AECOM Environment

Third Quarter 2020 – July, August, September Operation, Maintenance, and Monitoring Report

CHEM-TROL Site
NYSDEC Site No. 9-15-015
Report.hw915015.2020-10-06.3Q2020OMM

Site:
CHEM-TROL Site
4800 Lake Avenue
Blasdell, New York 14219

Submitted to:
NYSDEC
Region 9 Office
270 Michigan Avenue
Buffalo, NY 14203

Prepared for:
Waste Management
100 Brandywine Boulevard, Suite 300
Newtown, PA 18940

Prepared by:
AECOM
257 West Genesee Street, Suite 400
Buffalo, New York 14202

October 7, 2020

AECOM Project No. 60592091.1

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October 7, 2020

SUBMITTED VIA ELECTRONIC MAIL

Mr. Glenn May, PG
NYSDEC
Region 9 Office
270 Michigan Avenue
Buffalo, NY 14203

RE: S.C. Holdings, Inc., 4818 Lake Avenue, Blasdell, New York 14219
Third Quarter 2020 Operation, Maintenance, and Monitoring Report
Chem-Trol Site, NYSDEC Site No. 9-15-015, Report.hw915015.2020-10-06.3Q2020OMM

Dear Mr. May:

Enclosed please find the Third Quarter 2020 (3Q20 – July, August, September) Operation, Maintenance, and Monitoring Report for the "Chem-Trol" project site. AECOM is submitting this quarterly monitoring report on behalf of our client, S.C. Holdings, Inc.

The enclosed report contains the following information for 3Q20:

- Operation, Maintenance and Monitoring Checklists
- Summary Tables of Analytical Results and Flow Readings
- Copies of Analytical Results and Chain-of-Custody Forms

A summary of each month within 3Q20 is as follows:

July 2020

On July 7, 2020, AECOM performed a site visit and observed two floor-mounted pipe stands supporting the influent piping required replacement. The system was shut down pending replacement. On July 16, 2020, Matrix Environmental Technologies, Inc. (Matrix) visited the site and performed the necessary repairs to re-support the influent piping and restarted the system.

On July 17, 2020, AECOM performed a flush-and-rinse acid wash of the system. AECOM collected the monthly monitoring samples on July 22, 2020; analytical data were received on July 31, 2020. As presented on Table 1 (July 22, 2020), there were no exceedances of the treatment or discharge requirements for any parameter in the effluent samples during this month.

August 2020

On August 13, 2020, AECOM subcontractor Matrix performed a site visit to address a system outage caused by an electrical disruption. Matrix reset the system which addressed the issue.

AECOM collected the monthly monitoring samples on August 18, 2020; analytical data were received on September 1, 2020. As presented on Table 1 (August 18, 2020), there were no exceedances of the treatment or discharge requirements for any parameter in the effluent samples during this month.

September 2020

On September 16, 2020, Matrix performed the annual full tear-down acid wash and mechanical cleaning of the air-stripper trays. AECOM collected the monthly monitoring samples on September 17, 2020; analytical data were received on September 24, 2020. As presented on Table 1 (September 17, 2020), there were no exceedances of the treatment or discharge requirements for any parameter in the effluent samples during this month.

AECOM also collected quarterly groundwater levels on September 18, 2020.

Other

Hydro-pressure ("jet") cleaning of the effluent discharge line from the treatment building to the outlet at Smokes Creek is scheduled for the week of October 26, 2020. This cleaning is performed on an approximately two-year cycle to remove accumulated iron fouling in the discharge line.

S.C. Holdings has approved acquisition of a Sensaphone remote monitoring system for the treatment system. AECOM has engaged Matrix to support installation of the system. It is anticipated the Sensaphone system will be installed late October/early November 2020.

If you have any questions regarding the information presented in this report please contact me at (716) 923-1300.

Very truly yours,
AECOM

James L. Kaczor

James L. Kaczor
Project Manager

Enclosure

cc: Mr. Chad Moose (Waste Management) (electronic copy)
Mr. Brian Sadowski, NYSDEC (electronic copy)
60592091 Project File

July 2020

Operation, Maintenance & Monitoring Checklist

Groundwater Treatment System
CHEM-TROL Site
Town of Hamburg, New York

This summary inspection checklist is to be completed during each site inspection. Note all items, which require repair or maintenance. Use the last page to note any additional comments or unusual events.

General

Service by: Sean P. Connelly Weather/Temperature: Rain 70 F
Date: 7/22/2020 Arrival Time: 10:00 Departure Time: 12:20

Reason for Service: Inspect system

Inspection Items:	OK:	Comments:
Site Appearance/Condition	X	See comments section.
Building Exterior		
Overhead Door	X	Wood lintel decaying, header exposed.
Siding	X	Metal trim missing from lintel
Roof and Discharge Pipe	X	
Building Interior		
Indication of Spills or Leaks		Condensation on the floor
Building Heater	X	Breaker turned on. Was off on arrival.
Phone System	X	Disconnected
Exhaust Fan		Could not get fan to work.
Fire Extinguisher	X	
First Aid & Eye Wash	X	

Groundwater Treatment System

Air Stripper	**X**	Ratchet straps are used to keep the trays together. Several of the clips for the trays are rusted/broken.
Iron Removal Filter	**X**	Tank in-line but filter media removed; not required.
Flow Meters	**X**	See Notes.
Gauges	**X**	
Stripper Blower	**X**	
Indication of Alarm	**X**	

Groundwater Treatment Wells

EW-1 Pump	**X**	
EW-1 Transducer	**X**	
EW-1 Flow Meter	**X**	
EW-2 Pump	**X**	
EW-2 Transducer	**X**	
EW- 2 Flow Meter	**X**	
EW-3 Pump	**X**	
EW-3 Transducer	**X**	
EW-3 Flow Meter	**X**	

Effluent Discharge

Outfall		No water coming from outfall/ effluent line
Cleanout	**X**	

Instrumentation/Readings:

EW-1

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	277 Inches
Flow Meter Reading	8,444,686 Gallons

EW-2

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	165 Inches
Flow Meter Reading	28,528,520 Gallons

EW-3

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	185 Inches
Flow Meter Reading	15,696,380 Gallons

Air Stripper

Stripper Blower Pressure	15.5 Inches H2O

Effluent Flow

Total System Meter Reading	71,247,868 Gallons

Influent/Effluent Sampling

AQUEOUS:
Monthly monitoring samples of aqueous phase system influent and effluent were collected and submitted for the following analyses:

- VOCs by EPA Method 624 (CFR136 624)
- Iron by MCAWW 200.7
- TSS by MCAWW SM18-20 2540 D
- pH by MCAWW SM18-20 4500-H+B

pH measurements must be made in the field:

Influent pH 7 (field test strip)
Effluent pH 7 (field test strip)

Notes/Explanations
(Please include any additional information on those items that require attention as indicated above.)

On July 7, 2020, AECOM performed a site visit and observed two floor-mounted pipe stands supporting the influent piping required replacement. The system was shut down pending replacement. On July 16, 2020, Matrix Environmental Technologies, Inc. (Matrix) visited the site and performed the necessary repairs to re-support the influent piping and restarted the system.

Total system flow on system totalizer flow meter timed at 3.1 gpm. During visit, individually closed EW-1, EW-2, and EW-3 influent valve to test flow by reading response on transducer elevation; noted rise in transducer elevation when valve was closed and drop when valve was opened confirming well was pumping.

The SVE building overhead door flashing has wind and header damage.

The AS building overhead door flashing needs replacement.

The most recent round of water levels (2Q2020) were collected on June 2, 2020.

The most recent acid wash was performed on July 17, 2020 by AECOM personnel Sean P. Connelly

All wells were operational upon arrival and departure.

Table 1
July 22, 2020 Summary of Influent and Effluent Data

Chem-Trol Site
Town of Hamburg, New York

Parameters	Concentration				Mass Loading		
	Influent	Effluent	Discharge Limitations	Units	Effluent	Discharge Limitations	Units
Flow*	2,833	2,833	144,000	gpd	NA	NA	NA
pH	7.1	8.1	6.5 to 8.5	standard units	NA	NA	NA
Toluene	< 18	< 5.0	5	ug/L	< 0.0001	0.006	lbs/day
Chlorobenzene	< 19	< 5.0	10	ug/L	< 0.0001	0.012	lbs/day
cis-1,2-Dichloroethene	< 23	< 5.0	10	ug/L	< 0.0001	0.012	lbs/day
Benzene	< 24	< 5.0	5	ug/L	< 0.0001	0.006	lbs/day
1,1,1-Trichloroethane	< 15	< 5.0	10	ug/L	< 0.0001	0.012	lbs/day
Chloroethane	< 35	< 5.0	10	ug/L	< 0.0001	0.012	lbs/day
1,1-Dichloroethane	< 24	< 5.0	10	ug/L	< 0.0001	0.012	lbs/day
1,1-Dichloroethene	< 34	< 5.0	10	ug/L	< 0.0001	0.012	lbs/day
Trichloroethene	< 24	< 5.0	10	ug/L	< 0.0001	0.012	lbs/day
o-Chlorotoluene	2,700	< 5.0	10	ug/L	< 0.0001	0.012	lbs/day
Iron - Total	1,170	583	3,000	ug/L	0.01	3.61	lbs/day
TSS	< 4.0	4.8	20	mg/L	0.11		lbs/day

Notes:

*1) **Bold** typeface denotes exceedance of treatment requirements in the effluent sample.*

2) < indicates Not Detected at or above the laboratory reporting limit.

