Sampling and Analysis Report

Lockport City Landfill
Site No. 932010

City of Lockport
Lockport, New York

November 2016

SAMPLING AND ANALYSIS REPORT

LOCKPORT CITY LANDFILL

FOR

OCTOBER 25, 2015
(YEAR - 209)

LOCKPORT CITY LANDFILL
NYSDEC SITE NO. 9-32-010

Prepared for:

CITY OF LOCKPORT, NEW YORK
DEPARTMENT OF PUBLIC WORKS

Prepared by:

GHD CONSULTING SERVICES, INC.
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NOVEMBER 2016

PROJECT NO. 8612191

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SECTION 1 - INTRODUCTION

The Lockport City Landfill site is located on Oakhurst Street in the City of Lockport, Niagara County, New York. The landfill, assigned the Site Registry Number 9-32-010, is the subject of this report.

The Remedial Action Design as approved by the New York State Department of Environmental Conservation (NYSDEC) for the site; included a Long Term Monitoring Plan and Operation and Maintenance Plan. The purpose of the long term monitoring plan is to provide information to evaluate and monitor the long term effectiveness of the remedial work. The Operation and Maintenance Plan includes regular site inspections and analytical testing to identify any potential problems at the landfill that are not being adequately addressed by routine maintenance, and to document the current condition of the landfill. A site plan of the Lockport City Landfill is presented on Figure 1.

The Long Term Monitoring Program started in 1997; six (6) events were conducted in the first five (5) years (two events in 1997 and one event per year afterwards). This is the 5th monitoring event of the Long Term Monitoring contract dated July 25, 2012 between GHD Consulting Services, Inc. and the City of Lockport. The purpose of this report is to present the findings of the 20th sampling event conducted at the Lockport City Landfill on October 25, 2016. The present contract includes 5 years of service with the last year of service scheduled for 2016. The City has requested GHD to submit a proposal for the next 5 years of service.

SECTION 2 - LONG TERM MONITORING

In accordance with the NYSDEC approved Long Term Monitoring Plan, and included in the Operation and Maintenance Plan, five (5) groundwater wells, and one (1) outfall were sampled by GHD Consulting Services, Inc. on October 25, 2016. During sampling of groundwater at Monitoring Well MW-6D, due to a negligible amount of water in the well, groundwater was not tested for physical water quality parameters and sampling for volatile organic compounds (VOC's). Historically, Monitoring Well MW-6D could not be sampled due to lack of available groundwater present at the time of sampling.

The samples were delivered to ESC Lab Sciences, 12065 Lebanon Road, Mt. Juliet, Tennessee 37122, and analyzed for Target Compound List (TCL) VOCs by United States Environmental Protection Agency (USEPA) CLP Statement of Work (SOW) OLM04.2.

Analytical data sheets are provided in Appendix A and Groundwater Field Sampling Records are presented in Appendix B. Table 1 summarizes analytical testing data from groundwater samples collected from monitoring wells and the outfall for past 20 years.

Groundwater sampling and analytical testing is presented for the monitoring years of 1997 through 2016. The established action levels for Monitoring Wells MW-8D, MW-9S and MW-9I, and Outfall L2 are noted on Table 1. Analytical test results presented on Table 1 indicate that there were no exceedances detected above the reported action levels. Since exceedances did not occur, contingent sampling and analysis are not required. The next sampling event will be scheduled for October 2017 representing year 21 of the Long Term Monitoring Program.

In past reporting, 1,2-Dichloroethene (total) was reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene. Reporting in 2007 was the first year GHD conducted sampling and reporting. For purposes of presenting the analytical test results in a more definitive manner, analytical test results for reporting years of 2007 through 2016 are reported on Table 1 and in the 2016 report to include detected concentrations of cis-1,2-Dichloroethene and not reported as concentrations of 1,2-Dichloroethene (total).

The volatile organic analytical test results detected concentrations of cis-1,2-Dichloroethene in groundwater sampled from Monitoring Wells MW-8D and MW-9I.

As reported in 2015, volatile organic analytical test results detected concentrations of Carbon Disulfide and 1,1-Dichloroethane in groundwater sampled from Monitoring Well MW-3S. As reported in 2016, Carbon Disulfide and 1,1-Dichloroethane were not detected and reported as non-detectable results in groundwater sampled from Monitoring Well MW-3S.

Non detectable test results were reported from groundwater sampled from Monitoring Wells MW-3S and MW-9S and Outfall L-2.

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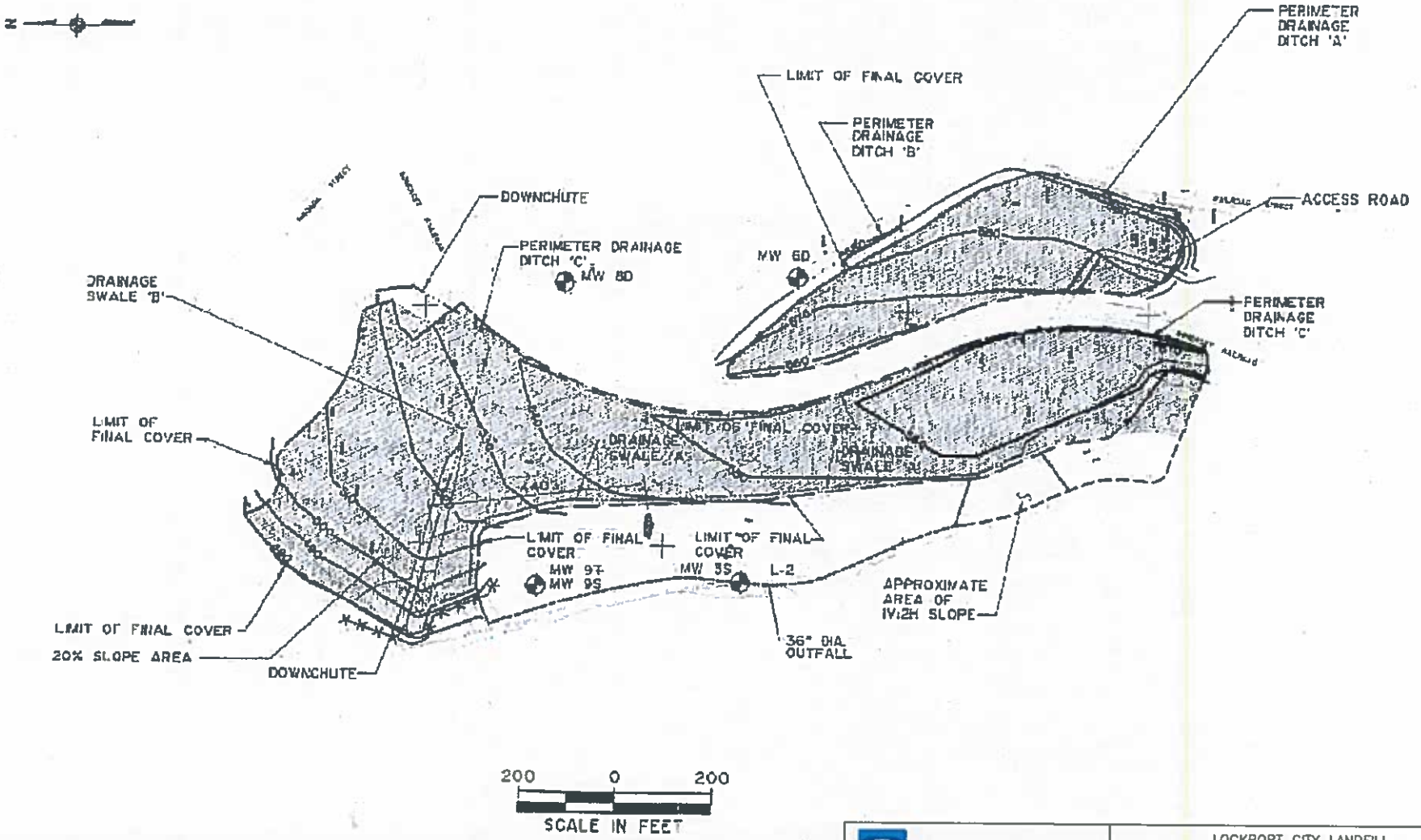

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LOCKPORT CITY LANDFILL
LOCKPORT, NEW YORK
CITY OF LOCKPORT

FIGURE 1
SITE PLAN

TABLES

TABLE 1
MONITORING WELL 3S
GROUNDWATER ANALYTICAL TEST RESULTS
LOCKPORT CITY LANDFILL

Volatile Compounds	Units	Action Level	Jun-97	Nov-97	Sep-98	Sep-99	Sep-00	Sep-01	Oct-02	Dec-03	Oct-04	Oct-05	Oct-06	Oct-07	Oct-08	Oct-09	Oct-10	Oct-11	Oct-12	Oct-13	Oct-14	Oct-15	Oct-16
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Vinyl chloride	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Acetone	µg/L	NS	U	U	U	U	U	U	U	U	U	U	6 J	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	1.2	1.1	U
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
trans-1, 2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	µg/L	NS	U	U	U	U	U	U	U	U	U	1 J	U	U	3J	2J	3J	2.8 J	U	1.8	1.4	1.6	U
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	4 J	3J	2J	4J	3.2 J	U	U	U	U	U
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Trichloroethene	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Dibromochloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U

