

RECEIVED

AUG 24 2017

DER/HWR
REGION 8



Mr. Michael Walters
New York/Caribbean Superfund Branch II
Emergency and Remedial Response Division
United States Environmental Protection Agency, Region II
290 Broadway, 20th Floor
New York, New York 10007-1886

Arcadis of New York, Inc.
295 Woodcliff Drive
Third Floor
Suite 301
Fairport
New York 14450
Tel 585 385 0090
Fax 585 385 4198
www.arcadis.com

Subject:

2017 Groundwater and Surface-Water Sampling and Analysis Report and
Annual Site Inspection Checklist
Batavia Landfill Superfund Site
Batavia, New York

Date:
August 22, 2017

Dear Mr. Walters:

Contact:
Joseph Molina III, P.E.

Arcadis of New York, Inc. (Arcadis) has prepared the *2017 Groundwater and Surface-Water Sampling and Analysis Report* (Attachment 1) for the Batavia Landfill Superfund Site located in Batavia, New York (site). Arcadis performed the annual groundwater and surface-water sampling event at the site on June 22, 2017, which was performed in accordance with the *Operation and Maintenance Plan* (O&M Plan; Blasland, Bouck & Lee, Inc. [BBL], March 2003, Revised July 2003), including Arcadis' May 27, 2015 Addendum #1 to the O&M Plan, and the United States Environmental Protection Agency's March 27, 2007 letter that provided approval for various modifications to the *Environmental Monitoring Plan* (Included in Appendix A of the O&M Plan).

Phone:
585.662.4012

Email:
joe.molina@arcadis.com

Our ref:
B0001524.2016

In addition, Arcadis conducted an annual site inspection on June 22, 2017 in accordance with the O&M Plan (BBL, March 2003, Revised July 2003). Attachment 2 includes a copy of the site inspection checklist.

If you have any questions related to the *2017 Groundwater and Surface-Water Sampling and Analysis Report* or the site inspection checklist, please contact me at 585.662.4012.

Sincerely,

Arcadis of New York, Inc.

Joseph Molina III, P.E.
Vice President

RECEIVED

AUG 24 2017

NYSDEC REGION 8
ENV REMEDIATION

Mr. Michael Walters
August 22, 2017

Copies:

~~Mr. Matthew Gillette, P.E.~~, New York State Department of Environmental Conservation
Ms. Kathryn Jahn, United States Fish and Wildlife Services
Mr. Ken Karwowski, United States Fish and Wildlife Services
Mr. James Doyle, United States Environmental Protection Agency
Ms. Marcia Gittes, United States Department of the Interior
Chief, Environmental Enforcement Section, United States Department of Justice
Les Greenbaum, Esq., Gross Shuman Brizdle & Gilfillan
Mr. Joseph D. Picciotti, Harris Beach PLLC
Mr. Greg Post, Town of Batavia
Mr. Steven J. Mountain, P.E., Town of Batavia
Mr. Matthew Worth, City of Batavia

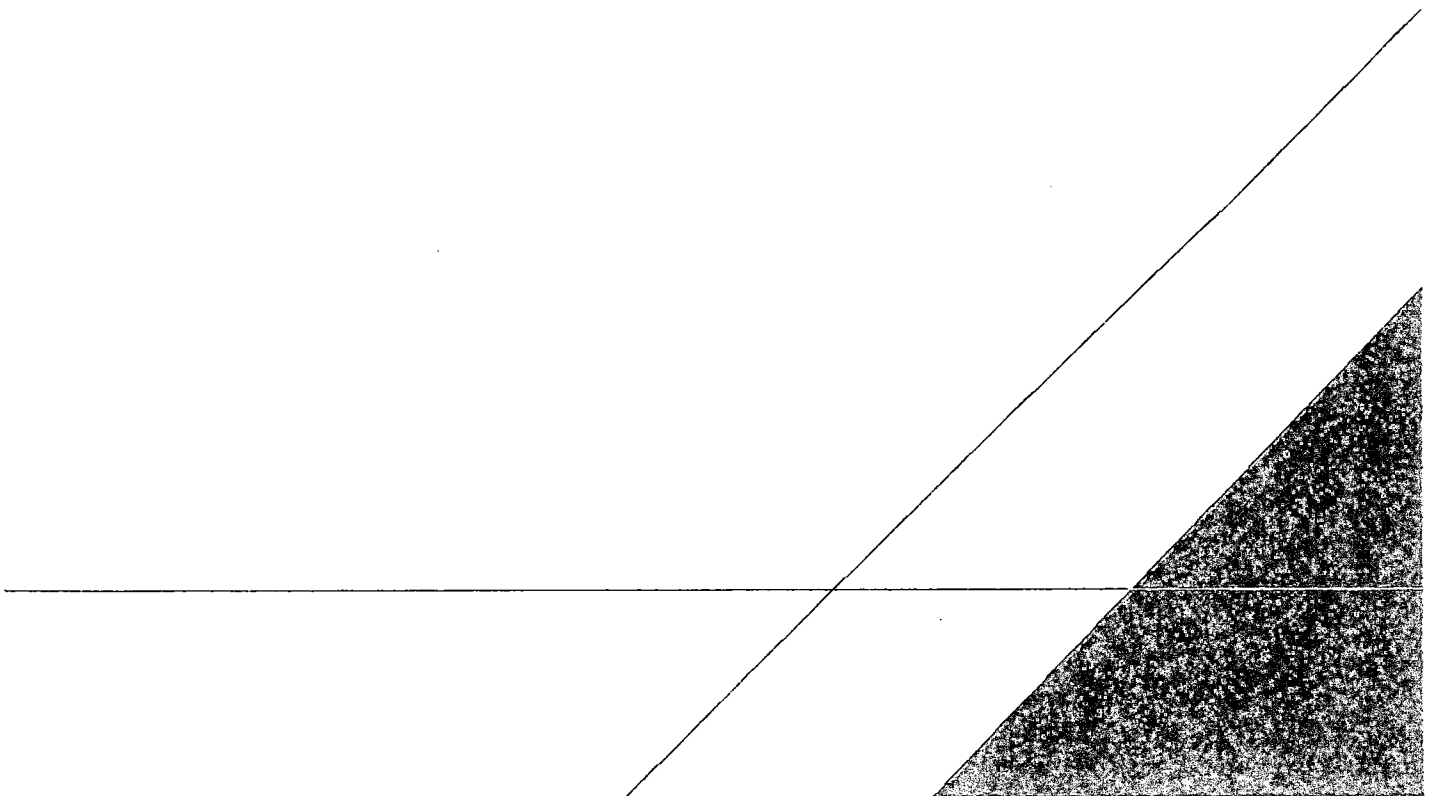
Enclosures:

Attachments

- 1 2017 Groundwater and Surface-Water Sampling and Analysis Report
- 2 2017 Site Inspection Checklist