3) NA indicates Not Applicable.

4) "J" indicates an estimated concentration below the method detection limit.

5) E - Estimated Value, result above calibration curve

6) D - Dilution

7) Revision of monitoring parameters (inorganics and TSS) and discharge limitation (iron) approved by NYSDEC letter dated July 27, 2007.

** Average daily flow as measured June 2, 2020 through July 22, 2020.*

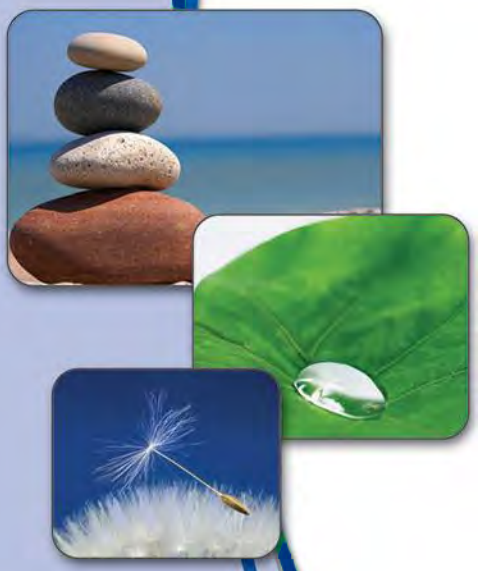
Table 2
July 22, 2020 Summary of Influent and Effluent Data

Chem-Trol Site
Town of Hamburg, New York

Instrumentation/Readings:	Current Report 7/22/2020	units	Prior Report 6/2/2020
EW-1			
Pumping Rate	0	GPM	0
Water Level Above Transducer	277	Inches	277
Flow Meter Reading	8,444,686	gallons	8,444,686
EW-2			
Pumping Rate	0	GPM	0
Water Level Above Transducer	165	Inches	169
Flow Meter Reading	28,528,520	gallons	28,528,520
EW-3			
Pumping Rate	0	GPM	0
Water Level Above Transducer	185	Inches	188
Flow Meter Reading	15,696,380	gallons	15,696,380
Air Stripper			
Stripper Blower Pressure	15.5	inches H_2O	16.0
Effluent Flow			
Total System Meter Reading	71,247,868	gallons	71,106,221
Average System Flow Since Prior Report	2,833	gpd	
	118.0	gph	
	2.0	gpm	
Influent o-Chlorotoluene concentration	2,700	ug/L	
Current month mass removal	1.4	kilograms	

Note: NA indicates Not Available.
NW - Not working
ug/L - micrograms per liter

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-172724-1
Client Project/Site: ChemTrol Site: Monthly Groundwater
Sampling Event: ChemTrol Monthly Groundwater

For:
Waste Management
600 New Ludlow Road
South Hadley, Massachusetts 01075

Attn: Ryan Donovan

Roxanne Cisneros

Authorized for release by:
7/31/2020 10:35:10 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Waste Management
Job ID: 480-172724-1
Project/Site: ChemTrol Site: Monthly Groundwater

Qualifiers

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

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

Job ID: 480-172724-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-172724-1

Comments
No additional comments.

Receipt
The samples were received on 7/22/2020 1:00 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.2º C.

GC/MS VOA
Method 624.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent (480-172724-2). Elevated reporting limits (RLs) are provided.

Method 624.1: The results reported for the following sample do not concur with results previously reported for this site: Influent (480-172724-2). Reanalysis was performed, and the result(s) confirmed.

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

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

General Chemistry
Methods SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Effluent (480-172724-1) and Influent (480-172724-2).

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

Detection Summary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-172724-1

Client Sample ID: Effluent — Lab Sample ID: 480-172724-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	583		50.0		ug/L	1		200.7 Rev 4.4	Total Recoverable
Total Suspended Solids	4.8		4.0		mg/L	1		SM 2540D	Total/NA
pH	8.1	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Temperature	16.9	HF	0.001		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Influent — Lab Sample ID: 480-172724-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
o-Chlorotoluene	2700		13		ug/L	40		624.1	Total/NA
Iron	1170		50.0		ug/L	1		200.7 Rev 4.4	Total Recoverable
pH	7.1	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Temperature	17.3	HF	0.001		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 480-172724-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-172724-1

Client Sample ID: Effluent

Date Collected: 07/22/20 10:00
Date Received: 07/22/20 13:00

Lab Sample ID: 480-172724-1

Matrix: Water

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			07/22/20 19:44	1
1,1-Dichloroethane	ND		5.0		ug/L			07/22/20 19:44	1
1,1-Dichloroethene	ND		5.0		ug/L			07/22/20 19:44	1
Benzene	ND		5.0		ug/L			07/22/20 19:44	1
Chlorobenzene	ND		5.0		ug/L			07/22/20 19:44	1
Chloroethane	ND		5.0		ug/L			07/22/20 19:44	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			07/22/20 19:44	1
Toluene	ND		5.0		ug/L			07/22/20 19:44	1
Trichloroethene	ND		5.0		ug/L			07/22/20 19:44	1
o-Chlorotoluene	ND		5.0		ug/L			07/22/20 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*68 - 130*		*07/22/20 19:44*	*1*
4-Bromofluorobenzene (Surr)	*97*		*76 - 123*		*07/22/20 19:44*	*1*
Toluene-d8 (Surr)	*104*		*77 - 120*		*07/22/20 19:44*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**583**		50.0		ug/L		07/24/20 09:07	07/28/20 00:54	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**4.8**		4.0		mg/L			07/22/20 20:02	1
pH	**8.1**	**HF**	0.1		SU			07/23/20 15:46	1
Temperature	**16.9**	**HF**	0.001		Degrees C			07/23/20 15:46	1

Client Sample Results

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-172724-1

Client Sample ID: Influent

Date Collected: 07/22/20 10:30
Date Received: 07/22/20 13:00

Lab Sample ID: 480-172724-2

Matrix: Water

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		15		ug/L			07/23/20 14:16	40
1,1-Dichloroethane	ND		24		ug/L			07/23/20 14:16	40
1,1-Dichloroethene	ND		34		ug/L			07/23/20 14:16	40
Benzene	ND		24		ug/L			07/23/20 14:16	40
Chlorobenzene	ND		19		ug/L			07/23/20 14:16	40
Chloroethane	ND		35		ug/L			07/23/20 14:16	40
cis-1,2-Dichloroethene	ND		23		ug/L			07/23/20 14:16	40
Toluene	ND		18		ug/L			07/23/20 14:16	40
Trichloroethene	ND		24		ug/L			07/23/20 14:16	40
o-Chlorotoluene	**2700**		13		ug/L			07/23/20 14:16	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*68 - 130*		*07/23/20 14:16*	*40*
4-Bromofluorobenzene (Surr)	*98*		*76 - 123*		*07/23/20 14:16*	*40*
Toluene-d8 (Surr)	*102*		*77 - 120*		*07/23/20 14:16*	*40*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1170**		50.0		ug/L		07/24/20 09:07	07/28/20 00:58	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0		mg/L			07/22/20 20:02	1
pH	**7.1**	**HF**	0.1		SU			07/23/20 15:47	1
Temperature	**17.3**	**HF**	0.001		Degrees C			07/23/20 15:47	1

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-172724-1

Client Sample ID: Trip Blank

Date Collected: 07/22/20 00:00
Date Received: 07/22/20 13:00

Lab Sample ID: 480-172724-3

Matrix: Water

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			07/22/20 20:32	1
1,1-Dichloroethane	ND		5.0		ug/L			07/22/20 20:32	1
1,1-Dichloroethene	ND		5.0		ug/L			07/22/20 20:32	1
Benzene	ND		5.0		ug/L			07/22/20 20:32	1
Chlorobenzene	ND		5.0		ug/L			07/22/20 20:32	1
Chloroethane	ND		5.0		ug/L			07/22/20 20:32	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			07/22/20 20:32	1
Toluene	ND		5.0		ug/L			07/22/20 20:32	1
Trichloroethene	ND		5.0		ug/L			07/22/20 20:32	1
o-Chlorotoluene	ND		5.0		ug/L			07/22/20 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*68 - 130*		*07/22/20 20:32*	*1*
4-Bromofluorobenzene (Surr)	*94*		*76 - 123*		*07/22/20 20:32*	*1*
Toluene-d8 (Surr)	*102*		*77 - 120*		*07/22/20 20:32*	*1*

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-541503/8
Matrix: Water
Analysis Batch: 541503