Notes:

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled for

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

TABLE 1 (Cont'd)
MONITORING WELL 6D
GROUNDWATER ANALYTICAL RESULTS
LOCKPORT CITY LANDFILL

Volatile Compounds	Units	Action Level	Jun-97	Nov-97	Sep-98	Sep-99	Sep-00	Sep-01	Oct-02	Dec-03	Oct-04	Oct-05	Oct-06	Oct-07	Oct-08	Oct-09	Oct-10	Oct-11	Oct-12	Oct-13	Oct-14	Oct-15	Oct-16
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Vinyl chloride	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-	-	-	U	U	U	-
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Acetone	µg/L	NS	U	U	U	U	U	U	U	U	U	2 J	16	-	-	-	-	-	-	U	U	U	-
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
1,2-Dichloroethene (total)	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-	-	-	U	U	U	-
trans-1, 2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
1,1-Dichloroethane	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-	-	-	U	U	U	-
2-Butanone	µg/L	NS	U	U	U	U	U	U	U	U	U	U	1 J	-	-	-	-	-	-	U	U	U	-
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Trichloroethene	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-	-	-	U	U	U	-
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Toluene	µg/L	NS	U	U	U	U	U	U	U	U	U	2 J	2 J	-	-	-	-	-	-	U	U	U	-
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Dibromochloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Xylene (Total)	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	-	-	-	-	-	-	U	U	U	-
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	-

Notes:

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

- = not sampled

NS = no standard

2007, 2008, 2009, 2010, 2011, 2012 : MW-6D not sampled due to dry conditions, no groundwater available

TABLE 1 (Cont'd)
MONITORING WELL 8D
GROUNDWATER ANALYTICAL TEST RESULTS
LOCKPORT CITY LANDFILL

Volatile Compounds	Units	Action Level	Jun-97	Nov-97	Sep-98	Sep-99	Sep-00	Sep-01	Oct-02	Dec-03	Oct-04	Oct-05	Oct-06	Oct-07	Oct-08	Oct-09	Oct-10	Oct-11	Oct-12	Oct-13	Oct-14	Oct-15	Oct-16
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Vinyl chloride	µg/L	162	U	U	U	U	U	7	33	6	4 J	U	U	U	U	U	U	U	11	11	2.1	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Acetone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	µg/L	1,580	100	90	110	18	25	41	120	7	28	27 J	40	U	U	U	U	U	U	U	U	U	U
trans-1, 2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	32	34	26	23	24	65	26	21	22	20
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Trichloroethene	µg/L	260	2	4	5	2	2	2	U	U	U	U	1 J	U	U	U	U	3.2 J	U	U	U	U	U
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Dibromochloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U

Notes:

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled for

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

TABLE 1 (Cont'd)
MONITORING WELL 9S
GROUNDWATER ANALYTICAL TEST RESULTS
LOCKPORT CITY LANDFILL

Volatile Compounds	Units	Action Level	Jun-97	Nov-97	Sep-98	Sep-99	Sep-00	Sep-01	Oct-02	Dec-03	Oct-04	Oct-05	Oct-06	Oct-07	Oct-08	Oct-09	Oct-10	Oct-11	Oct-12	Oct-13	Oct-14	Oct-15	Oct-15
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Vinyl chloride	µg/L	162	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Acetone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	µg/L	1,580	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
trans-1, 2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	2	U	U
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Trichloroethene	µg/L	260	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Dibromochloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U

Notes:

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled for

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

TABLE 1 (Cont'd)
MONITORING WELL 9I
GROUNDWATER ANALYTICAL TEST RESULTS
LOCKPORT CITY LANDFILL

Volatile Compounds	Units	Action Level	Jun-97	Nov-97	Sep-98	Sep-99	Sep-00	Sep-01	Oct-02	Dec-03	Oct-04	Oct-05	Oct-06	Oct-07	Oct-08	Oct-09	Oct-10	Oct-11	Oct-12	Oct-13	Oct-14	Oct-15	Oct-16
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Vinyl chloride	µg/L	24	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Acetone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	µg/L	42	8.4	6	6	5	4 J	4 J	4 J	4 J	3 J	3 J	2 J	U	U	U	U	U	U	U	U	U	U
trans-1, 2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	3 J	2J	U	2J	U	U	1.3	U	1.8	1.9
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Trichloroethene	µg/L	NS	1.6	2	2	1 J	1 J	1 J	1 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Dibromochloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U

Notes:

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled for

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

TABLE 1 (Cont'd)
OUTFALL L-2
GROUNDWATER ANALYTICAL TEST RESULTS
LOCKPORT CITY LANDFILL

Volatile Compounds	Units	Action Level	Jun-97	Nov-97	Sep-98	Sep-99	Sep-00	Sep-01	Oct-02	Dec-03	Oct-04	Oct-05	Oct-06	Oct-07	Oct-08	Oct-09	Oct-10	Oct-11	Oct-12	Oct-13	Oct-14	Oct-15	Oct-16
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Vinyl chloride	µg/L	94	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Acetone	µg/L	NS	U	U	U	U	U	U	U	U	U	2J	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	µg/L	280	U	2	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
trans-1, 2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Trichloroethene	µg/L	NS	U	3	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Dibromochloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Chlorobenzene	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	U	U	U	U	U	U

Notes:

VOC analysis by USEPA CLP SOW OLM04.2

U = not detected above the quantitation limit

J = estimated concentration

NS = no standard

- = not sampled for

1,2-Dichloroethene (Total) is reported in years (1997-2006) as the sum of the detected concentrations of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

APPENDICES

APPENDIX A

ANALYTICAL REPORT

November 03, 2016

GHD

Sample Delivery Group:	L867898
Samples Received:	10/22/2016
Project Number:	8612191-01-
Description:	Lockport Landfill

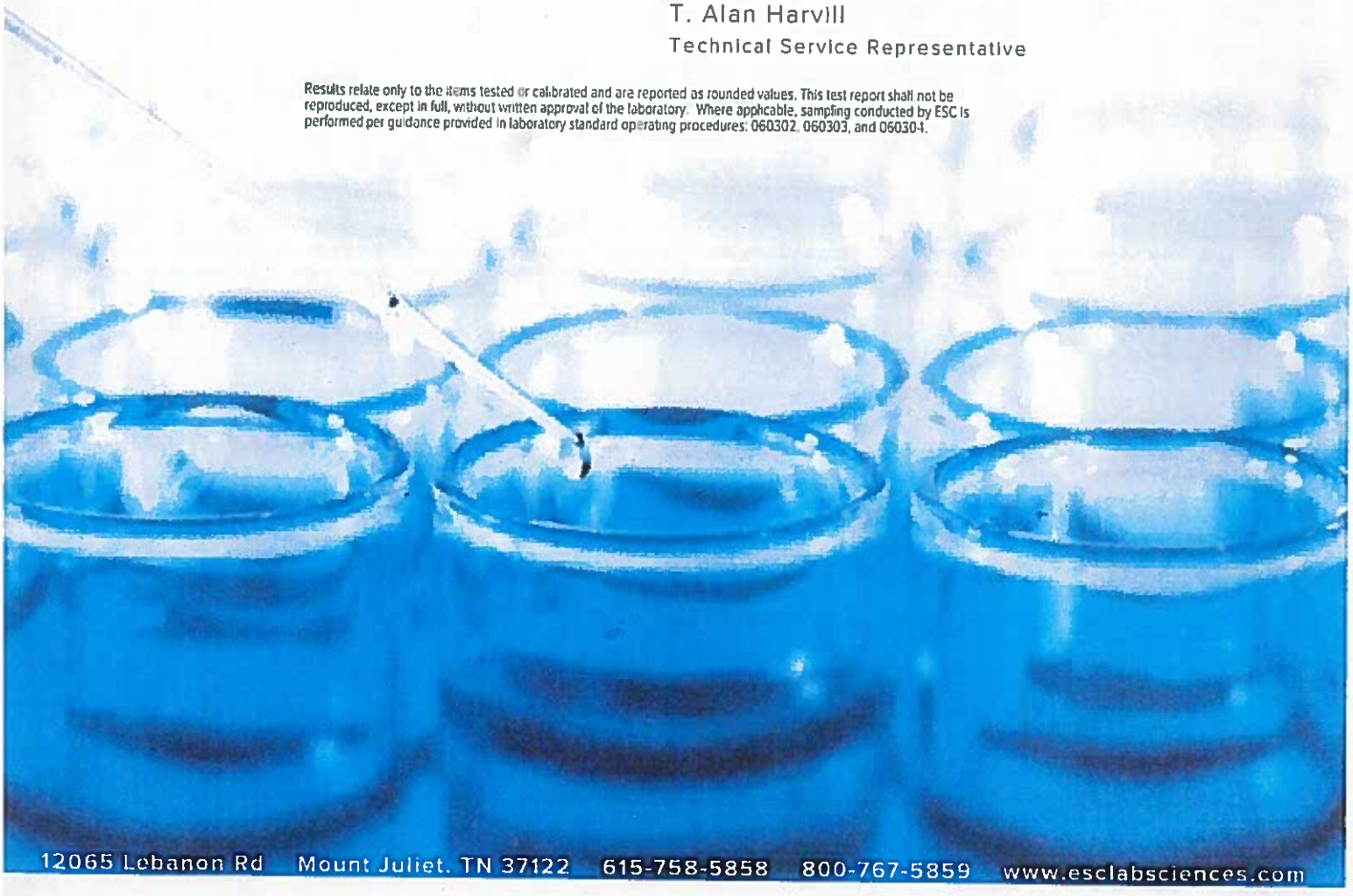
Report To:

Mr. Dave Rowlinson
285 Delaware Ave.
Suite 500
Buffalo, NY 14202

Entire Report Reviewed By:

T. Alan Harvill
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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ONE LAB. NATIONWIDE.