ATTACHMENT 1

2017 Groundwater and Surface-Water Sampling and Analysis Report

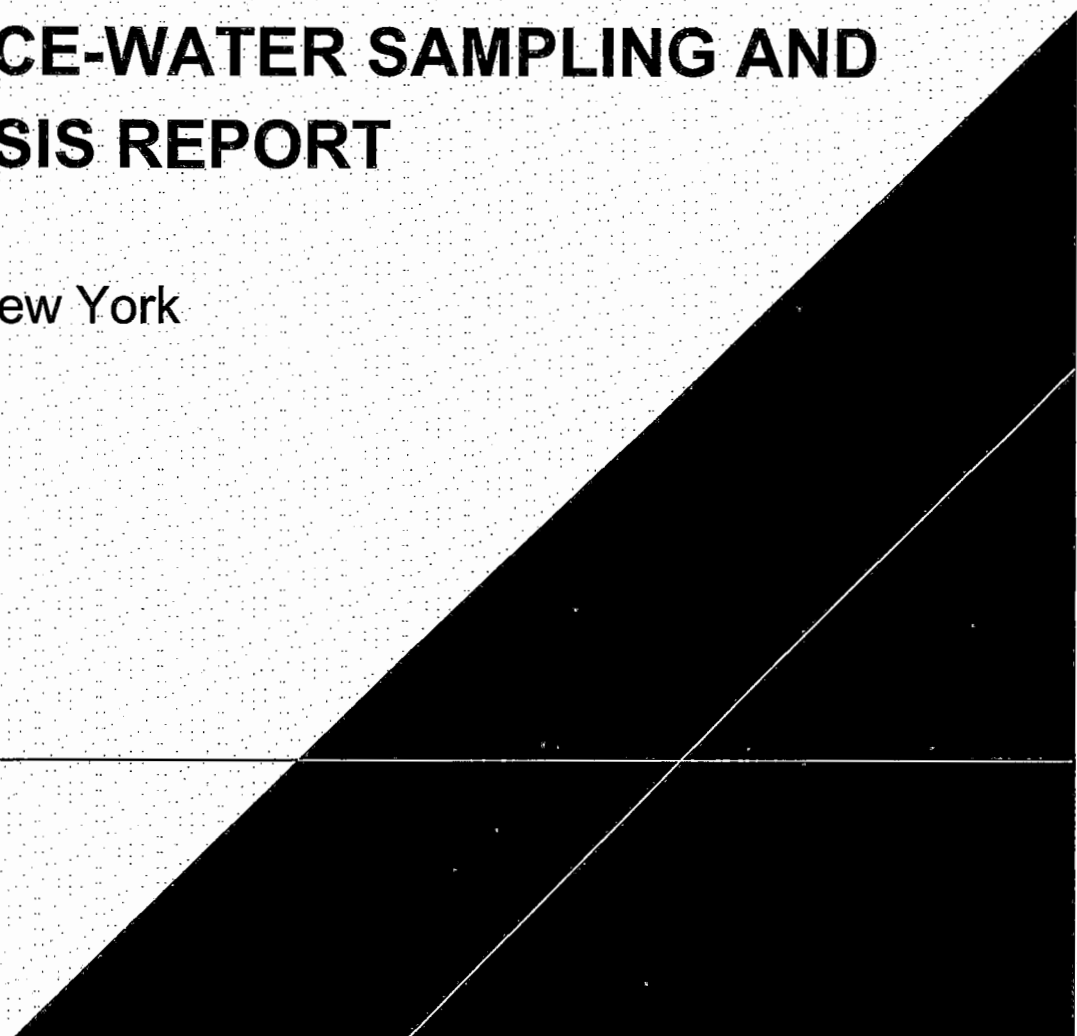


Batavia Landfill Superfund Site

2017 GROUNDWATER AND SURFACE-WATER SAMPLING AND ANALYSIS REPORT

Batavia, New York

August 2017



CONTENTS

Acronyms and Abbreviations	iii
1 Introduction	1
1.1 General	1
1.2 Site Description	1
1.3 Objectives of the Environmental Monitoring Program	1
1.4 Report Format	2
2 Hydrogeologic Conditions	3
2.1 Summary of Hydrogeologic Conditions	3
2.2 Critical Stratigraphic Interval	4
2.3 Groundwater Monitoring Well Network	4
2.4 Surface-Water Monitoring Locations	4
3 Groundwater and Surface-Water Sampling and Analysis	5
3.1 General	5
3.2 Summary of Groundwater Sampling Analytical Results	5
3.2.1 Volatile Organic Compounds	6
3.2.2 Inorganic Parameters	6
4 Conclusions	9
5 Schedule	10
6 References	11

TABLES

Table 1	Summary of Groundwater Measurement Data
Table 2	Summary of Groundwater and Surface-Water Field Parameters
Table 3	Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
Table 4	Summary of Inorganic Analytical Results for Groundwater Samples
Table 5	Summary of Volatile Organic Compounds Analytical Results for Surface-Water Samples
Table 6	Summary of Inorganic Analytical Results for Surface-Water Samples

FIGURE

Figure 1 Monitoring Well Network with Groundwater Elevations (Upper Sand) June 22, 2017

APPENDICES

- Appendix A March 27, 2007 USEPA Comment Letter on Proposed Environmental Monitoring Plan Modifications
- Appendix B Field Sampling Logs
- Appendix C Laboratory Analytical Report

ACRONYMS AND ABBREVIATIONS

1,1-DCA	1,1-dichloroethane
amsl	above mean sea level
Arcadis	Arcadis of New York, Inc.
BBL	Blasland, Bouck & Lee, Inc.
EMP	<i>Environmental Monitoring Plan</i>
GZA	GZA GeoEnvironmental of New York
MCL	Maximum Contaminant Level
NRWQC	National Recommended Water Quality Criteria
NYS TOGS 1.1.1	New York State Division of Water Technical and Operational Guidance Series 1.1.1
O&M	operation and maintenance
O&M Plan	<i>Operation and Maintenance Plan</i>
QA	quality assurance
report	<i>2017 Groundwater and Surface-Water Sampling and Analysis Report</i>
RI	remedial investigation
site	Batavia Landfill Superfund site located in Batavia, New York
TAL	Target Analyte List
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

1 INTRODUCTION

1.1 General

Arcadis of New York, Inc. (Arcadis) has prepared this *2017 Groundwater and Surface-Water Sampling and Analysis Report* (report) to summarize recent annual groundwater and surface-water sampling and analysis activities performed on June 22, 2017 at the Batavia Landfill Superfund Site located in Batavia, New York (site). These activities were performed on behalf of the Town of Batavia and the City of Batavia, the parties undertaking operation and maintenance (O&M) activities at the site, in accordance with the *Environmental Monitoring Plan* (EMP; Blasland, Bouck & Lee, Inc. [BBL] 2003a), which is included in Appendix A of the United States Environmental Protection Agency- (USEPA-) approved Operation and Maintenance Plan (O&M Plan; BBL 2003b). The sample collection methodology was revised for this and future sampling events as detailed in Addendum #1 to the O&M Plan (Arcadis 2015).

In accordance with the O&M Plan (BBL 2003b), groundwater and surface-water sampling and analysis activities were/will be performed at the site quarterly for the first year (i.e., 2004), semiannually for the second and third years (i.e., 2005 and 2006), and annually thereafter (i.e., 2007 and beyond).

The remedial action implemented at the site is functioning as designed and continues to be protective of groundwater and surface-water quality at the site.

1.2 Site Description

The site is located approximately 3 miles west-northwest of the City of Batavia in the Town of Batavia, Genesee County, New York. The site consists of approximately 35 acres, bound to the north by Galloway Swamp, to the east by Galloway Swamp and the Town of Batavia's closed sanitary landfill, to the south by Harloff Road, and to the west by private property.

1.3 Objectives of the Environmental Monitoring Program

The objectives for monitoring groundwater and surface water are to confirm that the concentrations of site-related constituents of concern do not increase in groundwater beneath the site or in surface-water areas adjacent to the site, and that the final cover system continues to perform as designed. The focus of the EMP (BBL 2003a) is on the southern disposal area where waste materials excavated from the northern and central areas were consolidated during the performance of remedial action activities at the site. This area was also capped with a final cover system and underlined with a leachate collection system installed as part of a completed remedial action for the site.

The EMP (BBL 2003a) will continue for 30 years during the performance of O&M activities at the site or until the USEPA approves a modification or termination of such activity. The USEPA modified the EMP pursuant to a March 27, 2007 letter (Appendix A), which includes the following modifications to the groundwater and surface-water sampling and analysis activities:

- Monitoring well BL-16R can be decommissioned
- Discontinue reporting volatile organic compounds (VOCs) for monitoring well BL-107B

1.4 Report Format

This report is organized into the following sections:

- Section 1: Introduction – Provides the purpose and objectives of the EMP (BBL 2003a), a site description, and contents of this report.
- Section 2: Hydrogeologic Conditions – Summarizes the hydrogeologic conditions of the site based on information obtained during the remedial investigation (RI) performed at the site by GZA GeoEnvironmental of New York (GZA) between 1987 and 1991, and further confirmed by additional investigation work performed by BBL in 2002.
- Section 3: Groundwater and Surface-Water Sampling and Analysis – Summarizes sampling and analysis activities performed at the site during implementation of the EMP and presents the analytical results of groundwater and surface-water samples collected at the site during the 2017 annual sampling event.
- Section 4: Conclusions – Provides brief conclusions based on the analytical results of groundwater and surface-water samples collected from the site.
- Section 5: Schedule – Identifies the timeframe of when the next scheduled annual groundwater and surface-water sampling event will be performed at the site in 2018.
- Section 6: References – Identifies references that were used for this report.

2 HYDROGEOLOGIC CONDITIONS

2.1 Summary of Hydrogeologic Conditions

The RI for the site performed by GZA included two phases of investigation, as well as a supplemental sampling event. The subsurface investigation indicated that waste in the southern area generally consisted of industrial and municipal waste, with a bottom elevation ranging from approximately 894 feet above mean sea level (amsl) to approximately 904 feet amsl. Beneath these miscellaneous fill materials is an upper soil layer consisting of sand with varying amounts of silt, gravel, and peat. The upper soil layer is continuous over much of the site. Beneath the upper soil layer is a low-permeability soil layer consisting of clay and silt to clayey silt deposits occasionally interbedded with sands, gravels, and/or silts. The low-permeability soil layer is continuous in the southern portion of the site. A lower soil layer consisting of sands with varying amounts of silt and gravel appears to be continuous and overlies rock across much of the site, except the northern area, where the low-permeability soil layer extends to bedrock. Bedrock at the site is the Onondaga Limestone Formation, the top 10 feet of which appear to be highly fractured and weathered.

Visual characterization of subsurface samples collected during the installation of monitoring wells, as described in the EMP (BBL 2003a), support GZA's interpretation of the unconsolidated geologic units and bedrock underlying the site, as described above. BBL installed eight monitoring wells in 2002 to augment the monitoring network, including five wells (BL-100U, BL-101U, BL-102U, BL-103U, and BL-104U) to monitor the upper soil zone, one well (BL-105L) to monitor the lower soil zone, and two wells (BL-106B and BL-107B) to monitor groundwater within bedrock.

There are three flow systems at the site: the upper soil, lower soil, and bedrock. Historical groundwater elevations in the upper soil in the northern area ranged from approximately 892 feet amsl to 895 feet amsl, while the groundwater elevations in the upper soil in the southern area ranged from approximately 888 feet amsl to 894 feet amsl. The USEPA's interpretation of the site hydrogeologic data suggests the following:

- Wetlands present in the southeastern corner of the site recharge groundwater in that area.
- A horizontal gradient is present in the northern and eastern areas, resulting in groundwater flow toward Galloway Swamp.
- Groundwater mounding that occurs in waste in the southern portions of the site could result in radial flow in all directions away from the mounds.
- The presence of a low-permeability soil layer limits downward flow and promotes horizontal flow on top of the layer, likely to the east.

