



Sampling and Analysis Report

Lockport City Landfill
Site No. 932010

City of Lockport
Lockport, New York

December 2013

SAMPLING AND ANALYSIS REPORT

LOCKPORT CITY LANDFILL

FOR

OCTOBER 23, 2013
(YEAR - 17)

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

Prepared for:

CITY OF LOCKPORT, NEW YORK
DEPARTMENT OF PUBLIC WORKS

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DECEMBER 2013

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 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 2nd 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 17th sampling event conducted at the Lockport City Landfill on October 23, 2013.

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 23, 2013. Of the six (6) sample monitoring points, a total of six (6) samples were collected. Monitoring Well MW-6D was sampled. Historically, monitoring well MW-6D could not be sampled due to lack of available groundwater present at the time of sampling. During the 2013 sampling without purging prior to sampling, a sufficient amount of groundwater was recovered from monitoring well MW-6D to provide sample volume. If the well was purged, an insufficient sample volume would result.

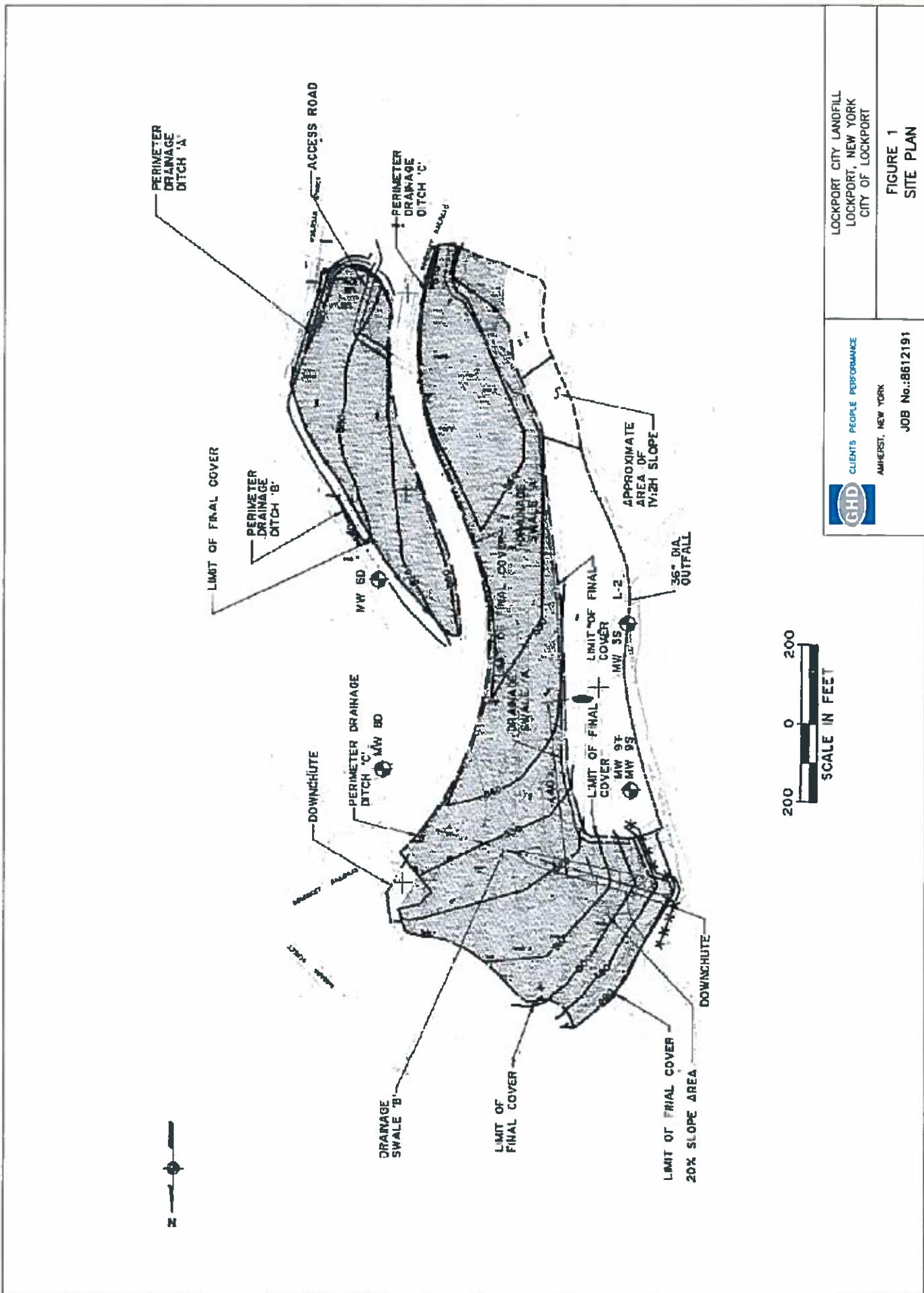
The samples were delivered to ESC Lab Sciences, 12065 Lebanon Road, Mt. Juliet, Tennessee 37122, and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) CLP Statement of Work (SOW) OLM04.2.