MW-8D L867898-01 GW

Collected by: Dave R. | Collected date/time: 10/21/16 12:30 | Received date/time: 10/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG920030	1	10/30/16 11:08	10/30/16 11:08	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG920030	1	11/01/16 18:26	11/01/16 18:26	JHH

MW-9I L867898-02 GW

Collected by: Dave R. | Collected date/time: 10/21/16 09:30 | Received date/time: 10/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG920030	1	10/30/16 11:30	10/30/16 11:30	JAH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG920030	1	11/01/16 18:47	11/01/16 18:47	JHH

MW-95 L867898-03 GW

Collected by: Dave R. | Collected date/time: 10/21/16 10:00 | Received date/time: 10/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG920041	1	10/28/16 16:22	10/28/16 16:22	JHH

MW-35 L867898-04 GW

Collected by: Dave R. | Collected date/time: 10/21/16 11:00 | Received date/time: 10/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG920041	1	10/28/16 16:43	10/28/16 16:43	JHH

OUTFALL-2 L867898-05 GW

Collected by: Dave R. | Collected date/time: 10/21/16 12:00 | Received date/time: 10/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG920041	1	10/28/16 17:03	10/28/16 17:03	JHH

TRIP BLANK L867898-06 GW

Collected by: Dave R. | Collected date/time: 10/21/16 00:00 | Received date/time: 10/22/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG920041	1	10/28/16 17:24	10/28/16 17:24	JHH

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

T. Alan Harvill
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	10/30/2016 11:08	WG920030
Benzene	ND		1.00	1	10/30/2016 11:08	WG920030
Bromochloromethane	ND		1.00	1	10/30/2016 11:08	WG920030
Bromodichloromethane	ND		1.00	1	10/30/2016 11:08	WG920030
Bromoform	ND		1.00	1	10/30/2016 11:08	WG920030
Bromomethane	ND		5.00	1	10/30/2016 11:08	WG920030
Carbon disulfide	ND		1.00	1	10/30/2016 11:08	WG920030
Carbon tetrachloride	ND		1.00	1	10/30/2016 11:08	WG920030
Chlorobenzene	ND		1.00	1	10/30/2016 11:08	WG920030
Chlorodibromomethane	ND		1.00	1	10/30/2016 11:08	WG920030
Chloroethane	ND		5.00	1	10/30/2016 11:08	WG920030
Chloroform	ND		5.00	1	10/30/2016 11:08	WG920030
Chloromethane	ND	J0	2.50	1	10/30/2016 11:08	WG920030
Cyclohexane	ND		1.00	1	10/30/2016 11:08	WG920030
1,2-Dibromo-3-Chloropropane	ND		5.00	1	10/30/2016 11:08	WG920030
1,2-Dibromoethane	ND		1.00	1	10/30/2016 11:08	WG920030
1,2-Dichlorobenzene	ND		1.00	1	10/30/2016 11:08	WG920030
1,3-Dichlorobenzene	ND		1.00	1	10/30/2016 11:08	WG920030
1,4-Dichlorobenzene	ND		1.00	1	10/30/2016 11:08	WG920030
Dichlorodifluoromethane	ND		5.00	1	10/30/2016 11:08	WG920030
1,1-Dichloroethane	ND		1.00	1	10/30/2016 11:08	WG920030
1,2-Dichloroethane	ND		1.00	1	10/30/2016 11:08	WG920030
1,1-Dichloroethene	ND		1.00	1	10/30/2016 11:08	WG920030
cis-1,2-Dichloroethene	19.8		1.00	1	10/30/2016 11:08	WG920030
trans-1,2-Dichloroethene	ND		1.00	1	10/30/2016 11:08	WG920030
1,2-Dichloropropane	ND		1.00	1	10/30/2016 11:08	WG920030
cis-1,3-Dichloropropene	ND		1.00	1	10/30/2016 11:08	WG920030
trans-1,3-Dichloropropene	ND		1.00	1	11/01/2016 18:26	WG920030
Ethylbenzene	ND		1.00	1	10/30/2016 11:08	WG920030
2-Hexanone	ND		10.0	1	10/30/2016 11:08	WG920030
Isopropylbenzene	ND		1.00	1	10/30/2016 11:08	WG920030
2-Butanone (MEK)	ND		10.0	1	10/30/2016 11:08	WG920030
Methyl Acetate	ND		20.0	1	10/30/2016 11:08	WG920030
Methyl Cyclohexane	ND		1.00	1	10/30/2016 11:08	WG920030
Methylene Chloride	ND		5.00	1	10/30/2016 11:08	WG920030
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	10/30/2016 11:08	WG920030
Methyl tert-butyl ether	ND		1.00	1	10/30/2016 11:08	WG920030
Styrene	ND		1.00	1	10/30/2016 11:08	WG920030
1,1,2,2-Tetrachloroethane	ND		1.00	1	10/30/2016 11:08	WG920030
Tetrachloroethene	ND		1.00	1	10/30/2016 11:08	WG920030
Toluene	ND		5.00	1	10/30/2016 11:08	WG920030
1,2,3-Trichlorobenzene	ND	J4	1.00	1	10/30/2016 11:08	WG920030
1,2,4-Trichlorobenzene	ND		1.00	1	10/30/2016 11:08	WG920030
1,1,1-Trichloroethane	ND		1.00	1	10/30/2016 11:08	WG920030
1,1,2-Trichloroethane	ND		1.00	1	10/30/2016 11:08	WG920030
Trichloroethene	ND		1.00	1	10/30/2016 11:08	WG920030
Trichlorofluoromethane	ND		5.00	1	10/30/2016 11:08	WG920030
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	10/30/2016 11:08	WG920030
Vinyl chloride	ND		1.00	1	10/30/2016 11:08	WG920030
Xylenes, Total	ND		3.00	1	10/30/2016 11:08	WG920030
(S) Toluene-d8	*104*		*90.0-115*		*10/30/2016 11:08*	WG920030
(S) Toluene-d8	*99.0*		*90.0-115*		*11/01/2016 18:26*	WG920030
(S) Dibromofluoromethane	*81.4*		*79.0-121*		*11/01/2016 18:26*	WG920030
(S) Dibromofluoromethane	*97.3*		*79.0-121*		*10/30/2016 11:08*	WG920030
(S) a,a,a-Trifluorotoluene	*104*		*90.4-116*		*10/30/2016 11:08*	WG920030
(S) a,a,a-Trifluorotoluene	*106*		*90.4-116*		*11/01/2016 18:26*	WG920030

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*96.5*		*80.1-120*		*11/01/2016 18:26*	*WG920030*
(S) 4-Bromofluorobenzene	*95.2*		*80.1-120*		*10/30/2016 11:08*	*WG920030*