Based on our review of previous groundwater elevations measured at the site, it appears that the USEPA's interpretation of hydrogeologic data described above remains valid.

2.2 Critical Stratigraphic Interval

Additional investigations performed as part of the *Basis of Design* (BBL 1999) substantiate the USEPA's interpretation for the southern area. In essence, the upper soil zone is continuous across the southern area and represents the first hydrogeological unit located directly below the waste/fill zone, as well as the Critical Stratigraphic Interval for groundwater quality monitoring purposes. Based on the results of the additional investigation, groundwater flow direction is radial from the central portion of the southern area. However, overall groundwater flow direction is from the west-southwest to the northeast and southeast.

Recent groundwater elevation measurements suggest that the groundwater flow direction in the upper soil zone remains generally consistent with the groundwater flow pattern previously observed at the site. Figure 1 presents the groundwater elevations observed in monitoring wells that screen the upper soil zone.

2.3 Groundwater Monitoring Well Network

Groundwater monitoring for the site focuses on the Critical Stratigraphic Interval or upper soil zone, in accordance with the EMP (BBL 2003a). Presently, nine groundwater monitoring wells are being used to monitor groundwater quality as part of the EMP (Figure 1). The monitoring well network consists of five monitoring wells (BL-100U, BL-101U, BL-102U, BL-103U, and BL-104U) to monitor the upper soil zone, two monitoring wells (BL-105L and BL-10) to monitor the lower soil zone, and two monitoring wells (BL-106B and BL-107B) to monitor groundwater within bedrock. In addition, monitoring wells MW-5, BL-16R, BL-20, and MW-11 (Figure 1) are present within or adjacent to the site; however, these wells are not used for the EMP at this time.

2.4 Surface-Water Monitoring Locations

In addition to the groundwater monitoring well network described above, surface-water quality is typically monitored at sampling locations in Wetlands B and C (Figure 1); however, both wetlands were dry, and surface-water samples could not be collected.

3 GROUNDWATER AND SURFACE-WATER SAMPLING AND ANALYSIS

3.1 General

The 2017 annual groundwater and surface-water sampling event was performed at the site on June 22, 2017 and included:

- Collection of water-level data from groundwater monitoring wells in conjunction with the groundwater sampling event (Table 1 summarizes the groundwater elevations at the site).
- Collection of groundwater samples from nine groundwater monitoring wells (BL-10, BL-100U, BL-101U, BL-102U, BL-103U, BL-104U, BL-105L, BL-106B, and BL-107B).
- Wetlands B and C continue to function as designed, as evidenced by the healthy and diverse vegetation present, but were too dry to be sampled on June 22, 2017.

Figure 1 illustrates the groundwater monitoring well and surface-water sampling locations.

The groundwater and surface-water samples were submitted to ALS Environmental for analysis of VOCs by USEPA Method 8260 and for Target Analyte List (TAL) metals by USEPA Methods 6010B/7000. The analytical results for all samples are presented in Tables 3 through 6, and include historical sample results for the last 10 years of monitoring.

All water generated during groundwater sampling activities was containerized and discharged into the onsite leachate storage tank.

3.2 Summary of Groundwater Sampling Analytical Results

Arcadis sampled nine groundwater monitoring wells (as listed above) on June 22, 2017. Purging was conducted in accordance with low-flow sampling protocols using a bladder pump at all groundwater monitoring wells. Water quality parameters (dissolved oxygen, oxidation-reduction potential, pH, temperature, specific conductivity, and turbidity) were measured in the field using portable equipment and were recorded within the sampling logs. Appendix B provides copies of the field sampling logs. Table 2 summarizes the recorded groundwater field parameters.

Groundwater samples were collected from the groundwater monitoring wells after the water quality parameters had stabilized for three consecutive readings. All samples were collected directly from the dedicated polyethylene tubing. As indicated in the March 27, 2007 USEPA letter (Appendix A), VOC analysis at monitoring well BL-107B has been discontinued.

Appropriate quality assurance (QA) samples were also collected and analyzed in accordance with the EMP (BBL 2003a). These QA samples included blind duplicates, trip blanks, equipment (rinse) blanks, and matrix spike/matrix spike duplicate samples.

Appendix C provides a copy of the laboratory analytical data report. Table 3 presents summaries of VOC analytical results for groundwater, and Table 4 presents inorganic results for groundwater. The following

sections summarize the detectable concentrations that were reported for the groundwater sampling performed by Arcadis.

3.2.1 Volatile Organic Compounds

As shown in Table 3, VOCs were detected in all groundwater monitoring wells sampled in 2017. No wells contained any detection that exceeded the National Primary Drinking Water Regulations Maximum Contaminant Levels (MCLs) (USEPA 816-F-03-016, 2003). In addition to the MCL criteria, the New York State Division of Water Technical and Operational Guidance Series 1.1.1 (NYS TOGS 1.1.1) criteria is also included in Table 3 to provide an alternate guidance standard because many of the VOCs do not have an established MCL. Four monitoring wells had concentrations of some VOCs above NYS TOGS 1.1.1 (BL-101U, BL-102U, BL-104U, and BL-10).

Analytical results for the groundwater samples collected during the 2017 annual sampling event were generally consistent with those of the previous sampling events and are summarized below:

- VOC concentrations for the groundwater samples collected from monitoring wells BL-100U, BL-103U, BL-105L, and BL-106B were below the MCLs and NYS TOGS 1.1.1, which is consistent with previous sampling events.
- The concentration of 1,1-dichloroethane (1,1-DCA) for the groundwater sample collected from monitoring well BL-101U remained slightly above NYS TOGS 1.1.1, which is consistent with previous sampling events.
- The concentration of chloroethane for the groundwater sample collected from monitoring well BL-102U remained above NYS TOGS 1.1.1, which is consistent with previous sampling events; by contrast, the concentration of 1,1-DCA remained below NYS TOGS 1.1.1 for a third consecutive event, and the concentration of vinyl chloride remained below NYS TOGS 1.1.1 and the federal MCL for a fourth consecutive event.
- The concentration of benzene for the groundwater sample collected from monitoring well BL-104U remained above NYS TOGS 1.1.1, but decreased below the MCL. The concentration of chloroethane continued a recent trend of fluctuating around NYS TOGS 1.1.1 and is currently below NYS TOGS 1.1.1.
- The concentrations of benzene and chloroethane for the groundwater sample collected from monitoring well BL-10 remain consistent with previous sampling events (below the MCLs and above NYS TOGS 1.1.1).

3.2.2 Inorganic Parameters

Groundwater samples were collected from the nine groundwater monitoring wells in 2017 for analysis of TAL metals. As shown in Table 4, arsenic (monitoring wells BL-100U, BL-101U, BL-105L, and BL-10) was the only inorganic compound with a reported concentration greater than the MCLs. In addition to the MCL criteria, the NYS TOGS 1.1.1 criteria are also included in Table 4 to provide an alternate guidance standard because many of the inorganics do not have an established MCL. Based on a comparison of the analytical results with NYS TOGS 1.1.1, arsenic, barium, iron, magnesium, manganese, and sodium exceeded the criteria in several of the monitoring wells.

2017 Groundwater and Surface-Water Sampling and Analysis Report

Analytical results for the groundwater samples collected during the 2017 annual sampling event were generally consistent with those of previous sampling events and are summarized below:

- Concentrations of iron and sodium for the groundwater sample collected from monitoring well BL-100U are above NYS TOGS 1.1.1, which is consistent with previous sampling events. The concentration of magnesium and manganese decreased below NYS TOGS 1.1.1 during the 2017 monitoring event, while the concentration of arsenic increased above both the federal MCL and NYS TOGS 1.1.1, after being a non-detectable concentration during the 2016 monitoring event.
- Concentrations of iron, magnesium, manganese, and sodium for the groundwater sample collected from monitoring well BL-101U are above NYS TOGS 1.1.1, which is consistent with previous sampling events. The concentration of arsenic continued to decrease, but still remained above both the MCLs and NYS TOGS 1.1.1.
- The concentration of iron for the groundwater sample collected from monitoring well BL-102U is above NYS TOGS 1.1.1, which is consistent with previous sampling events. All other inorganics remained below NYS TOGS 1.1.1.
- The concentrations of iron and magnesium for the groundwater sample collected from monitoring well BL-103U remains above NYS TOGS 1.1.1, consistent with previous sampling events. The concentration of manganese continued to fluctuate around NYS TOGS 1.1.1, decreasing below the standard for the 2017 monitoring event. The concentration of arsenic decreased below the MCLs and NYS TOGS 1.1.1 in 2017 after increasing above both standards in 2016.
- Concentrations of iron, magnesium, and sodium for the groundwater sample collected from monitoring well BL-104U remained above NYS TOGS 1.1.1, which is consistent with previous sampling events. The concentration of manganese continued to fluctuate around NYS TOGS 1.1.1, and is currently above.
- Concentrations of iron, magnesium, and manganese for the groundwater sample collected from monitoring well BL-105L are above NYS TOGS 1.1.1, which is consistent with previous sampling events. The concentration of manganese increased above NYS TOGS 1.1.1 in 2017 after decreasing below in 2016. The concentration of arsenic increased to a concentration above both the MCL and NYS TOGS 1.1.1 in 2017 after being above only the MCL in 2016.
- Concentrations of iron and magnesium for the groundwater sample collected from monitoring well BL-106B are above NYS TOGS 1.1.1, which is consistent with previous sampling events. The concentrations of sodium have historically fluctuated around NYS TOGS 1.1.1, and are currently below.
- Concentrations of barium, iron, magnesium, and sodium for the groundwater sample collected from monitoring well BL-107B are above NYS TOGS 1.1.1, which is consistent with previous sampling events. The concentrations of barium and sodium had decreased below NYS TOGS 1.1.1 for the 2015 sampling event, but concentrations are now consistent with historical sampling events (above NYS TOGS 1.1.1). The concentration of manganese has historically fluctuated around the NYS TOGS 1.1.1, and remained below NYS TOGS 1.1.1 for the 2017 sampling event.
- The concentration of arsenic for the groundwater sample collected from monitoring well BL-10 remained above both the MCL and NYS TOGS 1.1.1 values during the 2017 annual sampling event,

2017 Groundwater and Surface-Water Sampling and Analysis Report

which is consistent with previous sampling events. Concentrations of barium, iron, magnesium, and sodium for the groundwater sample collected from monitoring well BL-10 remained above NYS TOGS 1.1.1.