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			07/22/20 11:56	1
1,1-Dichloroethane	ND		5.0		ug/L			07/22/20 11:56	1
1,1-Dichloroethene	ND		5.0		ug/L			07/22/20 11:56	1
Benzene	ND		5.0		ug/L			07/22/20 11:56	1
Chlorobenzene	ND		5.0		ug/L			07/22/20 11:56	1
Chloroethane	ND		5.0		ug/L			07/22/20 11:56	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			07/22/20 11:56	1
Toluene	ND		5.0		ug/L			07/22/20 11:56	1
Trichloroethene	ND		5.0		ug/L			07/22/20 11:56	1
o-Chlorotoluene	ND		5.0		ug/L			07/22/20 11:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*68 - 130*		*07/22/20 11:56*	*1*
4-Bromofluorobenzene (Surr)	*97*		*76 - 123*		*07/22/20 11:56*	*1*
Toluene-d8 (Surr)	*106*		*77 - 120*		*07/22/20 11:56*	*1*

Lab Sample ID: LCS 480-541503/6
Matrix: Water
Analysis Batch: 541503

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.4		ug/L		97	52 - 162
1,1-Dichloroethane	20.0	20.2		ug/L		101	59 - 155
1,1-Dichloroethene	20.0	20.5		ug/L		103	1 - 234
Benzene	20.0	20.2		ug/L		101	37 - 151
Chlorobenzene	20.0	19.3		ug/L		97	37 - 160
Chloroethane	20.0	21.0		ug/L		105	14 - 230
Toluene	20.0	19.2		ug/L		96	47 - 150
Trichloroethene	20.0	19.2		ug/L		96	71 - 157

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*68 - 130*
4-Bromofluorobenzene (Surr)	*96*		*76 - 123*
Toluene-d8 (Surr)	*105*		*77 - 120*

Lab Sample ID: MB 480-541713/8
Matrix: Water
Analysis Batch: 541713

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			07/23/20 11:16	1
1,1-Dichloroethane	ND		5.0		ug/L			07/23/20 11:16	1
1,1-Dichloroethene	ND		5.0		ug/L			07/23/20 11:16	1
Benzene	ND		5.0		ug/L			07/23/20 11:16	1
Chlorobenzene	ND		5.0		ug/L			07/23/20 11:16	1
Chloroethane	ND		5.0		ug/L			07/23/20 11:16	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			07/23/20 11:16	1
Toluene	ND		5.0		ug/L			07/23/20 11:16	1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-541713/8
Matrix: Water
Analysis Batch: 541713

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		5.0		ug/L			07/23/20 11:16	1
o-Chlorotoluene	ND		5.0		ug/L			07/23/20 11:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*68 - 130*		*07/23/20 11:16*	*1*
4-Bromofluorobenzene (Surr)	*96*		*76 - 123*		*07/23/20 11:16*	*1*
Toluene-d8 (Surr)	*102*		*77 - 120*		*07/23/20 11:16*	*1*

Lab Sample ID: LCS 480-541713/6
Matrix: Water
Analysis Batch: 541713

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.6		ug/L		93	52 - 162
1,1-Dichloroethane	20.0	19.4		ug/L		97	59 - 155
1,1-Dichloroethene	20.0	19.8		ug/L		99	1 - 234
Benzene	20.0	19.6		ug/L		98	37 - 151
Chlorobenzene	20.0	19.5		ug/L		97	37 - 160
Chloroethane	20.0	18.2		ug/L		91	14 - 230
Toluene	20.0	19.5		ug/L		98	47 - 150
Trichloroethene	20.0	19.1		ug/L		95	71 - 157

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*68 - 130*
4-Bromofluorobenzene (Surr)	*96*		*76 - 123*
Toluene-d8 (Surr)	*102*		*77 - 120*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-541895/1-A
Matrix: Water
Analysis Batch: 542440

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 541895

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		50.0		ug/L		07/24/20 09:07	07/27/20 22:46	1

Lab Sample ID: LCS 480-541895/2-A
Matrix: Water
Analysis Batch: 542440

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 541895

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10000	10180		ug/L		102	85 - 115

QC Sample Results

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-172724-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 480-541677/1
Matrix: Water
Analysis Batch: 541677

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0		mg/L			07/22/20 20:02	1

Lab Sample ID: LCS 480-541677/2
Matrix: Water
Analysis Batch: 541677

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			250	243.6		mg/L		97	88 - 110		

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 480-541952/1
Matrix: Water
Analysis Batch: 541952

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.0		SU		101	99 - 101		

QC Association Summary

Client: Waste Management
Job ID: 480-172724-1
Project/Site: ChemTrol Site: Monthly Groundwater

GC/MS VOA

Analysis Batch: 541503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-172724-1	Effluent	Total/NA	Water	624.1	
480-172724-3	Trip Blank	Total/NA	Water	624.1	
MB 480-541503/8	Method Blank	Total/NA	Water	624.1	
LCS 480-541503/6	Lab Control Sample	Total/NA	Water	624.1	

Analysis Batch: 541713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-172724-2	Influent	Total/NA	Water	624.1	
MB 480-541713/8	Method Blank	Total/NA	Water	624.1	
LCS 480-541713/6	Lab Control Sample	Total/NA	Water	624.1	

Metals

Prep Batch: 541895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-172724-1	Effluent	Total Recoverable	Water	200.7	
480-172724-2	Influent	Total Recoverable	Water	200.7	
MB 480-541895/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 480-541895/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 542440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-172724-1	Effluent	Total Recoverable	Water	200.7 Rev 4.4	541895
480-172724-2	Influent	Total Recoverable	Water	200.7 Rev 4.4	541895
MB 480-541895/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	541895
LCS 480-541895/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	541895

General Chemistry

Analysis Batch: 541677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-172724-1	Effluent	Total/NA	Water	SM 2540D	
480-172724-2	Influent	Total/NA	Water	SM 2540D	
MB 480-541677/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 480-541677/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 541952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-172724-1	Effluent	Total/NA	Water	SM 4500 H+ B	
480-172724-2	Influent	Total/NA	Water	SM 4500 H+ B	
LCS 480-541952/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Lab Chronicle

Client: Waste Management
Job ID: 480-172724-1
Project/Site: ChemTrol Site: Monthly Groundwater

Client Sample ID: Effluent
Lab Sample ID: 480-172724-1
Date Collected: 07/22/20 10:00
Matrix: Water
Date Received: 07/22/20 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	541503	07/22/20 19:44	WJD	TAL BUF
Total Recoverable	Prep	200.7			541895	07/24/20 09:07	ADM	TAL BUF
Total Recoverable	Analysis	200.7 Rev 4.4		1	542440	07/28/20 00:54	AMH	TAL BUF
Total/NA	Analysis	SM 2540D		1	541677	07/22/20 20:02	E1T	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	541952	07/23/20 15:46	BEF	TAL BUF

Client Sample ID: Influent
Lab Sample ID: 480-172724-2
Date Collected: 07/22/20 10:30
Matrix: Water
Date Received: 07/22/20 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		40	541713	07/23/20 14:16	WJD	TAL BUF
Total Recoverable	Prep	200.7			541895	07/24/20 09:07	ADM	TAL BUF
Total Recoverable	Analysis	200.7 Rev 4.4		1	542440	07/28/20 00:58	AMH	TAL BUF
Total/NA	Analysis	SM 2540D		1	541677	07/22/20 20:02	E1T	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	541952	07/23/20 15:47	BEF	TAL BUF

Client Sample ID: Trip Blank
Lab Sample ID: 480-172724-3
Date Collected: 07/22/20 00:00
Matrix: Water
Date Received: 07/22/20 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	541503	07/22/20 20:32	WJD	TAL BUF

Laboratory References:
TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Waste Management
Job ID: 480-172724-1
Project/Site: ChemTrol Site: Monthly Groundwater

Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-02-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	o-Chlorotoluene
SM 4500 H+ B		Water	pH
SM 4500 H+ B		Water	Temperature

Method Summary

Client: Waste Management
Job ID: 480-172724-1
Project/Site: ChemTrol Site: Monthly Groundwater

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 4500 H+ B	pH	SM	TAL BUF
200.7	Preparation, Total Recoverable Metals	EPA	TAL BUF

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Waste Management
Job ID: 480-172724-1
Project/Site: ChemTrol Site: Monthly Groundwater

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-172724-1	Effluent	Water	07/22/20 10:00	07/22/20 13:00	
480-172724-2	Influent	Water	07/22/20 10:30	07/22/20 13:00	
480-172724-3	Trip Blank	Water	07/22/20 00:00	07/22/20 13:00	

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler:	Lab PM: Giglia, Denise L	Carrier Tracking No(s):	COC No: 480-131816-28522.1
Client Contact: Mr. Dino Zack	Phone:	E-Mail: denise.giglia@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #:

Address: 257 West Genesee Street Suite 400	Due Date Requested:
City: Buffalo	TAT Requested (days):
State, Zip: NY, 14202-2657	
Phone: 215-269-2114(Tel) 215-699-8315(Fax)	PO #: 5070003206
Email: dino.zack@aecom.com	WO #:
Project Name: ChemTrol Site/NY22 Event Desc: ChemTrol Monthly Groundwat	Project #: 48002447
Site: New York	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

480-172724 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.7 - Iron	624.1_PREC - 624	2540D - Total Suspended Solids	SM4500_H+ - pH	Total Number	Special Instructions/Note:
			Preservation Code:				D	A	N	N		
Effluent	7/22/20	1000	G	Water			1	3	1	1		
Influent	↓	1030	G	Water			1	3	1	1		
Trip Blank	↓	—	G	Water				3				

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	7/22/20 @ 1300	Aecom	[signature]	7/22/20 1300	TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

August 2020

Operation, Maintenance & Monitoring Checklist

Groundwater Treatment System
CHEM-TROL Site
Town of Hamburg, New York

This summary inspection checklist is to be completed during each site inspection. Note all items, which require repair or maintenance. Use the last page to note any additional comments or unusual events.