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 17 years. Groundwater sampling and analytical testing is presented for the monitoring years of 1997 through 2013. The established action levels for Monitoring Wells MW-8D 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 2014 representing year 18 of the Long Term Monitoring Program.

The volatile organic analytical test results detected concentrations of cis-1,2-dichloroethene in groundwater sampled from Monitoring Wells MW-8D and MW-9I. In past reporting, 1,2-dichloroethene (total) was reported in years (1997-2012) 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. At that time and to be consistent with past reporting, 1,2-dichloroethene (total) was reported as the sum of the detected concentrations of cis-1,2-dichloroethene and trans-1,2-dichloroethene. For purposes of presenting the analytical test results in a more definitive manner, analytical test results for reporting years of 2007 through 2013 as presented on Table 1 has been revised in this 2013 report to include detected concentrations of cis-1,2-dichloroethene and not reported as concentrations of 1,2-dichloroethene (total).



LOCKPORT CITY LANDFILL
LOCKPORT, NEW YORK
CITY OF LOCKPORT

FIGURE 1
SITE PLAN

GHD CLIENTS PEOPLE PERFORMANCE
ALBANY, NEW YORK
JOB No.:B612191

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
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Vinyl chloride	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Acetone	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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
trans-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,1,1-Trichloroethane	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	1.80
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Trichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Toluene	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Dibromo-chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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 I (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
Chloromethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Vinyl chloride	$\mu\text{g/L}$	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Chloroethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Acetone	$\mu\text{g/L}$	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Carbon disulfide	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Methylene chloride	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,2-Dichloroethene (total)	$\mu\text{g/L}$	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,1-Dichloroethane	$\mu\text{g/L}$	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
2-Butanone	$\mu\text{g/L}$	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Chloroform	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,1,1-Trichloroethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Carbon tetrachloride	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Benzene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,2-Dichloroethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Trichloroethene	$\mu\text{g/L}$	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Bromodichloromethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
4-Methyl-2-pentanone	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
cis-1,3-Dichloropropene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Toluene	$\mu\text{g/L}$	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
trans-1,3-Dichloropropene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,1,2-Trichloroethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
2-Hexanone	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Tetrachloroethene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Dibromoethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Chlorobenzene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Ethylbenzene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Xylene (Total)	$\mu\text{g/L}$	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Styrene	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
Bromoform	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U
1,1,2,2-Tetrachloroethane	$\mu\text{g/L}$	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Vinyl chloride	µg/L	162	U	U	U	U	U	U	7	33	6	4J	U	U	U	U	U	U	U	
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Chlormethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Acetone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
1,2-Dichloroethene (total)	µg/L	1,580	100	90	110	18	25	41	120	7	28	27J	40	U	U	U	U	U	U	
trans-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
1,1-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Trichloroethene	µg/L	260	2	4	5	2	2	U	U	U	U	U	U	U	U	U	32J	U	U	
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
2-Ihexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Dibromochloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	U	U	U	U	
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	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	Action	Units	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
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	162	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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
trans-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	260	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromo-chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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 91
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
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	24	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (Total)	µg/L	42	8.4	6	5	4.4	4.4	4.4	4.4	3.1	3.1	2.1	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	NS	1.6	2	2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromo-chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Syrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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
Chloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	94	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Bromomethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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
trans-1,2-Dichloroethylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	NS	U	3	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloropropane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihromochloromethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	NS	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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



GHD CONSULTING SERVICES, INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE Lockport City Landfill DATE 10/23/13
 Sampler: Brian Doyle SAMPLE ID MW-3S

Depth of well (from top of casing)..... 13.24 ft
 Initial static water level (from top of casing).... 3.6 ft

Evacuation Method:

Well Volume Calculation

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

Volume of water removed 1.50 gals.