4 CONCLUSIONS

Conclusions from the results of the 2017 annual sampling event are as follows:

- Concentrations of VOCs and inorganics, in general, are consistent with past monitoring events.
- The concentration of arsenic for the groundwater sample collected from monitoring well BL-101U decreased again from the previous sampling event. While the concentration remains above both the MCLs and NYS TOGS 1.1.1, the concentration is well below the relative high observed in the 2014 sampling event (and commented on in the USEPA's May 4, 2015 e-mail correspondence), and is consistent with historical concentrations observed at this location. Modest increases (BL-100U and BL-105L) and decreases (BL-103U) in arsenic concentrations were observed at other monitoring wells across the site, but all are consistent with historical concentration fluctuations at each respective location.
- In general, concentrations of VOCs observed during the 2017 sampling event are consistent with historical VOC concentrations.
- The remedial action implemented at the site is functioning as designed and continues to be protective of the groundwater and surface-water quality at the site.

In summary, results of the 2017 annual sampling event demonstrate that concentrations of VOCs in groundwater have decreased or remained consistent with previous events.

Inorganics in groundwater at the site have remained generally consistent with previous events, with modest concentration increases and decreases observed at certain locations.

It should be noted that the NYS TOGS 1.1.1 criteria was included in Tables 3 through 6 to provide an alternate guidance standard because many of the VOCs and inorganics do not have an established MCL or National Recommended Water Quality Criteria (NRWQC), and the NYS TOGS 1.1.1 criteria are generally more stringent guidance values than the MCLs. Based on a comparison of VOC and inorganic analytical data generated for the last sampling events with the most stringent NYS TOGS 1.1.1, MCL, or NRWQC guidance values, many constituents continue to demonstrate very low concentrations, and as such, have not affected the groundwater quality.

5 SCHEDULE

The 2018 annual groundwater and surface-water sampling event is scheduled to be performed at the site in May or June 2018.

6 REFERENCES

Arcadis. 2015. Addendum #1 to the O&M Plan. Batavia Landfill Superfund Site, Batavia, New York. May 27.

Blasland, Bouck & Lee, Inc. 1999. *Basis of Design*, Batavia Landfill Superfund Site, Batavia, New York.

Blasland, Bouck & Lee, Inc. 2003a. *Environmental Monitoring Plan*, Batavia Landfill Superfund Site, Batavia, New York. March 2003, revised July 2003.

Blasland, Bouck & Lee, Inc. 2003b. *Operation and Maintenance Plan*, Batavia Landfill Superfund Site, Batavia, New York. March 2003, revised July 2003.

United States Environmental Protection Agency. 2003. National Primary Drinking Water Regulations Maximum Contaminant Levels. (United States Environmental Protection Agency 816-F-02-013). June 2003.

TABLES



Table 1
Summary of Groundwater Measurement Data
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well ID	T.O.R. Reference Elevation (ft amsl)	March 24, 2004		June 15, 2004		September 25, 2004		December 21 & 22, 2004	
		Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)
BL-100U	900.49	4.33	896.16	5.20	895.29	5.31	895.18	4.92	895.57
BL-101U	908.30	16.96	891.34	16.85	891.45	17.46	890.84	17.50	890.80
BL-102U	901.01	8.43	892.58	8.95	892.06	9.20	891.81	8.87	892.14
BL-103U	900.29	9.78	890.51	10.20	890.09	10.78	889.51	10.54	889.75
BL-104U	901.07	9.95	891.12	10.91	890.16	11.05	890.02	10.98	890.09
BL-105L	910.68	19.91	890.77	19.15	891.53	19.94	890.74	19.96	890.72
BL-106B	910.52	35.39	875.13	33.84	876.68	34.23	876.29	33.57	876.95
BL-107B	890.73	14.76	875.97	14.21	876.52	14.60	876.13	13.82	876.91
BL-16R	880.78	3.35	877.43	4.07	876.71	3.21	877.57	3.79	876.99
BL-10	895.31	4.85	890.46	6.08	889.23	6.48	888.83	6.23	889.08

Table 1
Summary of Groundwater Measurement Data
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well ID	T.O.R. Reference Elevation (ft amsl)	May 20, 2005		October 28, 2005		May 11, 2006		October 12, 2006	
		Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)
BL-100U	900.49	4.77	895.72	4.84	895.65	5.58	894.91	4.58	895.91
BL-101U	908.30	15.98	892.32	18.67	889.63	17.45	890.85	18.83	889.47
BL-102U	901.01	8.38	892.63	9.12	891.89	8.88	892.13	9.28	891.73
BL-103U	900.29	9.44	890.85	10.95	889.34	10.54	889.75	11.00	889.29
BL-104U	901.07	9.15	891.92	11.70	889.37	11.10	889.97	11.87	889.20
BL-105L	910.68	18.22	892.46	21.32	889.36	19.45	891.23	21.18	889.50
BL-106B	910.52	33.42	877.10	34.54	875.98	33.75	876.77	36.68	873.84
BL-107B	890.73	13.68	877.05	15.12	875.61	14.08	876.65	14.77	875.96
BL-16R	880.78	3.63	877.15	5.18	875.60	4.00	876.78	4.65	876.13
BL-10	895.31	5.47	889.84	6.10	889.21	6.34	888.97	6.28	889.03

Table 1
 Summary of Groundwater Measurement Data
 2017 Groundwater and Surface-Water Sampling and Analysis Report
 Batavia Landfill Superfund Site
 Batavia, New York

Well ID	T.O.R. Reference Elevation (ft amsl)	June 12, 2007		June 11, 2008		June 29, 2009		June 29, 2010	
		Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)
BL-100U	900.49	6.50	893.99	5.32	895.17	5.18	895.31	5.02	895.47
BL-101U	908.30	17.18	891.12	17.56	890.74	17.5	890.80	17.35	890.95
BL-102U	901.01	9.10	891.91	8.96	892.05	9.09	891.92	8.58	892.43
BL-103U	900.29	10.45	889.84	10.32	889.97	10.49	889.80	9.85	890.44
BL-104U	901.07	10.82	890.25	10.82	890.25	11.34	889.73	10.6	890.47
BL-105L	910.68	19.23	891.45	19.71	890.97	20.05	890.63	19.71	890.97
BL-106B	910.52	34.57	875.95	34.58	875.94	34.4	876.12	34	876.52
BL-107B	890.73	14.90	875.83	14.85	875.88	14.67	876.06	14.30	876.43
BL-16R	880.78	NS	—	NS	—	NS	—	NS	—
BL-10	895.31	6.24	889.07	6.18	889.13	6.28	889.03	5.76	889.55

Table 1
Summary of Groundwater Measurement Data
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well ID	T.O.R. Reference Elevation (ft amsl)	June 1, 2011		June 7, 2012		June 12, 2013		May 12 & 13, 2014	
		Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)
BL-100U	900.49	3.64	896.85	5.72	894.77	4.56	895.93	4.53	895.96
BL-101U	908.30	14.45	893.85	17.84	890.46	16.74	891.56	15.85	892.45
BL-102U	901.01	7.40	893.61	9.47	891.54	8.29	892.72	8.32	892.69
BL-103U	900.29	7.86	892.43	10.58	889.71	9.02	891.27	8.84	891.45
BL-104U	901.07	8.05	893.02	11.14	889.93	9.81	891.26	9.21	891.86
BL-105L	910.68	16.97	893.71	20.05	890.63	19.45	891.23	18.33	892.35
BL-106B	910.52	32.28	878.24	34.44	876.08	33.41	877.11	33.19	877.33
BL-107B	890.73	12.54	878.19	14.78	875.95	13.70	877.03	13.52	877.21
BL-16R	880.78	NS	—	NS	—	NS	—	NS	—
BL-10	895.31	4.3	891.01	6.36	888.95	5.03	890.28	4.97	890.34