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	10/30/2016 11:30	WG920030
Benzene	ND		1.00	1	10/30/2016 11:30	WG920030
Bromochloromethane	ND		1.00	1	10/30/2016 11:30	WG920030
Bromodichloromethane	ND		1.00	1	10/30/2016 11:30	WG920030
Bromoform	ND		1.00	1	10/30/2016 11:30	WG920030
Bromomethane	ND		5.00	1	10/30/2016 11:30	WG920030
Carbon disulfide	ND		1.00	1	10/30/2016 11:30	WG920030
Carbon tetrachloride	ND		1.00	1	10/30/2016 11:30	WG920030
Chlorobenzene	ND		1.00	1	10/30/2016 11:30	WG920030
Chlorodibromomethane	ND		1.00	1	10/30/2016 11:30	WG920030
Chloroethane	ND		5.00	1	10/30/2016 11:30	WG920030
Chloroform	ND		5.00	1	10/30/2016 11:30	WG920030
Chloromethane	ND	J0	2.50	1	10/30/2016 11:30	WG920030
Cyclohexane	ND		1.00	1	10/30/2016 11:30	WG920030
1,2-Dibromo-3-Chloropropane	ND		5.00	1	10/30/2016 11:30	WG920030
1,2-Dibromoethane	ND		1.00	1	10/30/2016 11:30	WG920030
1,2-Dichlorobenzene	ND		1.00	1	10/30/2016 11:30	WG920030
1,3-Dichlorobenzene	ND		1.00	1	10/30/2016 11:30	WG920030
1,4-Dichlorobenzene	ND		1.00	1	10/30/2016 11:30	WG920030
Dichlorodifluoromethane	ND		5.00	1	10/30/2016 11:30	WG920030
1,1-Dichloroethane	ND		1.00	1	10/30/2016 11:30	WG920030
1,2-Dichloroethane	ND		1.00	1	10/30/2016 11:30	WG920030
1,1-Dichloroethene	ND		1.00	1	10/30/2016 11:30	WG920030
cis-1,2-Dichloroethene	1.87		1.00	1	10/30/2016 11:30	WG920030
trans-1,2-Dichloroethene	ND		1.00	1	10/30/2016 11:30	WG920030
1,2-Dichloropropane	ND		1.00	1	10/30/2016 11:30	WG920030
cis-1,3-Dichloropropene	ND		1.00	1	10/30/2016 11:30	WG920030
trans-1,3-Dichloropropene	ND		1.00	1	11/01/2016 18:47	WG920030
Ethylbenzene	ND		1.00	1	10/30/2016 11:30	WG920030
2-Hexanone	ND		10.0	1	10/30/2016 11:30	WG920030
Isopropylbenzene	ND		1.00	1	10/30/2016 11:30	WG920030
2-Butanone (MEK)	ND		10.0	1	10/30/2016 11:30	WG920030
Methyl Acetate	ND		20.0	1	10/30/2016 11:30	WG920030
Methyl Cyclohexane	ND		1.00	1	10/30/2016 11:30	WG920030
Methylene Chloride	ND		5.00	1	10/30/2016 11:30	WG920030
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	10/30/2016 11:30	WG920030
Methyl tert-butyl ether	ND		1.00	1	10/30/2016 11:30	WG920030
Styrene	ND		1.00	1	10/30/2016 11:30	WG920030
1,1,2,2-Tetrachloroethane	ND		1.00	1	10/30/2016 11:30	WG920030
Tetrachloroethene	ND		1.00	1	10/30/2016 11:30	WG920030
Toluene	ND		5.00	1	10/30/2016 11:30	WG920030
1,2,3-Trichlorobenzene	ND	J1	1.00	1	10/30/2016 11:30	WG920030
1,2,4-Trichlorobenzene	ND		1.00	1	10/30/2016 11:30	WG920030
1,1,1-Trichloroethane	ND		1.00	1	10/30/2016 11:30	WG920030
1,1,2-Trichloroethane	ND		1.00	1	10/30/2016 11:30	WG920030
Trichloroethene	ND		1.00	1	10/30/2016 11:30	WG920030
Trichlorofluoromethane	ND		5.00	1	10/30/2016 11:30	WG920030
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	10/30/2016 11:30	WG920030
Vinyl chloride	ND		1.00	1	10/30/2016 11:30	WG920030
Xylenes, Total	ND		3.00	1	10/30/2016 11:30	WG920030
(S) Toluene-d8	*105*		*90.0-115*		*10/30/2016 11:30*	WG920030
(S) Toluene-d8	*99.1*		*90.0-115*		*11/01/2016 18:47*	WG920030
(S) Dibromofluoromethane	*82.7*		*79.0-121*		*11/01/2016 18:47*	WG920030
(S) Dibromofluoromethane	*96.1*		*79.0-121*		*10/30/2016 11:30*	WG920030
(S) a,a,a-Trifluorotoluene	*104*		*90.4-116*		*10/30/2016 11:30*	WG920030
(S) a,a,a-Trifluorotoluene	*107*		*90.4-116*		*11/01/2016 18:47*	WG920030

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	97.7		80.1-120		11/01/2016 18:47	WG920030
(S) 4-Bromofluorobenzene	96.0		80.1-120		10/30/2016 11:30	WG920030

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	10/28/2016 16:22	WG920041
Benzene	ND		1.00	1	10/28/2016 16:22	WG920041
Bromochloromethane	ND		1.00	1	10/28/2016 16:22	WG920041
Bromodichloromethane	ND		1.00	1	10/28/2016 16:22	WG920041
Bromoform	ND		1.00	1	10/28/2016 16:22	WG920041
Bromomethane	ND		5.00	1	10/28/2016 16:22	WG920041
Carbon disulfide	ND		1.00	1	10/28/2016 16:22	WG920041
Carbon tetrachloride	ND		1.00	1	10/28/2016 16:22	WG920041
Chlorobenzene	ND		1.00	1	10/28/2016 16:22	WG920041
Chlorodibromomethane	ND		1.00	1	10/28/2016 16:22	WG920041
Chloroethane	ND		5.00	1	10/28/2016 16:22	WG920041
Chloroform	ND		5.00	1	10/28/2016 16:22	WG920041
Chloromethane	ND		2.50	1	10/28/2016 16:22	WG920041
Cyclohexane	ND		1.00	1	10/28/2016 16:22	WG920041
1,2-Dibromo-3-Chloropropane	ND		5.00	1	10/28/2016 16:22	WG920041
1,2-Dibromoethane	ND		1.00	1	10/28/2016 16:22	WG920041
1,2-Dichlorobenzene	ND		1.00	1	10/28/2016 16:22	WG920041
1,3-Dichlorobenzene	ND		1.00	1	10/28/2016 16:22	WG920041
1,4-Dichlorobenzene	ND		1.00	1	10/28/2016 16:22	WG920041
Dichlorodifluoromethane	ND		5.00	1	10/28/2016 16:22	WG920041
1,1-Dichloroethane	ND		1.00	1	10/28/2016 16:22	WG920041
1,2-Dichloroethane	ND	J4	1.00	1	10/28/2016 16:22	WG920041
1,1-Dichloroethene	ND		1.00	1	10/28/2016 16:22	WG920041
cis-1,2-Dichloroethene	ND		1.00	1	10/28/2016 16:22	WG920041
trans-1,2-Dichloroethene	ND		1.00	1	10/28/2016 16:22	WG920041
1,2-Dichloropropane	ND		1.00	1	10/28/2016 16:22	WG920041
cis-1,3-Dichloropropene	ND		1.00	1	10/28/2016 16:22	WG920041
trans-1,3-Dichloropropene	ND		1.00	1	10/28/2016 16:22	WG920041
Ethylbenzene	ND		1.00	1	10/28/2016 16:22	WG920041
2-Hexanone	ND		10.0	1	10/28/2016 16:22	WG920041
Isopropylbenzene	ND		1.00	1	10/28/2016 16:22	WG920041
2-Butanone (MEK)	ND		10.0	1	10/28/2016 16:22	WG920041
Methyl Acetate	ND		20.0	1	10/28/2016 16:22	WG920041
Methyl Cyclohexane	ND		1.00	1	10/28/2016 16:22	WG920041
Methylene Chloride	ND		5.00	1	10/28/2016 16:22	WG920041
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	10/28/2016 16:22	WG920041
Methyl tert-butyl ether	ND		1.00	1	10/28/2016 16:22	WG920041
Styrene	ND		1.00	1	10/28/2016 16:22	WG920041
1,1,2,2-Tetrachloroethane	ND		1.00	1	10/28/2016 16:22	WG920041
Tetrachloroethene	ND		1.00	1	10/28/2016 16:22	WG920041
Toluene	ND		5.00	1	10/28/2016 16:22	WG920041
1,2,3-Trichlorobenzene	ND		1.00	1	10/28/2016 16:22	WG920041
1,2,4-Trichlorobenzene	ND		1.00	1	10/28/2016 16:22	WG920041
1,1,1-Trichloroethane	ND		1.00	1	10/28/2016 16:22	WG920041
1,1,2-Trichloroethane	ND		1.00	1	10/28/2016 16:22	WG920041
Trichloroethene	ND		1.00	1	10/28/2016 16:22	WG920041
Trichlorofluoromethane	ND		5.00	1	10/28/2016 16:22	WG920041
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	10/28/2016 16:22	WG920041
Vinyl chloride	ND		1.00	1	10/28/2016 16:22	WG920041
Xylenes, Total	ND		3.00	1	10/28/2016 16:22	WG920041
(S) Toluene-d8	*99.7*		*90.0-115*		*10/28/2016 16:22*	WG920041
(S) Dibromofluoromethane	*95.6*		*79.0-121*		*10/28/2016 16:22*	WG920041
(S) a,a,a-Trifluorotoluene	*104*		*90.4-116*		*10/28/2016 16:22*	WG920041
(S) 4-Bromofluorobenzene	*105*		*80.1-120*		*10/28/2016 16:22*	WG920041