> 3 volumes:	<u>yes</u>	<u>NO</u>
dry:	<u>YES</u>	<u>no</u>

Field Tests:

Temp:	<u>12.1 C</u>
pH	<u>6.83</u>
Conductivity	<u>3.27 mS/cm</u>
DO	<u>4.61 mg/l</u>
Turbidity	<u>205 NTUs</u>
Salinity	<u>0.15 %</u>

Sampling:

Time: 1:00 AM

Sampling Method: Stainless Steel Bailer
Disposable Bailer X
Disposable Pump
Other

Observations:

Weather/Temperature: Overcast, 55°

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

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 CONSULTING SERVICES, INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE Lockport City Landfill DATE 10/23/13

Sampler: Brian Doyle SAMPLE ID MW-6D

Depth of well (from top of casing)..... 77.12 ft
 Initial static water level (from top of casing).... 76.1 ft

Evacuation Method:

Well Volume Calculation

Submersible	<u> </u>	Centrifugal	<u> </u>	2in. casing: <u> </u> ft. of water x .16 = <u> </u> gallons	<u> </u> 0.16 gallons
Airlift	<u> </u>	Pos. Displ.	<u> </u>	3in. casing: <u> </u> ft. of water x .36 = <u> </u> gallons	<u> </u> gallons
Bailer	<u>X</u>	>>> No. of bails	<u> </u>	4in. casing: <u> </u> ft. of water x .65 = <u> </u> gallons	<u> </u> gallons

Volume of water removed 0.00 gals.

> 3 volumes:	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> NO
dry:	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> no

Field Tests:	Temp:	<u>NA</u>	<u>C</u>
	pH	<u>NA</u>	
	Conductivity	<u>NA</u>	<u>mS/cm</u>
	DO	<u>NA</u>	<u>mg/l</u>
	Turbidity	<u>NA</u>	<u>NTUs</u>
	Oxidation Reduction Potential(ORP)	<u>NA</u>	<u>mV</u>
	Salinity	<u>NA</u>	<u>%</u>

Sampling:

Time: 11:30 AM

Sampling Method:	Stainless Steel Bailer	<u> </u>
	Disposable Bailer	<u>X</u>
	Disposable Pump	<u> </u>
	Other	<u> </u>

Observations:

Weather/Temperature: Overcast, 55°, rain

Physical Appearance and Odor of Sample: clear

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

GHD CONSULTING SERVICES, INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE Lockport City Landfill

DATE 10/23/13

Sampler: Brian Doyle

SAMPLE ID MW-8D

Depth of well (from top of casing)..... 76.67 ft
 Initial static water level (from top of casing).... 71.8 ft

Evacuation Method:

Well Volume Calculation

Submersible	<u> </u>	Centrifugal	<u> </u>	2in. casing: <u> </u> ft. of water x .16 = <u> </u> 0.78 gallons
Airlift	<u> </u>	Pos. Displ.	<u> </u>	3in. casing: <u> </u> ft. of water x .36 = <u> </u> gallons
Bailer	<u>X</u>	>> No. of bails	<u> </u>	4in. casing: <u> </u> ft. of water x .65 = <u> </u> gallons

Volume of water removed 2.50 gals.

> 3 volumes:	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> no
dry:	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> NO

Field Tests:

Temp:	<u>10.3 C</u>
pH	<u>7.82</u>
Conductivity	<u>2.48 mS/cm</u>
DO	<u>7.19 mg/l</u>
Turbidity	<u>109 NTUs</u>
Salinity	<u>0.13 %</u>

Sampling:

Time: 10:45 AM

Sampling Method: Stainless Steel Bailer
Disposable Bailer X
Disposable Pump
Other

Observations:

Weather/Temperature: Overcast, 55°, light rain

Physical Appearance and Odor of Sample: Clear, then turbid

Comments:

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

GHD CONSULTING SERVICES, INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE Lockport City Landfill

DATE 10/23/13

Sampler: Brian Doyle

SAMPLE ID MW-9S

Depth of well (from top of casing)..... 12.36 ft
 Initial static water level (from top of casing).... 6.6 ft

Evacuation Method:

Well Volume Calculation

Submersible	<u> </u>	Centrifugal	<u> </u>	2in. casing: <u> </u> ft. of water x .16 = <u> </u> 0.92 gallons
Airlift	<u> </u>	Pos. Displ.	<u> </u>	3in. casing: <u> </u> ft. of water x .36 = <u> </u> gallons
Bailer	<u>X</u>	>> No. of bails	<u> </u>	4in. casing: <u> </u> ft. of water x .65 = <u> </u> gallons

Volume of water removed 3.0 gals.