General

Service by: Sean P. Connelly Weather/Temperature: Sunny 69 F
Date: 8/18/2020 Arrival Time: 09:45 Departure Time: 10:40

Reason for Service: Inspect system

Inspection Items:	OK:	Comments:
Site Appearance/Condition	X	See comments section.
Building Exterior		
Overhead Door	X	Wood lintel decaying, header exposed.
Siding	X	Metal trim missing from lintel
Roof and Discharge Pipe	X	
Building Interior		
Indication of Spills or Leaks		Condensation on the floor
Building Heater	X	Breaker turned on. Was off on arrival.
Phone System	X	Disconnected
Exhaust Fan		Could not get fan to work.
Fire Extinguisher	X	
First Aid & Eye Wash	X	

Groundwater Treatment System

Air Stripper	**X**	Ratchet straps are used to keep the trays together. Several of the clips for the trays are rusted/broken.
Iron Removal Filter	**X**	Tank in-line but filter media removed; not required.
Flow Meters	**X**	See Notes.
Gauges	**X**	
Stripper Blower	**X**	
Indication of Alarm	**X**	

Groundwater Treatment Wells

EW-1 Pump	**X**	
EW-1 Transducer	**X**	
EW-1 Flow Meter	**X**	
EW-2 Pump	**X**	
EW-2 Transducer	**X**	
EW- 2 Flow Meter	**X**	
EW-3 Pump	**X**	
EW-3 Transducer	**X**	
EW-3 Flow Meter	**X**	

Effluent Discharge

Outfall		
Cleanout	**X**	

Instrumentation/Readings:

EW-1

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	269 Inches
Flow Meter Reading	8,444,686 Gallons

EW-2

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	161 Inches
Flow Meter Reading	28,528,520 Gallons

EW-3

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	178 Inches
Flow Meter Reading	15,696,380 Gallons

Air Stripper

Stripper Blower Pressure	17.0 Inches H2O

Effluent Flow

Total System Meter Reading	71,257,732 Gallons

Influent/Effluent Sampling

AQUEOUS:
Monthly monitoring samples of aqueous phase system influent and effluent were collected and submitted for the following analyses:

- VOCs by EPA Method 624 (CFR136 624)
- Iron by MCAWW 200.7
- TSS by MCAWW SM18-20 2540 D
- pH by MCAWW SM18-20 4500-H+B

pH measurements must be made in the field:

Influent pH 7 (field test strip)
Effluent pH 7 (field test strip)

Notes/Explanations
(Please include any additional information on those items that require attention as indicated above.)

On August 13, 2020, AECOM subcontractor Matrix Environmental Technologies, Inc. (Matrix) performed a site visit to address a system outage. Matrix reset the system which addressed the issue. All wells were pumping following the visit.

Total system flow on system totalizer flow meter timed at 2.5 gpm. During visit, individually closed EW-1, EW-2, and EW-3 influent valve to test flow by reading response on transducer elevation; noted rise in transducer elevation when valve was closed and drop when valve was opened confirming well was pumping.

The SVE building overhead door flashing has wind and header damage.

The AS building overhead door flashing needs replacement.

The most recent round of water levels (2Q2020) were collected on June 2, 2020.

The most recent acid wash was performed on July 17, 2020 by AECOM personnel.

All wells were operational upon arrival.

Table 1
August 18, 2020 Summary of Influent and Effluent Data

Chem-Trol Site
Town of Hamburg, New York

Parameters	Concentration				Mass Loading		
	Influent	Effluent	Discharge Limitations	Units	Effluent	Discharge Limitations	Units
Flow*	379	379	144,000	gpd	NA	NA	NA
pH	7.1	8.1	6.5 to 8.5	standard units	NA	NA	NA
Toluene	< 6.9	< 5.0	5	ug/L	< 0.0000	0.006	lbs/day
Chlorobenzene	< 6.4	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
cis-1,2-Dichloroethene	< 7.6	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
Benzene	< 7.7	< 5.0	5	ug/L	< 0.0000	0.006	lbs/day
1,1,1-Trichloroethane	< 5	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
Chloroethane	< 17	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
1,1-Dichloroethane	< 8.1	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
1,1-Dichloroethene	< 9.2	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
Trichloroethene	< 7.2	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
o-Chlorotoluene	2,400	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
Iron - Total	1,030	639	3,000	ug/L	0.00	3.61	lbs/day
TSS	< 4.8	11.2	20	mg/L	0.04		lbs/day

Notes:

*1) **Bold** typeface denotes exceedance of treatment requirements in the effluent sample.*

2) < indicates Not Detected at or above the laboratory reporting limit.

3) NA indicates Not Applicable.

4) "J" indicates an estimated concentration below the method detection limit.

5) E - Estimated Value, result above calibration curve

6) D - Dilution

7) Revision of monitoring parameters (inorganics and TSS) and discharge limitation (iron) approved by NYSDEC letter dated July 27, 2007.

** Average daily flow as measured July 22, 2020 through August 18, 2020.*

Table 2
August 18, 2020 Summary of Influent and Effluent Data

Chem-Trol Site
Town of Hamburg, New York

Instrumentation/Readings:	Current Report 8/18/2020	units	Prior Report 7/22/2020
EW-1			
Pumping Rate	0	GPM	0
Water Level Above Transducer	269	Inches	277
Flow Meter Reading	8,444,686	gallons	8,444,686
EW-2			
Pumping Rate	0	GPM	0
Water Level Above Transducer	161	Inches	165
Flow Meter Reading	28,528,520	gallons	28,528,520
EW-3			
Pumping Rate	0	GPM	0
Water Level Above Transducer	178	Inches	185
Flow Meter Reading	15,696,380	gallons	15,696,380
Air Stripper			
Stripper Blower Pressure	17.0	inches H_2O	15.5
Effluent Flow			
Total System Meter Reading	71,257,732	gallons	71,247,868
Average System Flow Since Prior Report	379	gpd	
	15.8	gph	
	0.3	gpm	
Influent o-Chlorotoluene concentration	2,400	ug/L	
Current month mass removal	0.1	kilograms	

Note: NA indicates Not Available.
NW - Not working
ug/L - micrograms per liter

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ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-173931-1
Client Project/Site: ChemTrol Site: Monthly Groundwater
Sampling Event: ChemTrol Monthly Groundwater

For:
Waste Management
600 New Ludlow Road
South Hadley, Massachusetts 01075

Attn: Ryan Donovan

Authorized for release by:
9/1/2020 10:10:19 AM

Lisa Shaffer, Senior Project Manager
(716)504-9816
Lisa.Shaffer@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Waste Management
Job ID: 480-173931-1
Project/Site: ChemTrol Site: Monthly Groundwater

Qualifiers

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

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

Case Narrative

Client: Waste Management
Job ID: 480-173931-1
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-173931-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-173931-1

Comments
No additional comments.

Receipt
The samples were received on 8/18/2020 11:10 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7º C.

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

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

General Chemistry
Methods 9040C, SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples have been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Effluent (480-173931-1) and Influent (480-173931-2).