Cp
1 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	10/28/2016 16:43	WG920041
Benzene	ND		1.00	1	10/28/2016 16:43	WG920041
Bromochloromethane	ND		1.00	1	10/28/2016 16:43	WG920041
Bromodichloromethane	ND		1.00	1	10/28/2016 16:43	WG920041
Bromoform	ND		1.00	1	10/28/2016 16:43	WG920041
Bromomethane	ND		5.00	1	10/28/2016 16:43	WG920041
Carbon disulfide	ND		1.00	1	10/28/2016 16:43	WG920041
Carbon tetrachloride	ND		1.00	1	10/28/2016 16:43	WG920041
Chlorobenzene	ND		1.00	1	10/28/2016 16:43	WG920041
Chlorodibromomethane	ND		1.00	1	10/28/2016 16:43	WG920041
Chloroethane	ND		5.00	1	10/28/2016 16:43	WG920041
Chloroform	ND		5.00	1	10/28/2016 16:43	WG920041
Chloromethane	ND		2.50	1	10/28/2016 16:43	WG920041
Cyclohexane	ND		1.00	1	10/28/2016 16:43	WG920041
1,2-Dibromo-3-Chloropropane	ND		5.00	1	10/28/2016 16:43	WG920041
1,2-Dibromoethane	ND		1.00	1	10/28/2016 16:43	WG920041
1,2-Dichlorobenzene	ND		1.00	1	10/28/2016 16:43	WG920041
1,3-Dichlorobenzene	ND		1.00	1	10/28/2016 16:43	WG920041
1,4-Dichlorobenzene	ND		1.00	1	10/28/2016 16:43	WG920041
Dichlorodifluoromethane	ND		5.00	1	10/28/2016 16:43	WG920041
1,1-Dichloroethane	ND		1.00	1	10/28/2016 16:43	WG920041
1,2-Dichloroethane	ND	J4	1.00	1	10/28/2016 16:43	WG920041
1,1-Dichloroethene	ND		1.00	1	10/28/2016 16:43	WG920041
cis-1,2-Dichloroethene	ND		1.00	1	10/28/2016 16:43	WG920041
trans-1,2-Dichloroethene	ND		1.00	1	10/28/2016 16:43	WG920041
1,2-Dichloropropane	ND		1.00	1	10/28/2016 16:43	WG920041
cis-1,3-Dichloropropene	ND		1.00	1	10/28/2016 16:43	WG920041
trans-1,3-Dichloropropene	ND		1.00	1	10/28/2016 16:43	WG920041
Ethylbenzene	ND		1.00	1	10/28/2016 16:43	WG920041
2-Hexanone	ND		10.0	1	10/28/2016 16:43	WG920041
Isopropylbenzene	ND		1.00	1	10/28/2016 16:43	WG920041
2-Butanone (MEK)	ND		10.0	1	10/28/2016 16:43	WG920041
Methyl Acetate	ND		20.0	1	10/28/2016 16:43	WG920041
Methyl Cyclohexane	ND		1.00	1	10/28/2016 16:43	WG920041
Methylene Chloride	ND		5.00	1	10/28/2016 16:43	WG920041
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	10/28/2016 16:43	WG920041
Methyl tert-butyl ether	ND		1.00	1	10/28/2016 16:43	WG920041
Styrene	ND		1.00	1	10/28/2016 16:43	WG920041
1,1,2,2-Tetrachloroethane	ND		1.00	1	10/28/2016 16:43	WG920041
Tetrachloroethene	ND		1.00	1	10/28/2016 16:43	WG920041
Toluene	ND		5.00	1	10/28/2016 16:43	WG920041
1,2,3-Trichlorobenzene	ND		1.00	1	10/28/2016 16:43	WG920041
1,2,4-Trichlorobenzene	ND		1.00	1	10/28/2016 16:43	WG920041
1,1,1-Trichloroethane	ND		1.00	1	10/28/2016 16:43	WG920041
1,1,2-Trichloroethane	ND		1.00	1	10/28/2016 16:43	WG920041
Trichloroethene	ND		1.00	1	10/28/2016 16:43	WG920041
Trichlorofluoromethane	ND		5.00	1	10/28/2016 16:43	WG920041
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	10/28/2016 16:43	WG920041
Vinyl chloride	ND		1.00	1	10/28/2016 16:43	WG920041
Xylenes, Total	ND		3.00	1	10/28/2016 16:43	WG920041
(S) Toluene-d8	*98.9*		*90.0-115*		*10/28/2016 16:43*	WG920041
(S) Dibromofluoromethane	*93.3*		*79.0-121*		*10/28/2016 16:43*	WG920041
(S) a,a,a-Trifluorotoluene	*104*		*90.4-116*		*10/28/2016 16:43*	WG920041
(S) 4-Bromofluorobenzene	*104*		*80.1-120*		*10/28/2016 16:43*	WG920041

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	10/28/2016 17:03	WG920041
Benzene	ND		1.00	1	10/28/2016 17:03	WG920041
Bromochloromethane	ND		1.00	1	10/28/2016 17:03	WG920041
Bromodichloromethane	ND		1.00	1	10/28/2016 17:03	WG920041
Bromoform	ND		1.00	1	10/28/2016 17:03	WG920041
Bromomethane	ND		5.00	1	10/28/2016 17:03	WG920041
Carbon disulfide	ND		1.00	1	10/28/2016 17:03	WG920041
Carbon tetrachloride	ND		1.00	1	10/28/2016 17:03	WG920041
Chlorobenzene	ND		1.00	1	10/28/2016 17:03	WG920041
Chlorodibromomethane	ND		1.00	1	10/28/2016 17:03	WG920041
Chloroethane	ND		5.00	1	10/28/2016 17:03	WG920041
Chloroform	ND		5.00	1	10/28/2016 17:03	WG920041
Chloromethane	ND		2.50	1	10/28/2016 17:03	WG920041
Cyclohexane	ND		1.00	1	10/28/2016 17:03	WG920041
1,2-Dibromo-3-Chloropropane	ND		5.00	1	10/28/2016 17:03	WG920041
1,2-Dibromoethane	ND		1.00	1	10/28/2016 17:03	WG920041
1,2-Dichlorobenzene	ND		1.00	1	10/28/2016 17:03	WG920041
1,3-Dichlorobenzene	ND		1.00	1	10/28/2016 17:03	WG920041
1,4-Dichlorobenzene	ND		1.00	1	10/28/2016 17:03	WG920041
Dichlorodifluoromethane	ND		5.00	1	10/28/2016 17:03	WG920041
1,1-Dichloroethane	ND		1.00	1	10/28/2016 17:03	WG920041
1,2-Dichloroethane	ND	J4	1.00	1	10/28/2016 17:03	WG920041
1,1-Dichloroethene	ND		1.00	1	10/28/2016 17:03	WG920041
cis-1,2-Dichloroethene	ND		1.00	1	10/28/2016 17:03	WG920041
trans-1,2-Dichloroethene	ND		1.00	1	10/28/2016 17:03	WG920041
1,2-Dichloropropane	ND		1.00	1	10/28/2016 17:03	WG920041
cis-1,3-Dichloropropene	ND		1.00	1	10/28/2016 17:03	WG920041
trans-1,3-Dichloropropene	ND		1.00	1	10/28/2016 17:03	WG920041
Ethylbenzene	ND		1.00	1	10/28/2016 17:03	WG920041
2-Hexanone	ND		10.0	1	10/28/2016 17:03	WG920041
Isopropylbenzene	ND		1.00	1	10/28/2016 17:03	WG920041
2-Butanone (MEK)	ND		10.0	1	10/28/2016 17:03	WG920041
Methyl Acetate	ND		20.0	1	10/28/2016 17:03	WG920041
Methyl Cyclohexane	ND		1.00	1	10/28/2016 17:03	WG920041
Methylene Chloride	ND		5.00	1	10/28/2016 17:03	WG920041
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	10/28/2016 17:03	WG920041
Methyl tert-butyl ether	ND		1.00	1	10/28/2016 17:03	WG920041
Styrene	ND		1.00	1	10/28/2016 17:03	WG920041
1,1,2,2-Tetrachloroethane	ND		1.00	1	10/28/2016 17:03	WG920041
Tetrachloroethene	ND		1.00	1	10/28/2016 17:03	WG920041
Toluene	ND		5.00	1	10/28/2016 17:03	WG920041
1,2,3-Trichlorobenzene	ND		1.00	1	10/28/2016 17:03	WG920041
1,2,4-Trichlorobenzene	ND		1.00	1	10/28/2016 17:03	WG920041
1,1,1-Trichloroethane	ND		1.00	1	10/28/2016 17:03	WG920041
1,1,2-Trichloroethane	ND		1.00	1	10/28/2016 17:03	WG920041
Trichloroethene	ND		1.00	1	10/28/2016 17:03	WG920041
Trichlorofluoromethane	ND		5.00	1	10/28/2016 17:03	WG920041
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	10/28/2016 17:03	WG920041
Vinyl chloride	ND		1.00	1	10/28/2016 17:03	WG920041
Xylenes, Total	ND		3.00	1	10/28/2016 17:03	WG920041
(S) Toluene-d8	*98.4*		*90.0-115*		*10/28/2016 17:03*	WG920041
(S) Dibromofluoromethane	*94.7*		*79.0-121*		*10/28/2016 17:03*	WG920041
(S) a,a,a-Trifluorotoluene	*103*		*90.4-116*		*10/28/2016 17:03*	WG920041
(S) 4-Bromofluorobenzene	*104*		*80.1-120*		*10/28/2016 17:03*	WG920041