Table 2
Summary of Groundwater and Surface-Water Field Parameters
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Location	BL-100U										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/12/14	6/1/15	6/7/16	6/22/17
pH	6.93	6.68	6.62	6.57	6.89	6.86	6.94	7.17	6.95	7.01	7.08
Temp (°C)	11.6	13.0	12.5	13.0	12.8	11.6	11.6	9.7	8.6	9.9	11.0
Conductivity (mS/cm)	2.15	3.04	3.96	3.8	1.79	3.85	3.67	2.26	4.38	4.3	2.164
Dissolved Oxygen (mg/L)	7.83	0.85	0.25	1.02	4.73	0.17	0.18	0.00	0.55	1.40	0.00
Turbidity (NTU)	32	50	129	381	296	5.36	21	46.1	0	20.9	31.6
ORP (mV)	-88	-72.3	33	-141	-103	-114.2	-103.5	-99.8	-123.0	-82.9	-115.8

Location	BL-106B										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/13/14	6/1/15	5/25/16	6/22/17
pH	7.03	6.81	8.47	6.98	7.38	7.02	7.04	7.12	7.06	7.07	7.10
Temp (°C)	11.6	10.6	11.9	11.63	11.00	10.9	10.8	10.8	10.2	10.8	11.1
Conductivity (mS/cm)	1.36	1.252	1.07	1.47	1.34	1.18	1.29	1.26	1.16	1.22	0.851
Dissolved Oxygen (mg/L)	0.33	0.28	2.89	0	0.11	0.22	0.85	0.00	0.18	0.14	0.16
Turbidity (NTU)	30.7	10.5	89.7	218	108	6.91	12.6	12.9	4.07	4.07	18.2
ORP (mV)	-129	-101	-101	-130	-67	-99.8	-75.0	-87.3	-137.2	-120.5	-55.3

Table 2

Summary of Groundwater and Surface-Water Field Parameters
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Location	BL-101U										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/12/14	6/1/15	6/7/16	6/22/17
pH	6.79	6.55	6.52	6.71	6.59	6.75	6.71	6.99	6.76	7.02	6.83
Temp (°C)	12.7	11.89	11	11.3	13.8	14.9	11.8	10.8	7.7	10.2	10.4
Conductivity (mS/cm)	1.75	1.73	1.74	1.82	1.62	1.56	1.43	1.59	2.93	1.39	1.316
Dissolved Oxygen (mg/L)	1.94	1.18	0.48	2.52	4.56	0.4	0.19	0.00	0.55	1.20	0.13
Turbidity (NTU)	30	29	402	163	351	63.9	22.1	48.6	55.7	38.1	36.1
ORP (mV)	-57	-36.1	50	-87	-79	-82.6	-35.4	-65.2	-106.9	-70.7	-53.3

Location	BL-107B										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/13/14	6/1/15	5/25/16	6/22/17
pH	7.05	6.88	9.8	7.00	7.52	7.14	7.19	7.28	8.43	7.21	7.08
Temp (°C)	11.2	11.99	10.89	10.81	11.00	10.4	11.3	9.4	9.0	9.2	11.6
Conductivity (mS/cm)	1.74	1.542	1.34	1.68	1.66	1.52	1.31	1.48	0.76	1.53	1.232
Dissolved Oxygen (mg/L)	0.25	0.2	0	0	0	0.16	0.26	0.00	0.00	1.22	0.33
Turbidity (NTU)	84.1	25.0	53.6	240.0	61	33.4	21.3	11.4	12.7	8.19	21.9
ORP (mV)	-136	-111	-142	-136	-102	-106.0	-104.4	-136.6	-369.5	-151.3	-77.0

Table 2
Summary of Groundwater and Surface-Water Field Parameters
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Location	BL-102U										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/13/14	6/1/15	6/7/16	6/22/17
pH	6.66	6.40	8.84	6.61	7.19	6.56	6.69	6.80	6.57	6.85	6.57
Temp (°C)	14.0	13.7	12.7	14.63	13.7	14.6	12.7	12.7	11.0	10.4	12.4
Conductivity (mS/cm)	0.943	0.741	0.723	0.768	0.593	0.72	0.68	0.8	0.68	0.675	0.553
Dissolved Oxygen (mg/L)	0.24	0.14	0.00	0.00	0.00	0.12	0.17	0.00	0.13	1.70	0.24
Turbidity (NTU)	183	42	241	778	307	11.00	40.5	15.3	39.6	68.3	12.7
ORP (mV)	-131	-142	-107	-109	-70	-83.2	-64.3	-88.1	-121.2	-114.9	-37.5

Location	BL-10										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/13/14	6/1/15	5/25/16	6/22/17
pH	6.71	6.51	8.88	6.72	6.65	6.72	6.71	6.86	6.74	6.78	6.72
Temp (°C)	11.8	10.3	12.4	13.12	14.48	12.7	12.2	11.1	8.4	10.0	11.6
Conductivity (mS/cm)	2.17	2.086	1.98	2.23	2.16	2.13	2.06	1.88	3.04	2.05	1.557
Dissolved Oxygen (mg/L)	2.29	0.24	0.00	0.00	4.96	0.11	0.19	0.04	0.26	0.11	0.09
Turbidity (NTU)	22	1.05	12.5	81.4	42.8	5.95	1.62	3.88	2.01	2.01	5.6
ORP (mV)	-91	-138	-79	-110	-101	-52.2	-64.5	-81.5	-125.0	-113.1	-46.9

Table 2
Summary of Groundwater and Surface-Water Field Parameters
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Location	BL-103U										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/8/12	6/12/13	5/13/14	6/1/15	5/26/16	6/22/17
pH	6.50	6.45	6.29	6.38	7.14	6.55	6.75	6.88	6.78	7.66	6.74
Temp (°C)	11.5	12.3	15.2	13.98	16.1	13.3	12.0	12.6	8.3	11.1	13.0
Conductivity (mS/cm)	2.90	1.14	1.03	1.18	0.8	1.08	0.95	0.88	1.73	0.9	0.885
Dissolved Oxygen (mg/L)	0.50	0.27	0.42	0.00	0.00	0.17	0.08	0.00	0.60	8.06	0.04
Turbidity (NTU)	11.4	1.87	46	29.2	23.4	1.08	2.49	11.2	10.93	48.7	2.6
ORP (mV)	-94	-93	41	-113	-71	-85.1	-94.2	-91.3	-148.4	-108.9	-97.3

Location	WETLAND-B1										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/12/14	6/1/15	5/25/16	6/22/17
pH	NS	9.41	7.62	7.02	6.58	NS	7.13	7.19	7.32	NS	NS
Temp (°C)	NS	24.7	20.36	20.47	22.10	NS	27.1	20.4	13.9	NS	NS
Conductivity (mS/cm)	NS	0.166	0.426	0.397	0.343	NS	0.328	0.557	0.244	NS	NS
Dissolved Oxygen (mg/L)	NS	7.68	5.62	2.66	7.8	NS	3.62	5.19	2.77	NS	NS
Turbidity (NTU)	NS	7.39	11.2	75.4	27.3	NS	10.39	21.7	14.5	NS	NS
ORP (mV)	NS	-65	23	0	196	NS	55.6	58.3	9.1	NS	NS

Table 2
Summary of Groundwater and Surface-Water Field Parameters
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Location	BL-104U										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/13/14	6/1/15	5/26/16	6/22/17
pH	6.5	6.26	6.36	6.41	6.42	6.40	6.36	6.70	6.41	6.40	6.30
Temp (°C)	13.3	12.8	13.8	13.2	15.7	12.4	11.9	11.7	8.4	12.1	10.9
Conductivity (mS/cm)	2.38	3.35	3.01	3.01	3.95	2.85	2.90	3.11	3.80	2.31	4.403
Dissolved Oxygen (mg/L)	1.82	1.43	0.71	3.78	4.87	0.18	0.09	0.08	0.40	1.25	0.06
Turbidity (NTU)	34	10.87	55	26.1	86.1	1.76	3.31	13.4	13.4	6.04	0.8
ORP (mV)	-72	-47.2	40	-74	-73	-61.2	-46.0	-61.8	-107.1	-56.4	-75.1

Location	WETLAND-C1										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/8/12	6/12/13	5/12/14	6/1/15	5/25/16	6/22/17
pH	9.91	7.38	8.07	7.80	7.45	7.51	7.34	7.52	7.63	7.71	NS
Temp (°C)	30.9	27.36	27.95	27.13	26.90	24.1	22.5	20.7	14.9	21.7	NS
Conductivity (mS/cm)	0.208	0.425	0.204	0.211	0.245	0.272	0.321	0.372	0.235	0.0371	NS
Dissolved Oxygen (mg/L)	11.72	5.47	7.66	14.65	6.57	5.75	4.57	4.19	8.32	8.11	NS
Turbidity (NTU)	50	21.6	67.3	166	242	14.2	16.2	27.7	13.2	12.9	NS
ORP (mV)	-19	18.6	-21	-25	71	46.4	6.5	19.1	13.6	-51.6	NS

Table 2
Summary of Groundwater and Surface-Water Field Parameters
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Location	BL-105L										
Date Sampled	6/12/07	6/11/08	6/29/09	6/29/10	6/1/11	6/7/12	6/12/13	5/12/14	6/1/15	5/26/16	6/22/17
pH	6.71	6.51	6.55	6.76	6.23	6.74	6.79	6.77	6.85	7.44	6.84
Temp (°C)	12.0	12.4	13.2	19.6	13.0	16.3	11.2	10.5	9.7	11.3	9.9
Conductivity (mS/cm)	1.13	1.156	1.13	1.29	1.02	1.01	1.07	1.08	0.94	0.97	1.000
Dissolved Oxygen (mg/L)	4.60	0.47	0.74	8.06	5.28	0.62	0.25	0.00	0.67	6.26	1.28
Turbidity (NTU)	20	2.45	92	58.2	82.1	4.32	10.91	16.1	6.21	11.6	12.4
ORP (mV)	-92	-138.9	23	-99	-55	-125.0	-103.2	-125	-186.7	-148.2	-85.1