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

Detection Summary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-173931-1

Client Sample ID: Effluent — Lab Sample ID: 480-173931-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	639		50.0		ug/L	1		200.7 Rev 4.4	Total Recoverable
Total Suspended Solids	11.2		4.0		mg/L	1		SM 2540D	Total/NA
pH	8.1	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Temperature	18.6	HF	0.001		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Influent — Lab Sample ID: 480-173931-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
o-Chlorotoluene	2400		8.5		ug/L	20		624	Total/NA
Iron	1030		50.0		ug/L	1		200.7 Rev 4.4	Total Recoverable
Total Suspended Solids	4.8		4.0		mg/L	1		SM 2540D	Total/NA
pH	7.1	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Temperature	18.8	HF	0.001		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 480-173931-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-173931-1

Client Sample ID: Effluent

Date Collected: 08/18/20 10:15
Date Received: 08/18/20 11:10

Lab Sample ID: 480-173931-1

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			08/28/20 23:57	1
1,1-Dichloroethane	ND		5.0		ug/L			08/28/20 23:57	1
1,1-Dichloroethene	ND		5.0		ug/L			08/28/20 23:57	1
Benzene	ND		5.0		ug/L			08/28/20 23:57	1
Chlorobenzene	ND		5.0		ug/L			08/28/20 23:57	1
Chloroethane	ND		5.0		ug/L			08/28/20 23:57	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			08/28/20 23:57	1
Toluene	ND		5.0		ug/L			08/28/20 23:57	1
Trichloroethene	ND		5.0		ug/L			08/28/20 23:57	1
o-Chlorotoluene	ND		5.0		ug/L			08/28/20 23:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 130*		*08/28/20 23:57*	*1*
4-Bromofluorobenzene (Surr)	*93*		*47 - 134*		*08/28/20 23:57*	*1*
Toluene-d8 (Surr)	*103*		*69 - 122*		*08/28/20 23:57*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**639**		50.0		ug/L		08/20/20 10:25	08/20/20 20:24	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**11.2**		4.0		mg/L			08/20/20 14:37	1
pH	**8.1**	**HF**	0.1		SU			08/27/20 09:23	1
Temperature	**18.6**	**HF**	0.001		Degrees C			08/27/20 09:23	1

Client Sample Results

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-173931-1

Client Sample ID: Influent

Date Collected: 08/18/20 10:30
Date Received: 08/18/20 11:10

Lab Sample ID: 480-173931-2

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			08/29/20 00:19	20
1,1-Dichloroethane	ND		8.1		ug/L			08/29/20 00:19	20
1,1-Dichloroethene	ND		9.2		ug/L			08/29/20 00:19	20
Benzene	ND		7.7		ug/L			08/29/20 00:19	20
Chlorobenzene	ND		6.4		ug/L			08/29/20 00:19	20
Chloroethane	ND		17		ug/L			08/29/20 00:19	20
cis-1,2-Dichloroethene	ND		7.6		ug/L			08/29/20 00:19	20
Toluene	ND		6.9		ug/L			08/29/20 00:19	20
Trichloroethene	ND		7.2		ug/L			08/29/20 00:19	20
o-Chlorotoluene	**2400**		8.5		ug/L			08/29/20 00:19	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*75 - 130*		*08/29/20 00:19*	*20*
4-Bromofluorobenzene (Surr)	*96*		*47 - 134*		*08/29/20 00:19*	*20*
Toluene-d8 (Surr)	*106*		*69 - 122*		*08/29/20 00:19*	*20*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1030**		50.0		ug/L		08/20/20 10:25	08/20/20 20:28	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**4.8**		4.0		mg/L			08/20/20 14:37	1
pH	**7.1**	**HF**	0.1		SU			08/27/20 09:24	1
Temperature	**18.8**	**HF**	0.001		Degrees C			08/27/20 09:24	1

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-173931-1

Client Sample ID: Trip Blank

Date Collected: 08/18/20 00:00
Date Received: 08/18/20 11:10

Lab Sample ID: 480-173931-3

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			08/28/20 23:34	1
1,1-Dichloroethane	ND		5.0		ug/L			08/28/20 23:34	1
1,1-Dichloroethene	ND		5.0		ug/L			08/28/20 23:34	1
Benzene	ND		5.0		ug/L			08/28/20 23:34	1
Chlorobenzene	ND		5.0		ug/L			08/28/20 23:34	1
Chloroethane	ND		5.0		ug/L			08/28/20 23:34	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			08/28/20 23:34	1
Toluene	ND		5.0		ug/L			08/28/20 23:34	1
Trichloroethene	ND		5.0		ug/L			08/28/20 23:34	1
o-Chlorotoluene	ND		5.0		ug/L			08/28/20 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 130*		*08/28/20 23:34*	*1*
4-Bromofluorobenzene (Surr)	*95*		*47 - 134*		*08/28/20 23:34*	*1*
Toluene-d8 (Surr)	*106*		*69 - 122*		*08/28/20 23:34*	*1*

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-449235/8
Matrix: Water
Analysis Batch: 449235

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			08/28/20 17:25	1
1,1-Dichloroethane	ND		5.0		ug/L			08/28/20 17:25	1
1,1-Dichloroethene	ND		5.0		ug/L			08/28/20 17:25	1
Benzene	ND		5.0		ug/L			08/28/20 17:25	1
Chlorobenzene	ND		5.0		ug/L			08/28/20 17:25	1
Chloroethane	ND		5.0		ug/L			08/28/20 17:25	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			08/28/20 17:25	1
Toluene	ND		5.0		ug/L			08/28/20 17:25	1
Trichloroethene	ND		5.0		ug/L			08/28/20 17:25	1
o-Chlorotoluene	ND		5.0		ug/L			08/28/20 17:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*75 - 130*		*08/28/20 17:25*	*1*
4-Bromofluorobenzene (Surr)	*89*		*47 - 134*		*08/28/20 17:25*	*1*
Toluene-d8 (Surr)	*102*		*69 - 122*		*08/28/20 17:25*	*1*

Lab Sample ID: LCS 240-449235/5
Matrix: Water
Analysis Batch: 449235

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.7		ug/L		93	52 - 162
1,1-Dichloroethane	20.0	21.5		ug/L		108	59 - 155
1,1-Dichloroethene	20.0	20.3		ug/L		101	10 - 234
Benzene	20.0	21.8		ug/L		109	37 - 151
Chlorobenzene	20.0	20.3		ug/L		102	37 - 160
Chloroethane	20.0	18.6		ug/L		93	14 - 230
Toluene	20.0	21.6		ug/L		108	47 - 150
Trichloroethene	20.0	18.5		ug/L		92	71 - 157

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*75 - 130*
4-Bromofluorobenzene (Surr)	*105*		*47 - 134*
Toluene-d8 (Surr)	*109*		*69 - 122*

Lab Sample ID: 480-173931-2 MS
Matrix: Water
Analysis Batch: 449235

Client Sample ID: Influent
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		2000	1860		ug/L		93	52 - 162
1,1-Dichloroethane	ND		2000	2100		ug/L		105	59 - 155
1,1-Dichloroethene	ND		2000	1940		ug/L		97	10 - 234
Benzene	ND		2000	2180		ug/L		109	37 - 151
Chlorobenzene	ND		2000	2020		ug/L		101	37 - 160
Chloroethane	ND		2000	1850		ug/L		92	14 - 230
Toluene	ND		2000	2140		ug/L		107	47 - 150
Trichloroethene	ND		2000	1810		ug/L		90	71 - 157

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 130*
4-Bromofluorobenzene (Surr)	*103*		*47 - 134*
Toluene-d8 (Surr)	*108*		*69 - 122*

Lab Sample ID: 480-173931-2 MSD
Matrix: Water
Analysis Batch: 449235

Client Sample ID: Influent
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		2000	1720		ug/L		86	52 - 162	8	35
1,1-Dichloroethane	ND		2000	1930		ug/L		96	59 - 155	8	35
1,1-Dichloroethene	ND		2000	1680		ug/L		84	10 - 234	14	35
Benzene	ND		2000	2110		ug/L		105	37 - 151	3	35
Chlorobenzene	ND		2000	1990		ug/L		100	37 - 160	1	35
Chloroethane	ND		2000	1700		ug/L		85	14 - 230	9	35
Toluene	ND		2000	2100		ug/L		105	47 - 150	2	35
Trichloroethene	ND		2000	1800		ug/L		90	71 - 157	0	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*89*		*75 - 130*
4-Bromofluorobenzene (Surr)	*101*		*47 - 134*
Toluene-d8 (Surr)	*105*		*69 - 122*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-545940/1-A
Matrix: Water
Analysis Batch: 546246

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 545940

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		50.0		ug/L		08/20/20 10:25	08/20/20 19:43	1

Lab Sample ID: LCS 480-545940/2-A
Matrix: Water
Analysis Batch: 546246

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 545940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10000	10510		ug/L		105	85 - 115

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 480-546108/1
Matrix: Water
Analysis Batch: 546108

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0		mg/L			08/20/20 14:37	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 480-546108/2
Matrix: Water
Analysis Batch: 546108

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	338	338.8		mg/L		100	88 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 480-547048/1
Matrix: Water
Analysis Batch: 547048

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.1		SU		101	99 - 101

QC Association Summary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-173931-1

GC/MS VOA

Analysis Batch: 449235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-173931-1	Effluent	Total/NA	Water	624	
480-173931-2	Influent	Total/NA	Water	624	
480-173931-3	Trip Blank	Total/NA	Water	624	
MB 240-449235/8	Method Blank	Total/NA	Water	624	
LCS 240-449235/5	Lab Control Sample	Total/NA	Water	624	
480-173931-2 MS	Influent	Total/NA	Water	624	
480-173931-2 MSD	Influent	Total/NA	Water	624	