> 3 volumes:	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> no
dry:	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> NO

Field Tests:

Temp:	<u>13.1 C</u>
pH	<u>7.42</u>
Conductivity	<u>1.38 mS/cm</u>
DO	<u>2.46 mg/l</u>
Turbidity	<u>399 NTUs</u>
Salinity	<u>0.09 %</u>

Sampling:

Time: 2:00

Sampling Method: Stainless Steel Bailer
Disposable Bailer X
Disposable Pump
Other

Observations:

Weather/Temperature: Overcast, 55°

Physical Appearance and Odor of Sample: Very turbid, brownish color, no odor.

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

GHD CONSULTING SERVICES, INC.
GROUNDWATER FIELD SAMPLING RECORD

SITE Lockport City Landfill DATE 10/23/13

Sampler: Brian Doyle SAMPLE ID MW-9I

Depth of well (from top of casing)..... 19.99 ft
 Initial static water level (from top of casing).... 5.4 ft

Evacuation Method:

Well Volume Calculation

Submersible	<u> </u>	Centrifugal	<u> </u>	2in. casing	<u>14.59 ft. of water x .16 =</u>	<u>2.33 gallons</u>
Airlift	<u> </u>	Pos. Displ.	<u> </u>	3in. casing	<u>ft. of water x .36 =</u>	<u>gallons</u>
Bailer	<u>X</u>	>>> No. of bails	<u> </u>	4in. casing	<u>ft. of water x .65 =</u>	<u>gallons</u>

Volume of water removed 7.0 gals.

> 3 volumes:	<input type="checkbox"/> YES	<input type="checkbox"/> no
dry:	<input type="checkbox"/> yes	<input checked="" type="checkbox"/> NO

Field Tests:

Temp:	<u>11.91 C</u>
pH	<u>6.89</u>
Conductivity	<u>1.52 mS/cm</u>
DO	<u>6.4 mg/l</u>
Turbidity	<u>93 NTUs</u>
Salinity	<u>0.1 %</u>

Sampling:

Time: 1:30 PM

Sampling Method:

Stainless Steel Bailer	<u> </u>
Disposable Bailer	<u>X</u>
Disposable Pump	<u> </u>
Other	<u> </u>

Observations:

Weather/Temperature: Overcast, 55°

Physical Appearance and Odor of Sample: initially clear, then slightly turbid, reddish brown, then yellowish light brown

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

GHD CONSULTING SERVICES, INC.
SURFACE WATER FIELD SAMPLING RECORD

SITE Lockport City Landfill DATE 10/23/13
Samplers: Brian Doyle SAMPLE ID Outfall L-2

Sampling Method:

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

Field Tests: Temp: 10.63 C
pH 7.37
Conductivity 1.65 mS/cm
DO 8.67 mg/l
Turbidity 42 NTUs
Salinity 0.1 %

Sampling: Time: 12:30 PM

Sampling Method: Stainless Steel Bailer _____
Teflon Bailer _____
Disposable Pump _____
Other Grab

Observations:

Weather/Temperature: Overcast, 55°

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

Comments: Iron bacteria was present on outfall and rocks.

APPENDIX B





12065 Lebanon Rd.
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Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 101
Amherst, NY 14228

Report Summary

Thursday October 31, 2013

Report Number: L664970

Samples Received: 10/24/13

Client Project:

Description: Lockport Landfill

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

A handwritten signature of "Leslie Newton" is written over a horizontal line.

Leslie Newton, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-8D
Collected By : Brian Doyle
Collection Date : 10/23/13 10:45

ESC Sample # : L664970-01

Site ID :
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	10/26/13	1
Benzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromoform	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	10/26/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloroform	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	10/26/13	1
Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,2-Dichloroethene	0.026	0.0010	mg/l	8260B	10/26/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	10/26/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	10/29/13	1
Methyl Acetate	BDL	0.020	mg/l	8260B	10/26/13	1
Methyl Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	10/26/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	10/26/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	10/26/13	1
Styrene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Toluene	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

ESC Sample # : L664970-01

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-8D
Collected By : Brian Doyle
Collection Date : 10/23/13 10:45