Notes:

°C = degrees Celsius
mS/cm = milliSiemens per centimeter
mg/L = milligrams per liter
NTU = nephelometric turbidity unit
mV = millivolts
NA = not available
NS = not sampled
ORP = oxidation-reduction potential

Table 3
Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-100U												
Date Sampled	NYS TOGS 1.1.1	Federal MCL	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/12/14	06/01/15	06/07/16	06/22/17
Volatiles													
Acetone	50	NA	-	-	-	2.1 J	-	-	3.7 J	-	-	-	1.9 J
Benzene	1	5	-	-	-	-	-	-	-	-	0.26 J	-	-
Bromodichloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromoform	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	5	NA	-	-	-	-	-	0.37 BJ	-	-	-	-	-
2-Butanone (MEK)	50	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	60	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	5	5	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	100	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Chloroform	7	NA	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.6	5	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	7	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	70	-	-	0.67 J	0.41 J	-	0.33 J	-	-	-	-	-
trans-1,2-Dichloroethene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	5	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	700	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	NA	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	1000	-	-	-	-	-	-	-	-	0.44 J	-	-
1,1,1-Trichloroethane	5	200	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	5	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	2	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	5	10000 [1]	-	-	-	-	-	-	-	-	-	0.33 J	-

See notes on page 9.

Table 3
Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-101U												
Date Sampled	NYS TOGS 1.1.1	Federal MCL	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/12/14	06/01/15	06/07/16	06/22/17
Volatiles													
Acetone	50	NA	6.2 J	6.3 J	1.7 J	4.0 J	6.0 J	3.1 J	7.5 J	4.1 J	-	-	2.1 J
Benzene	1	5	0.92 J	0.84 J	1.0 J	0.77 J	0.67 J	0.66 J	0.38 J	0.62 J	0.62 J	0.37 J	0.33 J
Bromodichloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromoform	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	5	NA	-	-	-	-	-	0.46 BJ	-	-	-	-	-
2-Butanone (MEK)	50	NA	-	1.3 J	-	-	-	-	-	-	-	-	-
Carbon Disulfide	60	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	5	5	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	100	0.88 J	1.5 J	1.8 J	1.0 J	1.2 J	1.6 J	0.68 J	1.8 J	1.8 J	0.73 J	0.63 J
Chloroethane	5	NA	5.1	6.7	7.8	4.7 J	3.9 J	4.1 J	3.2 J	3.1 J	2.4 J	1.8	1.6
Chloroform	7	NA	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	NA	NA	-	0.33 J	-	-	-	-	-	-	-	-	-
Dibromochloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	NA	10	12	12	11	9.7	9.0	10	6.6	7.8	8	9
1,2-Dichloroethane	0.6	5	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	7	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	70	1.3 J	2.1 J	2.3 J	1.5 J	1.5 J	1.9 J	0.89 J	1.4 J	1.4 J	0.98 J	0.94 J
trans-1,2-Dichloroethene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	5	-	-	-	-	-	-	-	-	-	-	0.21 J
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	700	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	NA	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	5	NA	0.71 J	0.84 J	0.75 J	0.61 J	0.42 J	0.45 J	-	0.42 J	-	-	-
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	1000	-	-	-	-	-	-	-	-	-	0.26 J	-
1,1,1-Trichloroethane	5	200	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	5	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	-	-	-	-	-	0.23 J	-	-	-	-	-
Vinyl Chloride	2	2	0.86 J	1.8 J	1.9 J	1.1 J	0.93 J	1.0 J	0.54 J	0.65 J	0.51 J	-	-
o-Xylene	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	5	10000 [1]	-	-	-	-	-	-	-	-	-	0.47 J	-

See notes on page 9.

Table 3
Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	NYS TOGS 1.1.1	Federal MCL	BL-102U										
			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/13/14	06/01/15	06/07/16	06/22/17
Volatiles													
Acetone	50	NA	-	9.0 J	-	2.9 J	3.5 J	1.5 J	3.7 J	1.8 J	-	1.4 J	1.8 J
Benzene	1	5	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromoform	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	5	NA	-	-	-	-	-	0.46 BJ	-	-	-	-	-
2-Butanone (MEK)	50	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	60	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	5	5	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	100	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	NA	32	30	33	39	36	30	45	36	33	40	24
Chloroform	7	NA	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	NA	18	15	5.5	21	7.7	5.3	16	5.2	1.8 J	1.9	0.21 J
1,2-Dichloroethane	0.6	5	-	-	-	0.37 J	0.30 J	-	0.37 J	-	-	-	-
1,1-Dichloroethene	5	7	4.3 J	3.7 J	3.6 J	3.5 J	2.0 J	1.8 J	3.8 J	1.4 J	0.72 J	2.3	-
cis-1,2-Dichloroethene	5	70	7.1	6.9	6.1	5.3	3.4 J	2.4 J	4.9 J	2.1 J	1.1 J	3.9	-
trans-1,2-Dichloroethene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	5	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	700	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	NA	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	1000	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	5	200	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	5	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	2	1.3 J	1.4 J	1.9 J	2.9 J	3.5 J	2.3 J	2.6 J	1.2 J	0.57 J	1.6	0.90 J
o-Xylene	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	5	10000 [1]	-	-	-	-	-	-	-	-	-	0.74 J	-

See notes on page 9.

Table 3
Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-103U												
Date Sampled	NYS TOGS 1.1.1	Federal MCL	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/08/12	06/12/13	05/14/14	06/01/15	05/26/16	06/22/17
Volatiles													
Acetone	50	NA	1.7 J	3.1 J	-	1.8 J	-	-	2.9 J	-	-	2.1 J	2.2 J
Benzene	1	5	0.70 J	0.36 J	0.44 J	0.59 J	-	0.38 J	0.31 J	0.28 J	-	-	0.30 J
Bromodichloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromoform	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	50	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	60	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	5	5	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	100	-	-	-	0.39 J	0.30 J	0.29 J	-	0.37 J	-	-	-
Chloroethane	5	NA	2.2 J	0.85 J	-	1.3 J	-	1.2 J	0.61 J	0.41 J	0.31 J	-	-
Chloroform	7	NA	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	NA	7.0	1.2 J	1.0 J	1.3 J	0.43 J	0.35 J	0.34 J	-	-	-	-
1,2-Dichloroethane	0.6	5	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	7	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	70	-	-	-	0.30 J	-	-	0.37 J	-	0.30 J	-	-
trans-1,2-Dichloroethene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	5	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	700	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	NA	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	1000	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	5	200	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	5	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	2	-	3.0 J	0.90 J	-	-	-	-	-	-	-	-
o-Xylene	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-

See notes on page 9.

Table 3
Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.			BL-104U										
Date Sampled	NYS TOGS 1.1.1	Federal MCL	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/13/14	06/01/15	05/26/16	06/22/17
Volatiles													
Acetone	50	NA	2.3 J	2.0 J	-	1.9 J	1.8 J	1.4 J	3.8 J	1.9 J	-	-	-
Benzene	1	5	30 J	20 J	24 J	37 J	26 J	4.4	5.1	27 J	42 J	7.8	47
Bromodichloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromoform	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	5	NA	-	-	-	-	-	0.36 BJ	-	-	-	-	-
2-Butanone (MEK)	50	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	60	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	5	5	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	100	3.1 J	2.5 J	2.6 J	3.0 J	2.5 J	3.2 J	3.6 J	3.1 J	3.1 J	4.2	5.5
Chloroethane	5	NA	42	56	4.5 J	6.1	3.1 J	6.4	7.3	2.5 J	3.8 J	7.1	4.4
Chloroform	7	NA	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	NA	0.92 J	0.51 J	-	0.35 J	-	0.44 J	0.60 J	0.25 J	0.25 J	0.30 J	0.91 J
1,2-Dichloroethane	0.6	5	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	7	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	70	-	-	-	0.31 J	-	0.33 J	-	-	-	-	-
trans-1,2-Dichloroethene	5	100	0.52 J	-	-	0.33 J	-	0.34 J	-	-	-	0.57 J	-
1,2-Dichloropropane	1	5	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	700	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	NA	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	1000	-	-	-	-	-	-	0.20 J	-	-	-	-
1,1,1-Trichloroethane	5	200	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	5	-	-	-	-	-	0.47 J	-	-	-	-	-
Trichloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	2	1.7 J	0.67 J	0.94 J	0.68 J	0.40 J	0.84 J	-	-	-	-	-
o-Xylene	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-

See notes on page 9.