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	10/28/2016 17:24	WG920041
Benzene	ND		1.00	1	10/28/2016 17:24	WG920041
Bromochloromethane	ND		1.00	1	10/28/2016 17:24	WG920041
Bromodichloromethane	ND		1.00	1	10/28/2016 17:24	WG920041
Bromoform	ND		1.00	1	10/28/2016 17:24	WG920041
Bromomethane	ND		5.00	1	10/28/2016 17:24	WG920041
Carbon disulfide	ND		1.00	1	10/28/2016 17:24	WG920041
Carbon tetrachloride	ND		1.00	1	10/28/2016 17:24	WG920041
Chlorobenzene	ND		1.00	1	10/28/2016 17:24	WG920041
Chlorodibromomethane	ND		1.00	1	10/28/2016 17:24	WG920041
Chloroethane	ND		5.00	1	10/28/2016 17:24	WG920041
Chloroform	ND		5.00	1	10/28/2016 17:24	WG920041
Chloromethane	ND		2.50	1	10/28/2016 17:24	WG920041
Cyclohexane	ND		1.00	1	10/28/2016 17:24	WG920041
1,2-Dibromo-3-Chloropropane	ND		5.00	1	10/28/2016 17:24	WG920041
1,2-Dibromoethane	ND		1.00	1	10/28/2016 17:24	WG920041
1,2-Dichlorobenzene	ND		1.00	1	10/28/2016 17:24	WG920041
1,3-Dichlorobenzene	ND		1.00	1	10/28/2016 17:24	WG920041
1,4-Dichlorobenzene	ND		1.00	1	10/28/2016 17:24	WG920041
Dichlorodifluoromethane	ND		5.00	1	10/28/2016 17:24	WG920041
1,1-Dichloroethane	ND		1.00	1	10/28/2016 17:24	WG920041
1,2-Dichloroethane	ND	J-1	1.00	1	10/28/2016 17:24	WG920041
1,1-Dichloroethene	ND		1.00	1	10/28/2016 17:24	WG920041
cis-1,2-Dichloroethene	ND		1.00	1	10/28/2016 17:24	WG920041
trans-1,2-Dichloroethene	ND		1.00	1	10/28/2016 17:24	WG920041
1,2-Dichloropropane	ND		1.00	1	10/28/2016 17:24	WG920041
cis-1,3-Dichloropropene	ND		1.00	1	10/28/2016 17:24	WG920041
trans-1,3-Dichloropropene	ND		1.00	1	10/28/2016 17:24	WG920041
Ethylbenzene	ND		1.00	1	10/28/2016 17:24	WG920041
2-Hexanone	ND		10.0	1	10/28/2016 17:24	WG920041
Isopropylbenzene	ND		1.00	1	10/28/2016 17:24	WG920041
2-Butanone (MEK)	ND		10.0	1	10/28/2016 17:24	WG920041
Methyl Acetate	ND		20.0	1	10/28/2016 17:24	WG920041
Methyl Cyclohexane	ND		1.00	1	10/28/2016 17:24	WG920041
Methylene Chloride	ND		5.00	1	10/28/2016 17:24	WG920041
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	10/28/2016 17:24	WG920041
Methyl tert-butyl ether	ND		1.00	1	10/28/2016 17:24	WG920041
Styrene	ND		1.00	1	10/28/2016 17:24	WG920041
1,1,2,2-Tetrachloroethane	ND		1.00	1	10/28/2016 17:24	WG920041
Tetrachloroethene	ND		1.00	1	10/28/2016 17:24	WG920041
Toluene	ND		5.00	1	10/28/2016 17:24	WG920041
1,2,3-Trichlorobenzene	ND		1.00	1	10/28/2016 17:24	WG920041
1,2,4-Trichlorobenzene	ND		1.00	1	10/28/2016 17:24	WG920041
1,1,1-Trichloroethane	ND		1.00	1	10/28/2016 17:24	WG920041
1,1,2-Trichloroethane	ND		1.00	1	10/28/2016 17:24	WG920041
Trichloroethene	ND		1.00	1	10/28/2016 17:24	WG920041
Trichlorofluoromethane	ND		5.00	1	10/28/2016 17:24	WG920041
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	10/28/2016 17:24	WG920041
Vinyl chloride	ND		1.00	1	10/28/2016 17:24	WG920041
Xylenes, Total	ND		3.00	1	10/28/2016 17:24	WG920041
(S) Toluene-d8	*98.2*		*90.0-115*		*10/28/2016 17:24*	WG920041
(S) Dibromofluoromethane	*94.6*		*79.0-121*		*10/28/2016 17:24*	WG920041
(S) a,a,a-Trifluorotoluene	*103*		*90.4-116*		*10/28/2016 17:24*	WG920041
(S) 4-Bromofluorobenzene	*105*		*80.1-120*		*10/28/2016 17:24*	WG920041

Method Blank (MB)

(MB) R3174777-3 10/30/16 03:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.343	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.358	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.305	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.390	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.780	5.00

Method Blank (MB)

(MB) R3174777-3 10/30/16 03:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*104*			*90.0-115*
(S) Dibromofluoromethane	*97.2*			*79.0-121*
(S) a,a,a-Trifluorotoluene	*102*			*90.4-116*
(S) 4-Bromofluorobenzene	*95.2*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3174777-1 10/30/16 02:15 • (LCSD) R3174777-2 10/30/16 02:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	156	161	125	128	28.7-175			2.65	20.9
Benzene	25.0	23.6	24.4	94.5	97.7	73.0-122			3.29	20
Bromodichloromethane	25.0	24.1	25.0	96.6	100	75.5-121			3.49	20
Bromochloromethane	25.0	23.6	25.1	94.3	101	78.9-123			6.38	20
Bromoform	25.0	27.2	27.4	109	110	71.5-131			0.720	20
Bromomethane	25.0	27.5	31.4	110	125	22.4-187			13.2	20
Carbon disulfide	25.0	24.0	23.6	96.1	94.3	53.0-134			1.87	20
Carbon tetrachloride	25.0	22.8	22.9	91.3	91.6	70.9-129			0.360	20
Chlorobenzene	25.0	25.7	25.3	103	101	79.7-122			1.47	20
Chlorodibromomethane	25.0	27.8	27.2	111	109	78.2-124			2.01	20
Chloroethane	25.0	21.2	22.1	84.7	88.6	41.2-153			4.44	20
Chloroform	25.0	24.1	24.8	96.4	99.1	73.2-125			2.74	20
Chloromethane	25.0	21.9	22.0	87.6	87.9	55.8-134			0.340	20
1,2-Dibromo-3-Chloropropane	25.0	22.3	23.7	89.3	94.8	64.8-131			5.99	20
1,2-Dibromoethane	25.0	24.9	24.8	99.7	99.4	79.8-122			0.380	20
1,2-Dichlorobenzene	25.0	24.4	25.6	97.7	102	84.7-118			4.62	20
1,3-Dichlorobenzene	25.0	22.6	22.0	90.6	88.1	77.6-127			2.78	20
1,4-Dichlorobenzene	25.0	22.9	24.5	91.8	98.2	82.2-114			6.74	20
Dichlorodifluoromethane	25.0	22.8	22.7	91.2	90.9	56.0-134			0.330	20
1,1-Dichloroethane	25.0	24.6	25.2	98.6	101	71.7-127			2.38	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3174777-1 10/30/16 02:15 • (LCSD) R3174777-2 10/30/16 02:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2-Dichloroethane	25.0	23.0	23.7	91.9	94.7	79.8-122			2.99	20
1,1-Dichloroethene	25.0	24.9	25.0	99.7	100	59.9-137			0.260	20
cis-1,2-Dichloroethene	25.0	25.3	25.4	101	101	77.3-122			0.320	20
trans-1,2-Dichloroethene	25.0	24.5	25.1	98.2	100	72.6-125			2.29	20
1,2-Dichloropropane	25.0	26.2	27.1	105	108	77.4-125			3.45	20
cis-1,3-Dichloropropene	25.0	26.1	26.8	104	107	77.7-124			2.67	20
Ethylbenzene	25.0	25.1	24.5	100	98.0	80.9-121			2.51	20
2-Hexanone	125	152	147	122	117	59.4-151			3.59	20
Isopropylbenzene	25.0	24.0	22.7	96.2	90.9	81.6-124			5.63	20
2-Butanone (MEK)	125	146	152	116	122	46.4-155			4.59	20
Methylene Chloride	25.0	24.3	25.5	97.3	102	69.5-120			4.54	20
4-Methyl-2-pentanone (MIBK)	125	135	139	108	111	63.3-138			3.03	20
Methyl tert-butyl ether	25.0	23.5	24.4	93.8	97.5	70.1-125			3.81	20
Styrene	25.0	25.5	24.7	102	98.8	79.9-124			3.29	20
1,1,2,2-Tetrachloroethane	25.0	24.7	24.0	98.7	96.1	79.3-123			2.69	20
Tetrachloroethene	25.0	25.9	25.3	104	101	73.5-130			2.29	20
Toluene	25.0	25.0	25.3	100	101	77.9-116			0.870	20
1,1,2-Trichlorotrifluoroethane	25.0	24.4	24.9	97.7	99.4	62.0-141			1.74	20
1,2,3-Trichlorobenzene	25.0	19.0	18.8	76.1	75.3	75.7-134	J1		1.03	20
1,2,4-Trichlorobenzene	25.0	23.0	23.0	91.9	92.0	76.1-135			0.140	20
1,1,1-Trichloroethane	25.0	23.5	24.1	94.1	96.3	71.1-129			2.29	20
1,1,2-Trichloroethane	25.0	25.1	25.3	101	101	81.6-120			0.430	20
Trichloroethene	25.0	27.1	26.5	109	106	79.5-121			2.24	20
Trichlorofluoromethane	25.0	22.6	22.5	90.4	90.1	49.1-157			0.260	20
Vinyl chloride	25.0	24.4	24.9	97.6	99.4	61.5-134			1.88	20
Xylenes, Total	75.0	75.9	74.3	101	99.1	79.2-122			2.17	20
(S) Toluene-d8				*104*	*105*	*90.0-115*				
(S) Dibromofluoromethane				*95.0*	*97.2*	*79.0-121*				
(S) a,a,a-Trifluorotoluene				*103*	*103*	*90.4-116*				
(S) 4-Bromofluorobenzene				*99.6*	*94.9*	*80.1-120*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3175066-1 11/01/16 08:51 • (LCSD) R3175066-3 11/01/16 12:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	25.0	23.7	23.8	94.8	95.3	73.5-127			0.550	20
(S) Toluene-d8				*102*	*102*	*90.0-115*				
(S) Dibromofluoromethane				*50.4*	*51.1*	*79.0-121*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3175066-1 11/01/16 08:51 • (LCSD) R3175066-3 11/01/16 12:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) α,α,α-Trifluorotoluene				*107*	*106*	*90.4-116*				
(S) 4-Bromofluorobenzene				*100*	*101*	*80.1-120*				