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	10/26/13	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	10/26/13	1
Dibromofluoromethane	105.		% Rec.	8260B	10/26/13	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	10/26/13	1
4-Bromofluorobenzene	97.2		% Rec.	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-9I
Collected By : Brian Doyle
Collection Date : 10/23/13 14:00

ESC Sample # : L664970-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	10/26/13	1
Benzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromoform	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	10/26/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloroform	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	10/26/13	1
Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,2-Dichloroethene	0.0019	0.0010	mg/l	8260B	10/26/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	10/26/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	10/29/13	1
Methyl Acetate	BDL	0.020	mg/l	8260B	10/26/13	1
Methyl Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	10/26/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	10/26/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	10/26/13	1
Styrene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Toluene	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-9I
Collected By : Brian Doyle
Collection Date : 10/23/13 14:00

ESC Sample # : L664970-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	10/26/13	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	10/26/13	1
Dibromofluoromethane	102.		% Rec.	8260B	10/26/13	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	10/26/13	1
4-Bromofluorobenzene	101.		% Rec.	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013 ESC Sample # : L664970-03
Description : Sampling-Groundwater Lockport Landfill Site ID :
Sample ID : MW-9S Project # :
Collected By : Brian Doyle
Collection Date : 10/23/13 13:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	10/26/13	1
Benzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromoform	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	10/26/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloroform	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	10/26/13	1
Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	10/26/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	10/30/13	1
Methyl Acetate	BDL	0.020	mg/l	8260B	10/26/13	1
Methyl Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	10/26/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	10/26/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	10/26/13	1
Styrene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Toluene	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

ESC Sample # : L664970-03

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-9S
Collected By : Brian Doyle
Collection Date : 10/23/13 13:30

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	10/26/13	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	8260B	10/26/13	1
Dibromofluoromethane	103.		% Rec.	8260B	10/26/13	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	10/26/13	1
4-Bromofluorobenzene	101.		% Rec.	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Est. 1970

REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-3S
Collected By : Brian Doyle
Collection Date : 10/23/13 13:00

ESC Sample # : L664970-04

Site ID :
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	10/26/13	1
Benzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromoform	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	10/26/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloroform	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	10/26/13	1
Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1-Dichloroethane	0.0018	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	10/26/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	10/30/13	1
Methyl Acetate	BDL	0.020	mg/l	8260B	10/26/13	1
Methyl Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	10/26/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	10/26/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	10/26/13	1
Styrene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Toluene	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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Tax I.D. 62-0014289

Est. 1970

REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-3S
Collected By : Brian Doyle
Collection Date : 10/23/13 13:00

ESC Sample # : L664970-04

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	10/26/13	1
Surrogate Recovery						
Toluene-d8	99.9	% Rec.	8260B		10/26/13	1
Dibromofluoromethane	106.	% Rec.	8260B		10/26/13	1
a,a,a-Trifluorotoluene	102.	% Rec.	8260B		10/26/13	1
4-Bromofluorobenzene	105.	% Rec.	8260B		10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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L·A·B S·C·I·E·N·C·E·S

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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013 ESC Sample # : L664970-05
Description : Sampling-Groundwater Lockport Landfill Site ID :
Sample ID : OUTFALL L-2 Project # :
Collected By : Brian Doyle
Collection Date : 10/23/13 12:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	10/26/13	1
Benzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromoform	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	10/26/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloroform	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	10/26/13	1
Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	10/26/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	10/30/13	1
Methyl Acetate	BDL	0.020	mg/l	8260B	10/26/13	1
Methyl Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	10/26/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	10/26/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	10/26/13	1
Styrene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Toluene	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : OUTFALL L-2
Collected By : Brian Doyle
Collection Date : 10/23/13 12:30

ESC Sample # : L664970-05

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	10/26/13	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	10/26/13	1
Dibromofluoromethane	104.		% Rec.	8260B	10/26/13	1
a,a,a-Trifluorotoluene	101.		% Rec.	8260B	10/26/13	1
4-Bromofluorobenzene	103.		% Rec.	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-6D
Collected By : Brian Doyle
Collection Date : 10/23/13 11:30