Metals

Prep Batch: 545940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-173931-1	Effluent	Total Recoverable	Water	200.7	
480-173931-2	Influent	Total Recoverable	Water	200.7	
MB 480-545940/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 480-545940/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 546246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-173931-1	Effluent	Total Recoverable	Water	200.7 Rev 4.4	545940
480-173931-2	Influent	Total Recoverable	Water	200.7 Rev 4.4	545940
MB 480-545940/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	545940
LCS 480-545940/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	545940

General Chemistry

Analysis Batch: 546108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-173931-1	Effluent	Total/NA	Water	SM 2540D	
480-173931-2	Influent	Total/NA	Water	SM 2540D	
MB 480-546108/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 480-546108/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 547048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-173931-1	Effluent	Total/NA	Water	SM 4500 H+ B	
480-173931-2	Influent	Total/NA	Water	SM 4500 H+ B	
LCS 480-547048/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Lab Chronicle

Client: Waste Management
Job ID: 480-173931-1
Project/Site: ChemTrol Site: Monthly Groundwater

Client Sample ID: Effluent
Lab Sample ID: 480-173931-1
Date Collected: 08/18/20 10:15
Matrix: Water
Date Received: 08/18/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	449235	08/28/20 23:57	TJL1	TAL CAN
Total Recoverable	Prep	200.7			545940	08/20/20 10:25	ADM	TAL BUF
Total Recoverable	Analysis	200.7 Rev 4.4		1	546246	08/20/20 20:24	LMH	TAL BUF
Total/NA	Analysis	SM 2540D		1	546108	08/20/20 14:37	CSS	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	547048	08/27/20 09:23	DLG	TAL BUF

Client Sample ID: Influent
Lab Sample ID: 480-173931-2
Date Collected: 08/18/20 10:30
Matrix: Water
Date Received: 08/18/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		20	449235	08/29/20 00:19	TJL1	TAL CAN
Total Recoverable	Prep	200.7			545940	08/20/20 10:25	ADM	TAL BUF
Total Recoverable	Analysis	200.7 Rev 4.4		1	546246	08/20/20 20:28	LMH	TAL BUF
Total/NA	Analysis	SM 2540D		1	546108	08/20/20 14:37	CSS	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	547048	08/27/20 09:24	DLG	TAL BUF

Client Sample ID: Trip Blank
Lab Sample ID: 480-173931-3
Date Collected: 08/18/20 00:00
Matrix: Water
Date Received: 08/18/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	449235	08/28/20 23:34	TJL1	TAL CAN

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Waste Management
Job ID: 480-173931-1
Project/Site: ChemTrol Site: Monthly Groundwater

Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-02-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 4500 H+ B		Water	pH
SM 4500 H+ B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20 *
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

Method Summary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly Groundwater

Job ID: 480-173931-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CAN
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 4500 H+ B	pH	SM	TAL BUF
200.7	Preparation, Total Recoverable Metals	EPA	TAL BUF

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Waste Management
Job ID: 480-173931-1
Project/Site: ChemTrol Site: Monthly Groundwater

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-173931-1	Effluent	Water	08/18/20 10:15	08/18/20 11:10	
480-173931-2	Influent	Water	08/18/20 10:30	08/18/20 11:10	
480-173931-3	Trip Blank	Water	08/18/20 00:00	08/18/20 11:10	

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: S. Connelly	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 480-143622-28522.1
Client Contact: Mr. Dino Zack	Phone:	E-Mail: roxanne.cisneros@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #:
Address: 257 West Genesee Street Suite 400	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14202-2657				
Phone: 215-269-2114(Tel) 215-699-8315(Fax)	PO #: 5070005494			
Email: dino.zack@aecom.com	WO #:			
Project Name: ChemTrol Site/NY22 Event Desc: ChemTrol Monthly Groundwat	Project #: 48002447			
Site: New York	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.7 - Iron	624.1_PREC - 624	2540D - Total Suspended Solids	SM4500_H+ - pH	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	A	N	N		
Effluent	8/18/20	1015	G	Water	N	N	1	3	1	1		
Influent		1030	G	Water	N	N	1	3	1	1		
Trip Blank		—	—	Water	N	N		3				

480-173931 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed ... an 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		8/18/20 1110	AECOM			
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 8/19/20 1110	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

47 #1

Ver: 01/16/2019

September 2020

Operation, Maintenance & Monitoring Checklist

Groundwater Treatment System
CHEM-TROL Site
Town of Hamburg, New York

This summary inspection checklist is to be completed during each site inspection. Note all items, which require repair or maintenance. Use the last page to note any additional comments or unusual events.

General

Service by: Emily Au Weather/Temperature: Cloudy, 65 F
Date: 9/17/2020 Arrival Time: 10:30 Departure Time: 16:30

Reason for Service: Inspect system

Inspection Items:	OK:	Comments:
Site Appearance/Condition	X	See comments section.
Building Exterior		
Overhead Door	X	Wood lintel decaying, header exposed.
Siding	X	Metal trim missing from lintel
Roof and Discharge Pipe	X	
Building Interior		
Indication of Spills or Leaks		Condensation on the floor; slight drip from air stripper
Building Heater	X	Breaker turned on. Was off on arrival.
Phone System	X	Disconnected
Exhaust Fan		Could not get fan to work.
Fire Extinguisher	X	
First Aid & Eye Wash	X	

Groundwater Treatment System

Air Stripper	**X**	Ratchet straps are used to keep the trays together. Several of the clips for the trays are rusted/broken.
Iron Removal Filter	**X**	Tank in-line but filter media removed; not required.
Flow Meters	**X**	See Notes.
Gauges	**X**	
Stripper Blower	**X**	
Indication of Alarm	**X**	

Groundwater Treatment Wells

EW-1 Pump	**X**	
EW-1 Transducer	**X**	
EW-1 Flow Meter	**X**	
EW-2 Pump	**X**	
EW-2 Transducer	**X**	
EW- 2 Flow Meter	**X**	
EW-3 Pump	**X**	
EW-3 Transducer	**X**	
EW-3 Flow Meter	**X**	

Effluent Discharge

Outfall		Little to no flow at outfall/effluent line at creek.
Cleanout	**X**	Iron removal tank is discharging to cleanout pipe at slow rate.

Instrumentation/Readings:

EW-1

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	268 Inches
Flow Meter Reading	8,444,686 Gallons

EW-2

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	173 Inches
Flow Meter Reading	28,528,520 Gallons

EW-3

Pumping Rate	0 GPM (see Notes section)
Water Level Above Transducer	188 Inches
Flow Meter Reading	15,696,380 Gallons

Air Stripper

Stripper Blower Pressure	11.0 Inches H2O

Effluent Flow

Total System Meter Reading	71,272,670 Gallons

Influent/Effluent Sampling

AQUEOUS:
Monthly monitoring samples of aqueous phase system influent and effluent were collected and submitted for the following analyses:

- VOCs by EPA Method 624 (CFR136 624)
- Iron by MCAWW 200.7
- TSS by MCAWW SM18-20 2540 D
- pH by MCAWW SM18-20 4500-H+B

pH measurements must be made in the field:

Influent pH 7 (field test strip)
Effluent pH 7 (field test strip)

Notes/Explanations
(Please include any additional information on those items that require attention as indicated above.)

Total system flow on system totalizer flow meter timed at 0.5 gpm. During visit, individually closed EW-1, EW-2, and EW-3 influent valve to test flow by reading response on transducer elevation; noted rise in transducer elevation when valve was closed and drop when valve was opened confirming well was pumping.

The SVE building overhead door flashing has wind and header damage.

The AS building overhead door flashing needs replacement.

The gate leading to the outfall is becoming overgrown by vegetation.

The most recent round of water levels (3Q2020) were collected today.

The most recent acid wash was performed on September 16, 2020 by Matrix Technologies Inc.

Effluent sample today collected from just outside the AS building before the outlet pipe enters the cleanout due to lack of flow at the outfall terminus.

All wells were operational upon arrival and departure.

Table 1
September 17, 2020 Summary of Influent and Effluent Data

Chem-Trol Site
Town of Hamburg, New York

Parameters	Concentration				Mass Loading		
	Influent	Effluent	Discharge Limitations	Units	Effluent	Discharge Limitations	Units
Flow*	515	515	144,000	gpd	NA	NA	NA
pH	7.1	7.8	6.5 to 8.5	standard units	NA	NA	NA
Toluene	< 9.1	< 5.0	5	ug/L	< 0.0000	0.006	lbs/day
Chlorobenzene	< 9.5	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
cis-1,2-Dichloroethene	< 11	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
Benzene	< 12	< 5.0	5	ug/L	< 0.0000	0.006	lbs/day
1,1,1-Trichloroethane	< 7.7	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
Chloroethane	< 17	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
1,1-Dichloroethane	< 7.7	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
1,1-Dichloroethene	< 17	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
Trichloroethene	< 12	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
o-Chlorotoluene	2,300	< 5.0	10	ug/L	< 0.0000	0.012	lbs/day
Iron - Total	717	420	3,000	ug/L	0.00	3.61	lbs/day
TSS	< 4.0	6.8	20	mg/L	0.03		lbs/day

Notes:

*1) **Bold** typeface denotes exceedance of treatment requirements in the effluent sample.*

2) < indicates Not Detected at or above the laboratory reporting limit.