1631711807 tables 3 and 4
8/9/2017

Table 3

Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
 2017 Groundwater and Surface-Water Sampling and Analysis Report
 Batavia Landfill Superfund Site
 Batavia, New York

Well I.D.			BL-105L										
Date Sampled	NYS TOGS 1.1.1	Federal MCL	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/12/14	06/01/15	05/26/16	06/22/17
Volatiles													
Acetone	50	NA	9.4 J	8.0 J	18 J	43	91	14	4.3 J	17	1.9 J	4.8 J	9.3
Benzene	1	5	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromoform	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	50	NA	-	-	-	-	3.4 J	-	-	-	-	-	-
Carbon Disulfide	60	NA	-	-	-	-	0.37 J	0.23 J	-	0.30 J	-	0.42 J	-
Carbon Tetrachloride	5	5	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	100	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	NA	0.65 J	0.53 J	-	0.65 J	-	-	0.25 J	0.55 J	-	-	-
Chloroform	7	NA	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	NA	NA	-	-	-	-	0.48 J	-	-	0.29 J	-	-	-
Dibromochloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.6	5	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	7	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	70	-	-	-	-	-	-	0.50 J	-	-	-	-
trans-1,2-Dichloroethene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	5	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	700	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	NA	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	1000	-	-	-	-	-	-	-	0.23 J	-	-	0.35 J
1,1,1-Trichloroethane	5	200	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	5	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	1.1 J	0.52 J	0.83 J	0.38 J	1.1 J	0.69 J	0.59 J	0.27 J	0.70 J	0.89 J	1.1
Vinyl Chloride	2	2	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-

See notes on page 9.

1631711807 tables 3 and 4
 8/9/2017

Table 3

Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
 2017 Groundwater and Surface-Water Sampling and Analysis Report
 Batavia Landfill Superfund Site
 Batavia, New York

Well I.D.	BL-106B												
Date Sampled	NYS TOGS 1.1.1	Federal MCL	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/13/14	06/01/15	05/25/16	06/22/17
Volatiles													
Acetone	50	NA	-	2.5 J	-	2.6 J	-	-	2.1 J	-	-	1.6 J	1.4 J
Benzene	1	5	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromoform	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	50	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	60	NA	-	-	-	-	-	0.28 J	-	1.4 J	-	-	-
Carbon Tetrachloride	5	5	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	100	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	NA	4.2 J	0.62 J	-	3.7 J	-	-	2.0 J	3.2 J	0.99 J	1.3	-
Chloroform	7	NA	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	NA	NA	-	-	-	-	-	0.37 J	-	-	-	-	-
Dibromochloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	NA	-	-	-	-	-	-	0.22 J	-	0.24 J	0.26 J	0.28 J
1,2-Dichloroethane	0.6	5	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	7	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	70	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	5	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	700	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	NA	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	1000	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	5	200	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	5	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	2	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-

See notes on page 9.

Table 3
Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	NYS TOGS	Federal	BL-10										
			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/13/14	06/01/15	05/25/16	06/22/17
Volatiles													
Acetone	50	NA	6.4 J	3.0 J	-	4.1 J	2.3 J	3.3 J	4.6 J	3.2 J	-	2.8 J	1.6 J
Benzene	1	5	37 J	1.2 J	1.2 J	3.5 J	2.9 J	2.0 J	3.3 J	2.7 J	2.7 J	2.9	2.9
Bromodichloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromoform	50	NA	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	5	NA	-	-	-	-	-	0.47 BJ	-	-	-	-	-
2-Butanone (MEK)	50	NA	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	60	NA	-	-	-	-	-	-	-	0.27 J	-	-	-
Carbon Tetrachloride	5	5	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	5	100	1.5 J	0.40 J	-	1.5 J	1.3 J	0.89 J	1.6 J	1.3 J	1.4 J	1.5	1.3
Chloroethane	5	NA	62	33	31	63	65	44	64	45	37	35	42
Chloroform	7	NA	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	50	NA	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	NA	1.0 J	2.0 J	1.2 J	0.64 J	0.64 J	0.41 J	0.57 J	0.40 J	0.35 J	0.47 J	0.50 J
1,2-Dichloroethane	0.6	5	-	0.30 J	-	0.62 J	0.58 J	-	0.37 J	-	-	-	-
1,1-Dichloroethene	5	7	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	70	-	1.7 J	1.5 J	0.38 J	0.31 J	1.5	-	-	-	0.34 J	-
trans-1,2-Dichloroethene	5	100	-	-	-	0.33 J	-	0.31 J	-	-	-	-	-
1,2-Dichloropropane	1	5	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	700	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	50	NA	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Styrene	5	100	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	5	NA	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	1000	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	5	200	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	5	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	5	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	2	-	0.75 J	-	-	-	0.43 J	-	-	-	-	-
o-Xylene	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	5	10000 [1]	-	-	-	-	-	-	-	-	-	-	-

See notes on page 9.

Table 3

**Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York**

Notes:

Water quality results are expressed in micrograms per liter ($\mu\text{g/L}$), equivalent to parts per billion (ppb).

Groundwater Effluent Limits criteria are taken from the New York State Division of Water Technical and Operational Guidance Series 1.1.1 (NYS TOGS 1.1.1) *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations* . June 1998.

National Primary Drinking Water Regulations Maximum Contaminant Levels (MCLs) taken from USEPA 816-F-03-016, June 2003.

J : The compound was positively identified; however, the associated numerical value is an estimated concentration.

- : Denotes a nondetectable concentration.

NA: Not applicable, a standard has not been established for this compound.

[1]: Criteria applies to total xylene concentration.

Yellow shaded results indicate the concentration exceeds the Federal MCLs.

Red shaded results indicate the concentration exceeds the state TOGS 1.1.1.

Blue shaded results indicate the concentration exceeds the federal MCLs and state TOGS 1.1.1.

Table 4
Summary of Inorganics Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-100U												
Date Sampled	NYS TOGS 1.1.1	Federal MCLs	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/12/14	06/01/15	06/07/16	06/22/17
Inorganics													
Aluminum	NA	NA	135	438	100	-	179	167	167	615*	2050	2190	2160
Antimony	3	6	-	-	-	-	-	-	-	-	-	-	-
Arsenic	25	10	12.7	131	17	26.5	16	-	12.1	11.2	25.6	-	25.5
Barium	1000	2000	169	393	310	253	115	233	243	136	739	307	128
Beryllium	3	4	-	-	-	-	-	-	-	-	-	-	-
Cadmium	5	5	-	-	-	-	-	-	-	-	-	-	-
Calcium	NA	NA	120000	123000	215000	157000	61400	146000	150000	87500 E	552000	179000	63000
Chromium	50	100	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	200	1300 [1]	-	-	-	-	-	-	-	-	22.9	-	-
Iron	300	NA	13600	116000	19300	19200	13200	12100	13000	7510	27200	9130	12500
Lead	25	15 [1]	-	-	-	-	-	-	-	-	-	-	-
Magnesium	35000	NA	27900	28100	47400	35100	13500	34000	31400	19200	140000	36400	12700
Manganese	300	NA	381	383	559	417	157	376	345	261	1920	414	151
Mercury	0.7	2	-	-	-	-	-	-	-	-	0.254	-	-
Nickel	100	NA	-	-	-	-	-	-	-	-	-	-	-
Potassium	NA	NA	2930	2650 N	3100	2950	-	2830	2650	2310	2850	3270	2570
Selenium	10	50	-	-	-	-	-	-	-	-	-	-	-
Silver	50	NA	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	NA	270000	308000 N	540000	547000	300000	585000	652000	354000	567000	651000	401000
Thallium	0.5	2	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Zinc	2000	NA	-	-	-	-	-	-	-	-	42.0	-	-

See notes on page 10.

Table 4
Summary of Inorganics Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.			BL-102U										
	NYS TOGS 1.1.1	Federal MCLs											
Date Sampled			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/13/14	06/01/15	06/07/16	06/22/17
Inorganics													
Aluminum	NA	NA	14300	24400	14600	29600	44800	967	4210	195*	290	4260	350
Antimony	3	6	-	-	-	-	-	-	-	-	-	-	-
Arsenic	25	10	-	-	-	-	-	-	-	-	-	-	-
Barium	1000	2000	175	217	227	327	488	73.3	95.3	95.1	104	87.7	91.4
Beryllium	3	4	-	-	-	-	-	-	-	-	-	-	-
Cadmium	5	5	-	-	-	-	-	-	-	-	-	-	-
Calcium	NA	NA	133000	149000	160000	306000	519000	88900	99800	89600 E	98500	95600	95800
Chromium	50	100	24.7	38.7	23	49	104	-	25	-	-	-	-
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	200	1300 [1]	-	39.9	23	38.9	52.2	-	-	-	-	-	-
Iron	300	NA	19100	27400	19400	40600	64000	6460	9860	6640	7100	8790	6350
Lead	25	15 [1]	9.5	17.4	12.9	17.3	19.1	-	-	-	-	-	-
Magnesium	35000	NA	49100	61000	50300	121000	178000	29800	35700	28300	31700	32500	30100
Manganese	300	NA	465	637	484	1200	2040	199	275	204	252	263	231
Mercury	0.7	2	-	-	-	-	-	-	-	-	-	-	-
Nickel	100	NA	-	-	-	41.8	74.9	-	-	-	-	-	-
Potassium	NA	NA	9190	12600 N	8300	12000	16300	3490	4080	2700	3590	4290	3510
Selenium	10	50	-	-	-	-	-	-	-	-	-	-	-
Silver	50	NA	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	NA	18200	16400 N	14600	15300	15300	12500	11700	9810	12300	10500	13400
Thallium	0.5	2	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	-	-	-	64.8	106	-	-	-	-	-	-
Zinc	2000	NA	60.0	111.0	70	123	169	-	-	-	-	-	-

See notes on page 10.