Method Blank (MB)

(MB) R3174659-3 10/28/16 11:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.413	1.00
Ethylbenzene	U		0.334	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00

Method Blank (MB)

(MB) R3174659-3 10/28/16 11:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.780	5.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d3	*97.3*			*90.0-115*
(S) Dibromofluoromethane	*92.3*			*79.0-121*
(S) a,a,a-Trifluorotoluene	*106*			*90.4-116*
(S) 4-Bromofluorobenzene	*106*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3174659-1 10/28/16 09:40 • (LCSD) R3174659-2 10/28/16 10:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	98.9	112	79.1	89.5	28.7-175			12.3	20.9
Benzene	25.0	20.4	22.9	81.9	91.5	73.0-122			11.2	20
Bromodichloromethane	25.0	23.1	25.5	92.2	102	75.5-121			9.89	20
Bromochloromethane	25.0	19.8	20.8	79.4	83.4	78.9-123			4.95	20
Bromoform	25.0	24.6	27.8	98.3	111	71.5-131			12.2	20
Bromomethane	25.0	16.7	19.8	66.8	79.0	22.4-187			16.8	20
Carbon disulfide	25.0	22.5	25.8	89.9	103	53.0-134			13.8	20
Carbon tetrachloride	25.0	23.6	26.2	94.5	105	70.9-129			10.5	20
Chlorobenzene	25.0	23.9	26.2	95.4	105	79.7-122			9.27	20
Chlorodibromomethane	25.0	24.9	27.1	99.6	108	78.2-124			8.38	20
Chloroethane	25.0	22.5	25.7	90.1	103	41.2-153			13.1	20
Chloroform	25.0	21.3	23.8	85.1	95.2	73.2-125			11.2	20
Chloromethane	25.0	23.5	26.4	93.9	106	55.8-134			11.7	20
1,2-Dibromo-3-Chloropropane	25.0	21.4	24.6	85.5	98.3	64.8-131			14.0	20
1,2-Dibromoethane	25.0	24.0	26.5	96.0	106	79.8-122			9.78	20
1,2-Dichlorobenzene	25.0	21.6	24.4	86.4	97.4	84.7-118			12.0	20
1,3-Dichlorobenzene	25.0	24.0	26.4	96.0	106	77.6-127			9.51	20
1,4-Dichlorobenzene	25.0	21.4	23.8	85.7	95.3	82.2-114			10.7	20
Dichlorodifluoromethane	25.0	22.5	25.5	90.1	102	56.0-134			12.4	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3174659-1 10/28/16 09:40 • (LCSD) R3174659-2 10/28/16 10:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethane	25.0	20.6	23.0	82.5	91.9	71.7-127			10.8	20
1,2-Dichloroethane	25.0	19.9	22.2	79.5	88.9	79.8-122	J1		11.2	20
1,1-Dichloroethene	25.0	24.3	27.5	97.4	110	59.9-137			12.2	20
cis-1,2-Dichloroethene	25.0	23.6	24.8	94.3	99.2	77.3-122			5.11	20
trans-1,2-Dichloroethene	25.0	22.5	24.9	89.9	99.5	72.6-125			10.1	20
1,2-Dichloropropane	25.0	21.8	24.4	87.3	97.7	77.4-125			11.2	20
cis-1,3-Dichloropropene	25.0	22.5	25.2	90.2	101	77.7-124			11.1	20
trans-1,3-Dichloropropene	25.0	21.9	24.6	87.7	98.4	73.5-127			11.5	20
Ethylbenzene	25.0	23.6	26.1	94.5	104	80.9-121			10.0	20
2-Hexanone	125	121	133	96.4	107	59.4-151			10.2	20
Isopropylbenzene	25.0	23.5	26.0	93.9	104	81.6-124			10.3	20
2-Butanone (MEK)	125	104	117	83.6	93.3	46.4-155			11.0	20
Methylene Chloride	25.0	20.6	22.8	82.3	91.4	69.5-120			10.5	20
4-Methyl-2-pentanone (MIBK)	125	107	120	85.4	96.2	63.3-138			11.9	20
Methyl tert-butyl ether	25.0	19.2	21.4	76.8	85.7	70.1-125			10.9	20
Styrene	25.0	24.9	27.0	99.5	108	79.9-124			8.27	20
1,1,2,2-Tetrachloroethane	25.0	22.9	25.3	91.6	101	79.3-123			9.98	20
Tetrachloroethene	25.0	25.9	28.8	104	115	73.5-130			10.7	20
Toluene	25.0	22.2	25.3	88.7	101	77.9-116			13.1	20
1,1,2-Trichlorotrifluoroethane	25.0	25.9	29.6	104	118	62.0-141			13.4	20
1,2,3-Trichlorobenzene	25.0	20.3	22.6	81.3	90.3	75.7-134			10.5	20
1,2,4-Trichlorobenzene	25.0	22.0	24.4	87.9	97.8	76.1-136			10.6	20
1,1,1-Trichloroethane	25.0	21.5	23.8	85.9	95.4	71.1-129			10.4	20
1,1,2-Trichloroethane	25.0	22.7	24.9	90.6	99.5	81.6-120			9.31	20
Trichloroethene	25.0	23.2	26.1	92.9	105	79.5-121			11.8	20
Trichlorofluoromethane	25.0	24.1	27.6	96.6	111	49.1-157			13.5	20
Vinyl chloride	25.0	22.2	24.6	88.9	98.3	61.5-134			10.1	20
Xylenes, Total	75.0	71.7	78.5	95.5	105	79.2-122			9.15	20
(S) Toluene-d8				*95.4*	*98.9*	*90.0-115*				
(S) Dibromofluoromethane				*93.2*	*94.0*	*79.0-121*				
(S) a,a,a-Trifluorotoluene				*106*	*107*	*90.4-116*				
(S) 4-Bromofluorobenzene				*106*	*105*	*80.1-120*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J0	J0 - Analyte exceeds %D or %Rec for Continuing Calibration per 8260C or 8270D method specific criteria. The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [14]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

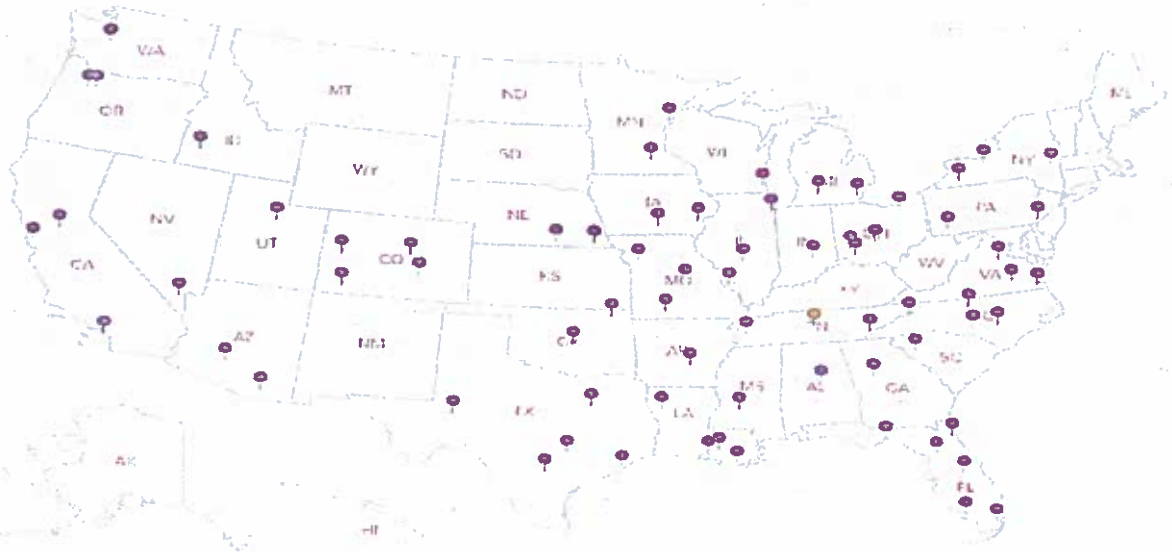
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [14] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