3) NA indicates Not Applicable.

4) "J" indicates an estimated concentration below the method detection limit.

5) E - Estimated Value, result above calibration curve

6) D - Dilution

7) Revision of monitoring parameters (inorganics and TSS) and discharge limitation (iron) approved by NYSDEC letter dated July 27, 2007.

** Average daily flow as measured August 18, 2020 through September 17, 2020.*

Table 2
September 17, 2020 Summary of Influent and Effluent Data

Chem-Trol Site
Town of Hamburg, New York

Instrumentation/Readings:	Current Report 9/17/2020	units	Prior Report 8/18/2020
EW-1			
Pumping Rate	0	GPM	0
Water Level Above Transducer	268	Inches	269
Flow Meter Reading	8,444,686	gallons	8,444,686
EW-2			
Pumping Rate	0	GPM	0
Water Level Above Transducer	173	Inches	161
Flow Meter Reading	28,528,520	gallons	28,528,520
EW-3			
Pumping Rate	0	GPM	0
Water Level Above Transducer	188	Inches	178
Flow Meter Reading	15,696,380	gallons	15,696,380
Air Stripper			
Stripper Blower Pressure	11.0	inches H_2O	17.0
Effluent Flow			
Total System Meter Reading	71,272,670	gallons	71,257,732
Average System Flow Since Prior Report	515	gpd	
	21.5	gph	
	0.4	gpm	
Influent o-Chlorotoluene concentration	2,300	ug/L	
Current month mass removal	0.1	kilograms	

Note: NA indicates Not Available.
NW - Not working
ug/L - micrograms per liter

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-175317-1
Client Project/Site: ChemTrol Site: Monthly GW
Sampling Event: ChemTrol Monthly Groundwater

For:
Waste Management
600 New Ludlow Road
South Hadley, Massachusetts 01075

Attn: Ryan Donovan

Katelyn Ferguson

Authorized for release by:
9/24/2020 11:02:54 AM

Katelyn Ferguson, Project Manager I
(716)691-2600
katelyn.ferguson@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

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

Job ID: 480-175317-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-175317-1

Comments
No additional comments.

Receipt
The samples were received on 9/17/2020 4:45 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.2º C.

GC/MS VOA
Method 624.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent (480-175317-2). Elevated reporting limits (RLs) are provided.

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

Metals
Method 200.7 Rev 4.4: The Total Iron results reported for the following samples do not concur with results previously reported for this site: Effluent (480-175317-1) and Influent (480-175317-2). Reanalysis was performed, and the results confirmed.

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

General Chemistry
Methods 9040C, SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Effluent (480-175317-1) and Influent (480-175317-2).

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

Detection Summary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

Client Sample ID: Effluent — Lab Sample ID: 480-175317-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	420		50.0		ug/L	1		200.7 Rev 4.4	Total Recoverable
Total Suspended Solids	6.8		4.0		mg/L	1		SM 2540D	Total/NA
pH	7.8	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Temperature	19.5	HF	0.001		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Influent — Lab Sample ID: 480-175317-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
o-Chlorotoluene - DL	2300		13		ug/L	40		624.1	Total/NA
Iron	717		50.0		ug/L	1		200.7 Rev 4.4	Total Recoverable
pH	7.1	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Temperature	19.8	HF	0.001		Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 480-175317-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

Client Sample ID: Effluent

Date Collected: 09/17/20 12:15
Date Received: 09/17/20 16:45

Lab Sample ID: 480-175317-1

Matrix: Water

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			09/18/20 17:52	1
1,1-Dichloroethane	ND		5.0		ug/L			09/18/20 17:52	1
1,1-Dichloroethene	ND		5.0		ug/L			09/18/20 17:52	1
Benzene	ND		5.0		ug/L			09/18/20 17:52	1
Chlorobenzene	ND		5.0		ug/L			09/18/20 17:52	1
Chloroethane	ND		5.0		ug/L			09/18/20 17:52	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			09/18/20 17:52	1
Toluene	ND		5.0		ug/L			09/18/20 17:52	1
Trichloroethene	ND		5.0		ug/L			09/18/20 17:52	1
o-Chlorotoluene	ND		5.0		ug/L			09/18/20 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*68 - 130*		*09/18/20 17:52*	*1*
4-Bromofluorobenzene (Surr)	*100*		*76 - 123*		*09/18/20 17:52*	*1*
Toluene-d8 (Surr)	*100*		*77 - 120*		*09/18/20 17:52*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**420**		50.0		ug/L		09/22/20 10:30	09/22/20 19:43	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**6.8**		4.0		mg/L			09/18/20 19:53	1
pH	**7.8**	**HF**	0.1		SU			09/21/20 17:20	1
Temperature	**19.5**	**HF**	0.001		Degrees C			09/21/20 17:20	1

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

Client Sample ID: Influent

Date Collected: 09/17/20 12:30
Date Received: 09/17/20 16:45

Lab Sample ID: 480-175317-2

Matrix: Water

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		7.7		ug/L			09/18/20 18:15	20
1,1-Dichloroethane	ND		12		ug/L			09/18/20 18:15	20
1,1-Dichloroethene	ND		17		ug/L			09/18/20 18:15	20
Benzene	ND		12		ug/L			09/18/20 18:15	20
Chlorobenzene	ND		9.5		ug/L			09/18/20 18:15	20
Chloroethane	ND		17		ug/L			09/18/20 18:15	20
cis-1,2-Dichloroethene	ND		11		ug/L			09/18/20 18:15	20
Toluene	ND		9.1		ug/L			09/18/20 18:15	20
Trichloroethene	ND		12		ug/L			09/18/20 18:15	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*68 - 130*		*09/18/20 18:15*	*20*
4-Bromofluorobenzene (Surr)	*100*		*76 - 123*		*09/18/20 18:15*	*20*
Toluene-d8 (Surr)	*101*		*77 - 120*		*09/18/20 18:15*	*20*

Method: 624.1 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Chlorotoluene	**2300**		13		ug/L			09/21/20 11:57	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*68 - 130*		*09/21/20 11:57*	*40*
4-Bromofluorobenzene (Surr)	*100*		*76 - 123*		*09/21/20 11:57*	*40*
Toluene-d8 (Surr)	*98*		*77 - 120*		*09/21/20 11:57*	*40*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**717**		50.0		ug/L		09/22/20 10:30	09/22/20 19:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0		mg/L			09/18/20 19:53	1
pH	**7.1**	**HF**	0.1		SU			09/21/20 17:22	1
Temperature	**19.8**	**HF**	0.001		Degrees C			09/21/20 17:22	1

Client Sample Results

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

Client Sample ID: Trip Blank

Date Collected: 09/17/20 00:00
Date Received: 09/17/20 16:45

Lab Sample ID: 480-175317-3

Matrix: Water

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			09/18/20 18:38	1
1,1-Dichloroethane	ND		5.0		ug/L			09/18/20 18:38	1
1,1-Dichloroethene	ND		5.0		ug/L			09/18/20 18:38	1
Benzene	ND		5.0		ug/L			09/18/20 18:38	1
Chlorobenzene	ND		5.0		ug/L			09/18/20 18:38	1
Chloroethane	ND		5.0		ug/L			09/18/20 18:38	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			09/18/20 18:38	1
Toluene	ND		5.0		ug/L			09/18/20 18:38	1
Trichloroethene	ND		5.0		ug/L			09/18/20 18:38	1
o-Chlorotoluene	ND		5.0		ug/L			09/18/20 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*68 - 130*		*09/18/20 18:38*	*1*
4-Bromofluorobenzene (Surr)	*99*		*76 - 123*		*09/18/20 18:38*	*1*
Toluene-d8 (Surr)	*98*		*77 - 120*		*09/18/20 18:38*	*1*

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-550106/8
Matrix: Water
Analysis Batch: 550106

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			09/18/20 11:16	1
1,1-Dichloroethane	ND		5.0		ug/L			09/18/20 11:16	1
1,1-Dichloroethene	ND		5.0		ug/L			09/18/20 11:16	1
Benzene	ND		5.0		ug/L			09/18/20 11:16	1
Chlorobenzene	ND		5.0		ug/L			09/18/20 11:16	1
Chloroethane	ND		5.0		ug/L			09/18/20 11:16	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			09/18/20 11:16	1
Toluene	ND		5.0		ug/L			09/18/20 11:16	1
Trichloroethene	ND		5.0		ug/L			09/18/20 11:16	1
o-Chlorotoluene	ND		5.0		ug/L			09/18/20 11:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*68 - 130*		*09/18/20 11:16*	*1*
4-Bromofluorobenzene (Surr)	*99*		*76 - 123*		*09/18/20 11:16*	*1*
Toluene-d8 (Surr)	*99*		*77 - 120*		*09/18/20 11:16*	*1*