ESC Sample # : L664970-06

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	10/26/13	1
Benzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromoform	BDL	0.0010	mg/l	8260B	10/26/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	10/26/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloroform	BDL	0.0050	mg/l	8260B	10/26/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	10/26/13	1
Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	10/26/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/26/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	10/26/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	10/30/13	1
Methyl Acetate	BDL	0.020	mg/l	8260B	10/26/13	1
Methyl Cyclohexane	BDL	0.0010	mg/l	8260B	10/26/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	10/26/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	10/26/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	10/26/13	1
Styrene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Toluene	BDL	0.0050	mg/l	8260B	10/26/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : MW-6D
Collected By : Brian Doyle
Collection Date : 10/23/13 11:30

ESC Sample # : L664970-06

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	10/26/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	10/26/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	10/26/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	10/26/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	10/26/13	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	8260B	10/26/13	1
Dibromofluoromethane	107.		% Rec.	8260B	10/26/13	1
a,a,a-Trifluorotoluene	103.		% Rec.	8260B	10/26/13	1
4-Bromofluorobenzene	100.		% Rec.	8260B	10/26/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : TRIP BLANK
Collected By : Brian Doyle
Collection Date : 10/23/13 00:00

ESC Sample # : L664970-07

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	10/31/13	1
Benzene	BDL	0.0010	mg/l	8260B	10/31/13	1
Bromochloromethane	BDL	0.0010	mg/l	8260B	10/31/13	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	10/31/13	1
Bromoform	BDL	0.0010	mg/l	8260B	10/31/13	1
Bromomethane	BDL	0.0050	mg/l	8260B	10/31/13	1
Carbon disulfide	BDL	0.0010	mg/l	8260B	10/31/13	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	10/31/13	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	10/31/13	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	10/31/13	1
Chloroethane	BDL	0.0050	mg/l	8260B	10/31/13	1
Chloroform	BDL	0.0050	mg/l	8260B	10/31/13	1
Chloromethane	BDL	0.0025	mg/l	8260B	10/31/13	1
Cyclohexane	BDL	0.0010	mg/l	8260B	10/31/13	1
1,2-Dibromo-3-Chloropropane	BDL	0.0050	mg/l	8260B	10/31/13	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	10/31/13	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/31/13	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/31/13	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	10/31/13	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	8260B	10/31/13	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	10/31/13	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	10/31/13	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	10/31/13	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/31/13	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	10/31/13	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	10/31/13	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/31/13	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	10/31/13	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	10/31/13	1
2-Hexanone	BDL	0.010	mg/l	8260B	10/31/13	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	10/31/13	1
2-Butanone (MEK)	BDL	0.010	mg/l	8260B	10/31/13	1
Methyl Acetate	BDL	0.020	mg/l	8260B	10/31/13	1
Methyl Cyclohexane	BDL	0.0010	mg/l	8260B	10/31/13	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	10/31/13	1
4-Methyl-2-pentanone (MIBK)	BDL	0.010	mg/l	8260B	10/31/13	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	10/31/13	1
Styrene	BDL	0.0010	mg/l	8260B	10/31/13	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	10/31/13	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	10/31/13	1
Toluene	BDL	0.0050	mg/l	8260B	10/31/13	1
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/31/13	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	10/31/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

October 31, 2013

Mr. Dave Rowlinson
GHD
200 John James Audubon Pkwy; Ste 10
Amherst, NY 14228

ESC Sample # : L664970-07

Date Received : October 24, 2013
Description : Sampling-Groundwater Lockport Landfill
Sample ID : TRIP BLANK
Collected By : Brian Doyle
Collection Date : 10/23/13 00:00

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	10/31/13	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	10/31/13	1
Trichloroethene	BDL	0.0010	mg/l	8260B	10/31/13	1
Trichlorofluoromethane	BDL	0.0050	mg/l	8260B	10/31/13	1
1,1,2-Trichlorotrifluoroethane	BDL	0.0010	mg/l	8260B	10/31/13	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	10/31/13	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	10/31/13	1
Surrogate Recovery						
Toluene-d8	96.0		% Rec.	8260B	10/31/13	1
Dibromofluoromethane	105.		% Rec.	8260B	10/31/13	1
a,a,a-Trifluorotoluene	102.		% Rec.	8260B	10/31/13	1
4-Bromofluorobenzene	88.3		% Rec.	8260B	10/31/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/31/13 13:16 Printed: 10/31/13 13:17

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L664970-03	WG688877	SAMP	1,2-Dibromoethane	R2845742	J3
	WG688877	SAMP	1,2-Dichloropropane	R2845742	J3
	WG688877	SAMP	trans-1,3-Dichloropropene	R2845742	J3
	WG688877	SAMP	Tetrachloroethene	R2845742	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