GHD

285 Delaware Ave.
Suite 500
Buffalo, NY 14202

Billing Information & Quote Number:
Mr. Dave Rowlinson
285 Delaware Ave.
Suite 500
Buffalo, NY 14202

Report to: Mr. Dave Rowlinson

Email To: dave.rowlinson@ghd.com; brian.doyle@ghd.com

Project Description: Lockport Landfill

City/State Collected: Lockport, NY

Phone: 716-748-6624
Fax:

Client Project #: 8612191-01-

Lab Project #: STEARNSANY-LOCKPORT

Collected by (print): Dave Rowlinson

Site/Facility ID #:

P.O. #: 34002145

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Data Results Needed
Email? ___ No X Yes
FAX? ___ No ___ Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES

L# L867898
B164

Acctnum: STEARNSANY
Template: T89880
Prelogin: P572729
TSR: 364 - T. Alan Harvill
PB: 10/13/16 ac
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	V8260TCLC 40mlAmb-HCl	V8260TCLC 40mlAmb-HCl-Blk	Rem./Cont. Preserved	Sample # (lab only)
MW-8D	G	GW		10/21/16	12:33pm	2	X			-01
MW-8I	G	GW		↓	9:30am	2	X			-02
MW-9S	G	GW		↓	10:00am	2	X			-03
MW-3S	G	GW		↓	11:00am	2	X			-04
Outfall L-2	G	GW		↓	12:00	2	X			-05
		GW				2	X			
		GW				2	X			
TRIP BLANK		GW				1		X		
										-06

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ________

Remarks:

pH ______ Temp ______
Flow ______ Other ______

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ ____	Hold #
[signature]	10/21/16	4:00pm			Condition: (lab use only) OK
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp 2.4 °C Bottles Received 10VP+TB	COC Seal Intact: ✓ Y ___ N ___ NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 10-22-16 Time: 0900	pH Checked: NCF:

APPENDIX B

GHD INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE: Lockport City Landfill — DATE: 10/20/16

Sampler: Dave Rowlinson — SAMPLE ID: MW-3S

Depth of well (from top of casing)..... 13.24 ft
Initial static water level (from top of casing).... 4.6 ft

Evacuation Method:

Submersible		Centrifugal		2in. casing:	8.64	ft. of water x .16 =	1.38 gallons
Airlift		Pos. Displ.		3in. casing:		ft. of water x .36 =	gallons
Bailer	X	>>> No. of bails		4in. casing:		ft. of water x .65 =	gallons

Well Volume Calculation

Volume of water removed: 1.75 gals.

> 3 volumes: yes [no]

dry: [yes] no

Field Tests:

Temp:	15.8 C
pH	6.7
Conductivity	3.54 mS/cm
DO	9.85 mg/l
Turbidity	-5 NTUs
Salinity	0.20 %

Sampling: Time: 11:00 PM

Sampling Method:

Stainless Steel Bailer	
Disposable Bailer	X
Disposable Pump	
Other	

Observations:

Weather/Temperature: Rain, 50°

Physical Appearance and Odor of Sample: No odor, reddish-brown color, then dark brown

Comments: Debris around monitoring well.
Unable to fully purge well due to obstruction in well between the riser and the screen.
Well pad is intact and the stickup protective cover is in good condition.

GHD INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE Lockport City Landfill DATE 10/20/16

Sampler: Dave Rowlinson SAMPLE ID MW-6D

Depth of well (from top of casing)..... 77.12 ft
Initial static water level (from top of casing).... 77.1 ft

Evacuation Method:

Submersible		Centrifugal		2in. casing:	0.02	ft. of water x .16 =	0.00 gallons
Airlift		Pos. Displ.		3in. casing:		ft. of water x .36 =	gallons
Bailer	X	>>> No. of bails		4in. casing:		ft. of water x .65 =	gallons

Well Volume Calculation

Volume of water removed 0.00 gals.

> 3 volumes: yes **no**

dry: **yes** no

Field Tests:

Temp:		C
pH		
Conductivity		mS/cm
DO		mg/l
Turbidity		NTUs
Oxidation Reduction Potential(ORP)		mV
Salinity		%

Sampling: Time: 12:00 noon

Sampling Method:

Stainless Steel Bailer	
Disposable Bailer	X
Disposable Pump	
Other	

Observations:

Weather/Temperature: Rain, 50°

Physical Appearance and Odor of Sample:

Comments: Unable to test for water quality parameters and take samples due to a neglible amount of water in well. Well pad is intact and the stickup protective cover is in good condition.

GHD INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE: Lockport City Landfill — DATE: 10/20/16

Sampler: Dave Rowlinson — SAMPLE ID: MW-8D

Depth of well (from top of casing)..... 76.67 ft
Initial static water level (from top of casing).... 72.1 ft

Evacuation Method:

Submersible		Centrifugal			
Airlift		Pos. Displ.			
Bailer	X	>>> No. of bails			

Well Volume Calculation

2in. casing:	4.57 ft. of water x .16 =	0.73	gallons
3in. casing:	ft. of water x .36 =		gallons
4in. casing:	ft. of water x .65 =		gallons

Volume of water removed: 1.00 gals.

> 3 volumes: yes [no]

dry: [yes] no

Field Tests:

Temp:	11.9 C
pH	6.5
Conductivity	2.37 mS/cm
DO	10.90 mg/l
Turbidity	-88.1 NTUs
Salinity	0.1 %

Sampling: Time: 12:30 pm

Sampling Method:

Stainless Steel Bailer	
Disposable Bailer	X
Disposable Pump	
Other	

Observations:

Weather/Temperature: Rain, 50°

Physical Appearance and Odor of Sample: Clear, then light brown

Comments: Well purged dry after 1.0 gallons.
Well pad is intact and the stickup protective cover is in good condition.

GHD INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE: Lockport City Landfill

DATE: 10/20/16

Sampler: Dave Rowlinson

SAMPLE ID: MW-9S

Depth of well (from top of casing)..... 12.36 ft

Initial static water level (from top of casing).... 6.9 ft

Evacuation Method:

Submersible		Centrifugal			
Airlift		Pos. Displ.			
Bailer	X	>>> No. of bails			

Well Volume Calculation

2in. casing:	5.46 ft. of water x .16 =	0.87	gallons
3in. casing:	ft. of water x .36 =		gallons
4in. casing:	ft. of water x .65 =		gallons

Volume of water removed: 2.62 gals.

> 3 volumes: yes / no

dry: yes / no

Field Tests:

Temp:	15.8 C
pH	7.2
Conductivity	2.09 mS/cm
DO	6.30 mg/l
Turbidity	544 NTUs
Salinity	0.1 %

Sampling:

Time: 10:00 am

Sampling Method:

Stainless Steel Bailer	
Disposable Bailer	X
Disposable Pump	
Other	

Observations:

Weather/Temperature: Rain, 50°

Physical Appearance and Odor of Sample: Light brown, then very turbid, brown, no odor.

Comments: Well pad is intact and the stickup protective cover is in good condition.

GHD INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE: Lockport City Landfill
DATE: 10/20/16

Sampler: Dave Rowlinson
SAMPLE ID: MW-9I

Depth of well (from top of casing)..... 19.99 ft
Initial static water level (from top of casing).... 5.9 ft

Evacuation Method:

Submersible		Centrifugal			
Airlift		Pos. Displ.			
Bailer	X	>>> No. of bails			

Well Volume Calculation

2in. casing:	14.09 ft. of water x .16 =	2.25	gallons
3in. casing:	ft. of water x .36 =		gallons
4in. casing:	ft. of water x .65 =		gallons

Volume of water removed: 6.76 gals.
> 3 volumes: yes / no
dry: yes / no

Field Tests:

Temp:	14.85 C
pH	7.48
Conductivity	1.72 mS/cm
DO	9.14 mg/l
Turbidity	129 NTUs
Salinity	0.1 %

Sampling:

Time: 9:30 am

Sampling Method:

Stainless Steel Bailer	
Disposable Bailer	X
Disposable Pump	
Other	

Observations:

Weather/Temperature: Rain, 50°

Physical Appearance and Odor of Sample: Initially reddish brown, no odor, then clear

Comments: Well pad is intact and the stickup protective cover is in good condition. Lock was cut for well access. Lock needs replacement

GHD INC.
SURFACE WATER FIELD SAMPLING RECORD

SITE Lockport City Landfill DATE 10/20/16

Samplers: Dave Rowlinson SAMPLE ID Outfall L-2

Sampling Method:

Submersible	GRAB	Centrifugal	
Airlift		Pos. Displ.	
Bailer		>>> No. of bails	

Field Tests:

Temp:	15.4	C
pH	7.5	
Conductivity	1.57	mS/cm
DO	9.6	mg/l
Turbidity	155	NTUs
Salinity	0.1	%

Sampling: Time: 12:00 noon

Sampling Method:

Stainless Steel Bailer	
Teflon Bailer	
Disposable Pump	
Other	Grab

Observations:

Weather/Temperature: Rain, 50°

Physical Appearance and Odor of Sample: No odor, light brown color, slightly turbid.

Comments: Iron bacteria was present on outfall and rocks.