Lab Sample ID: LCS 480-550106/6
Matrix: Water
Analysis Batch: 550106

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	20.2		ug/L		101	52 - 162
1,1-Dichloroethane	20.0	19.2		ug/L		96	59 - 155
1,1-Dichloroethene	20.0	20.2		ug/L		101	1 - 234
Benzene	20.0	19.2		ug/L		96	37 - 151
Chlorobenzene	20.0	19.1		ug/L		96	37 - 160
Chloroethane	20.0	21.5		ug/L		108	14 - 230
Toluene	20.0	18.9		ug/L		94	47 - 150
Trichloroethene	20.0	19.6		ug/L		98	71 - 157

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*68 - 130*
4-Bromofluorobenzene (Surr)	*100*		*76 - 123*
Toluene-d8 (Surr)	*100*		*77 - 120*

Lab Sample ID: MB 480-550365/8
Matrix: Water
Analysis Batch: 550365

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0		ug/L			09/21/20 11:23	1
1,1-Dichloroethane	ND		5.0		ug/L			09/21/20 11:23	1
1,1-Dichloroethene	ND		5.0		ug/L			09/21/20 11:23	1
Benzene	ND		5.0		ug/L			09/21/20 11:23	1
Chlorobenzene	ND		5.0		ug/L			09/21/20 11:23	1
Chloroethane	ND		5.0		ug/L			09/21/20 11:23	1
cis-1,2-Dichloroethene	ND		5.0		ug/L			09/21/20 11:23	1
Toluene	ND		5.0		ug/L			09/21/20 11:23	1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-550365/8
Matrix: Water
Analysis Batch: 550365

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		5.0		ug/L			09/21/20 11:23	1
o-Chlorotoluene	ND		5.0		ug/L			09/21/20 11:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*68 - 130*		*09/21/20 11:23*	*1*
4-Bromofluorobenzene (Surr)	*100*		*76 - 123*		*09/21/20 11:23*	*1*
Toluene-d8 (Surr)	*98*		*77 - 120*		*09/21/20 11:23*	*1*

Lab Sample ID: LCS 480-550365/6
Matrix: Water
Analysis Batch: 550365

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.5		ug/L		98	52 - 162
1,1-Dichloroethane	20.0	18.7		ug/L		93	59 - 155
1,1-Dichloroethene	20.0	19.2		ug/L		96	1 - 234
Benzene	20.0	19.3		ug/L		97	37 - 151
Chlorobenzene	20.0	18.9		ug/L		95	37 - 160
Chloroethane	20.0	20.2		ug/L		101	14 - 230
Toluene	20.0	18.7		ug/L		94	47 - 150
Trichloroethene	20.0	19.2		ug/L		96	71 - 157

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*68 - 130*
4-Bromofluorobenzene (Surr)	*100*		*76 - 123*
Toluene-d8 (Surr)	*100*		*77 - 120*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-550555/1-A
Matrix: Water
Analysis Batch: 550789

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 550555

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		50.0		ug/L		09/22/20 10:30	09/22/20 18:55	1

Lab Sample ID: LCS 480-550555/2-A
Matrix: Water
Analysis Batch: 550789

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 550555

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10000	9684		ug/L		97	85 - 115

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 480-550255/1
Matrix: Water
Analysis Batch: 550255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0		mg/L			09/18/20 19:53	1

Lab Sample ID: LCS 480-550255/2
Matrix: Water
Analysis Batch: 550255

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			240	238.8		mg/L		100	88 - 110		

Lab Sample ID: 480-175317-1 DU
Matrix: Water
Analysis Batch: 550255

Client Sample ID: Effluent
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	6.8			7.20		mg/L				6	10

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 480-550547/23
Matrix: Water
Analysis Batch: 550547

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.1		SU		101	99 - 101		

QC Association Summary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

GC/MS VOA

Analysis Batch: 550106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-175317-1	Effluent	Total/NA	Water	624.1	
480-175317-2	Influent	Total/NA	Water	624.1	
480-175317-3	Trip Blank	Total/NA	Water	624.1	
MB 480-550106/8	Method Blank	Total/NA	Water	624.1	
LCS 480-550106/6	Lab Control Sample	Total/NA	Water	624.1	

Analysis Batch: 550365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-175317-2 - DL	Influent	Total/NA	Water	624.1	
MB 480-550365/8	Method Blank	Total/NA	Water	624.1	
LCS 480-550365/6	Lab Control Sample	Total/NA	Water	624.1	

Metals

Prep Batch: 550555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-175317-1	Effluent	Total Recoverable	Water	200.7	
480-175317-2	Influent	Total Recoverable	Water	200.7	
MB 480-550555/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 480-550555/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 550789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-175317-1	Effluent	Total Recoverable	Water	200.7 Rev 4.4	550555
480-175317-2	Influent	Total Recoverable	Water	200.7 Rev 4.4	550555
MB 480-550555/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	550555
LCS 480-550555/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	550555

General Chemistry

Analysis Batch: 550255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-175317-1	Effluent	Total/NA	Water	SM 2540D	
480-175317-2	Influent	Total/NA	Water	SM 2540D	
MB 480-550255/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 480-550255/2	Lab Control Sample	Total/NA	Water	SM 2540D	
480-175317-1 DU	Effluent	Total/NA	Water	SM 2540D	

Analysis Batch: 550547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-175317-1	Effluent	Total/NA	Water	SM 4500 H+ B	
480-175317-2	Influent	Total/NA	Water	SM 4500 H+ B	
LCS 480-550547/23	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Lab Chronicle

Client: Waste Management
Job ID: 480-175317-1
Project/Site: ChemTrol Site: Monthly GW

Client Sample ID: Effluent
Lab Sample ID: 480-175317-1
Date Collected: 09/17/20 12:15
Matrix: Water
Date Received: 09/17/20 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	550106	09/18/20 17:52	WJD	TAL BUF
Total Recoverable	Prep	200.7			550555	09/22/20 10:30	KMP	TAL BUF
Total Recoverable	Analysis	200.7 Rev 4.4		1	550789	09/22/20 19:43	LMH	TAL BUF
Total/NA	Analysis	SM 2540D		1	550255	09/18/20 19:53	E1T	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	550547	09/21/20 17:20	BEF	TAL BUF

Client Sample ID: Influent
Lab Sample ID: 480-175317-2
Date Collected: 09/17/20 12:30
Matrix: Water
Date Received: 09/17/20 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	550106	09/18/20 18:15	WJD	TAL BUF
Total/NA	Analysis	624.1	DL	40	550365	09/21/20 11:57	WJD	TAL BUF
Total Recoverable	Prep	200.7			550555	09/22/20 10:30	KMP	TAL BUF
Total Recoverable	Analysis	200.7 Rev 4.4		1	550789	09/22/20 19:46	LMH	TAL BUF
Total/NA	Analysis	SM 2540D		1	550255	09/18/20 19:53	E1T	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	550547	09/21/20 17:22	BEF	TAL BUF

Client Sample ID: Trip Blank
Lab Sample ID: 480-175317-3
Date Collected: 09/17/20 00:00
Matrix: Water
Date Received: 09/17/20 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	550106	09/18/20 18:38	WJD	TAL BUF

Laboratory References:
TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Waste Management
Job ID: 480-175317-1
Project/Site: ChemTrol Site: Monthly GW

Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	o-Chlorotoluene
SM 4500 H+ B		Water	pH
SM 4500 H+ B		Water	Temperature

Method Summary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 4500 H+ B	pH	SM	TAL BUF
200.7	Preparation, Total Recoverable Metals	EPA	TAL BUF

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Waste Management
Project/Site: ChemTrol Site: Monthly GW

Job ID: 480-175317-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-175317-1	Effluent	Water	09/17/20 12:15	09/17/20 16:45	
480-175317-2	Influent	Water	09/17/20 12:30	09/17/20 16:45	
480-175317-3	Trip Blank	Water	09/17/20 00:00	09/17/20 16:45	

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Emily Au	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 480-148245-28522.1
Client Contact: Mr. Dino Zack	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com		Page: Page 1 of 1
Company: AECOM				Job #:

Address: 257 West Genesee Street Suite 400	Due Date Requested:	Analysis Requested
City: Buffalo	TAT Requested (days): Standard	
State, Zip: NY, 14202-2657		
Phone: 215-269-2114(Tel) 215-699-8315(Fax)	PO #: 5070005494	
Email: dino.zack@aecom.com	WO #:	
Project Name: ChemTrol Site/NY22 Event Desc: ChemTrol Monthly Groundwat	Project #: 48002447	
Site: New York	SSOW#:	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.7 - Iron	624.1_PREC - 624	2540D - Total Suspended Solids	SM4500_H+ - pH	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	A	N	N		
Effluent	9/17/2020	1215	G	Water			1	3	1	1		
Influent	9/17/2020	1230	G	Water			1	3	1	1		
Trip Blank	9/17/2020	—	TB-17	Water				1				

480-175317 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) per contract

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by: Emily Au	Date/Time: 9/17/2020 4:45	Company: AECOM	Received by: SD	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 9/17/2020 16:45	Company: TA
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.1 7 #1 ICE

Ver: 01/16/2019