Table 4
Summary of Inorganics Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-103U												
Date Sampled	NYS TOGS 1.1.1	Federal MCLs	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/08/12	06/12/13	05/13/14	06/01/15	05/26/16	06/22/17
Inorganics													
Aluminum	NA	NA	4250	457	12300	-	-	171	-	-	-	9860	-
Antimony	3	6	-	-	-	-	-	-	-	-	-	-	-
Arsenic	25	10	10.8	-	24	-	-	-	-	-	-	31.9	-
Barium	1000	2000	173	119	183	114	105	102	113	90.1	86.4	197	106
Beryllium	3	4	-	-	-	-	-	-	-	-	-	-	-
Cadmium	5	5	-	-	-	-	-	-	-	-	-	-	-
Calcium	NA	NA	169000	127000	199000	139000	125000	142000	120000	106000 E	109000	148000	128000
Chromium	50	100	14.5	-	17	-	-	-	-	-	-	11.7	-
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	200	1300 [1]	-	-	-	-	-	-	-	-	-	-	-
Iron	300	NA	27000	20500	54700	14500	13400	17400	12700	11300	11100	16400	11400
Lead	25	15 [1]	-	-	23.2	-	-	-	-	-	-	-	-
Magnesium	35000	NA	61900	47700	68300	45800	41200	45000	42500	34800	34300	51900	39300
Manganese	300	NA	432	377	668	324	265	324	256	192	261	339	268
Mercury	0.7	2	-	-	-	-	-	-	-	-	-	-	-
Nickel	100	NA	-	-	-	-	-	-	-	-	-	-	-
Potassium	NA	NA	5330	5050 N	10100	2320	2020	2420	-	-	-	5870	-
Selenium	10	50	-	-	-	10.7	-	-	-	-	-	-	-
Silver	50	NA	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	NA	22000	24000 N	21000	19400	19600	20500	23300	17400	16400	19000	15800
Thallium	0.5	2	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Zinc	2000	NA	-	-	69	-	-	-	-	-	-	54	-

See notes on page 10.

Table 4
Summary of Inorganics Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-104U												
Date Sampled	NYS TOGS 1.1.1	Federal MCLs	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/08/12	06/12/13	05/13/14	06/01/15	05/26/16	06/22/17
Inorganics													
Aluminum	NA	NA	-	108	-	-	-	-	-	-	-	-	-
Antimony	3	6	-	-	-	-	-	-	-	-	-	-	-
Arsenic	25	10	-	19	-	-	-	-	-	-	-	-	-
Barium	1000	2000	502	718	501	492	630	474	590	455	496	438	727
Beryllium	3	4	-	-	-	-	-	-	-	-	-	-	-
Cadmium	5	5	-	-	-	-	-	-	-	-	-	-	-
Calcium	NA	NA	199000	200000	208000	207000	236000	199000	239000	192000 E	214000	215000	287000
Chromium	50	100	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	200	1300 [1]	-	-	-	-	-	-	-	-	-	-	-
Iron	300	NA	24500	44500	22500	24600	29700	26800	32000	21300	28700	24100	32400
Lead	25	15 [1]	-	-	7.4	-	-	-	-	-	-	-	-
Magnesium	35000	NA	58100	54300	49800	53900	58000	49000	61800	42700	50800	46600	63200
Manganese	300	NA	301	273	274	290	335	268	333	230	302	275	347
Mercury	0.7	2	-	-	-	-	-	-	-	-	-	-	-
Nickel	100	NA	-	-	-	-	-	-	-	-	-	-	-
Potassium	NA	NA	12500	12100 N	9500	9960	9100	11500	10300	7370	6690	6100	11400
Selenium	10	50	-	-	-	-	-	-	-	-	-	-	-
Silver	50	NA	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	NA	221000	286000 N	384000	297000	463000	315000	283000	432000	293000	208000	519000
Thallium	0.5	2	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Zinc	2000	NA	-	-	-	-	-	-	-	-	-	-	-

See notes on page 10.

Table 4
Summary of Inorganics Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-105L												
Date Sampled	NYS TOGS 1.1.1	Federal MCLs	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/12/14	06/01/15	05/26/16	06/22/17
Inorganics													
Aluminum	NA	NA	-	181	-	247	-	176	477	-	-	678	-
Antimony	3	6	-	-	-	-	-	-	-	-	-	-	-
Arsenic	25	10	-	-	-	-	58.7	-	12.4	40.6	-	10.3	53.2
Barium	1000	2000	87.7	71.1	84	94.3	109	72.7	129	88	84.9	93.3	105
Beryllium	3	4	-	-	-	-	-	-	-	-	-	-	-
Cadmium	5	5	-	-	-	-	-	-	-	-	-	-	-
Calcium	NA	NA	155000	131000	164000	167000	152000	139000	145000	144000 E	127000	128000	135000
Chromium	50	100	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	200	1300 [1]	-	-	-	-	-	-	-	-	-	-	-
Iron	300	NA	3020	5600	4370	3370	5710	4060	25600	12400	3930	7050	8230
Lead	25	15 [1]	-	-	-	-	-	-	-	-	-	-	-
Magnesium	35000	NA	59200	51300	63600	63700	63000	54100	58500	57900	52100	52900	56400
Manganese	300	NA	1610	1370	1340	1620	1070	850	456	724	841	269	570
Mercury	0.7	2	-	-	-	-	-	-	-	-	-	-	-
Nickel	100	NA	-	-	-	-	-	-	-	-	-	-	-
Potassium	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Selenium	10	50	-	-	-	-	-	-	-	-	-	-	-
Silver	50	NA	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	NA	10300	11500 N	11900	16900	20300	10100	7970	16800	9200	7210	9740
Thallium	0.5	2	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Zinc	2000	NA	-	-	-	-	-	-	-	-	-	-	-

See notes on page 10.

Table 4
Summary of Inorganics Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-106B												
	NYS TOGS 1.1.1	Federal MCLs											
Date Sampled			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/13/14	06/01/15	05/25/16	06/22/17
Inorganics													
Aluminum	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Antimony	3	6	-	-	-	-	-	-	-	-	-	-	-
Arsenic	25	10	-	-	-	-	-	-	-	-	-	-	-
Barium	1000	2000	1170	301	98	1190	946	816	1180	997	953	945	911
Beryllium	3	4	-	-	-	-	-	-	-	-	-	-	-
Cadmium	5	5	-	-	-	-	-	-	-	-	-	-	-
Calcium	NA	NA	121000	32900	11600	126000	107000	95200	124000	112000 E	109000	114000	118000
Chromium	50	100	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	200	1300 [1]	-	-	-	-	-	-	-	-	-	-	-
Iron	300	NA	20500	19700	17500	36000	69000	7720	23300	21300	4000	34900	12000
Lead	25	15 [1]	-	-	-	-	-	-	-	-	-	-	-
Magnesium	35000	NA	80600	55400	43400	82500	70700	67400	80000	73400	71500	71800	74800
Manganese	300	NA	67.8	164	204	91.9	125	61.4	76.6	69.0	35.1	73.3	47.9
Mercury	0.7	2	-	-	-	-	-	-	-	-	-	-	-
Nickel	100	NA	-	-	-	-	-	-	-	-	-	-	-
Potassium	NA	NA	7400	6100 N	6000	8450	6830	6200	8750	6300	5750	5990	5320
Selenium	10	50	-	-	-	-	-	-	-	-	-	-	-
Silver	50	NA	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	NA	20900	17300 N	16400	22600	19200	17900	22000	18600	18800	20100	19700
Thallium	0.5	2	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Zinc	2000	NA	-	-	-	-	-	-	-	-	-	-	-

See notes on page 10.

Table 4
Summary of Inorganics Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-107B												
	NYS TOGS 1.1.1	Federal MCLs											
Date Sampled			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/08/12	06/12/13	05/13/14	06/01/15	05/25/16	06/22/17
Inorganics													
Aluminum	NA	NA	-	-	-	-	-	141	-	-	-	-	-
Antimony	3	6	-	-	-	-	-	-	-	-	-	-	-
Arsenic	25	10	-	-	-	-	-	-	-	-	-	-	-
Barium	1000	2000	357	757	235	1570	1790	1050	1590	1350	502	1330	1670
Beryllium	3	4	-	-	-	-	-	-	-	-	-	-	-
Cadmium	5	5	-	-	-	-	-	-	-	-	-	-	-
Calcium	NA	NA	36600	50000	29000	98100	103000	73600	86700	94300 E	39000	90700	119000
Chromium	50	100	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	200	1300 [1]	-	-	-	-	-	-	-	-	-	-	-
Iron	300	NA	27100	17500	24500	16800	16200	73600	36500	9350	39000	10500	7520
Lead	25	15 [1]	-	-	5.8	-	-	-	-	-	-	-	-
Magnesium	35000	NA	64000	66600	55900	86700	89300	71300	81900	74400	58400	73400	87300
Manganese	300	NA	367	237	370	177	164	508	190	118	300	115	124
Mercury	0.7	2	-	-	-	-	-	-	-	-	-	-	-
Nickel	100	NA	-	-	-	-	-	-	-	-	-	-	-
Potassium	NA	NA	68100	68600 N	60300	58000	60500	55600	59800	45800	55300	47000	50200
Selenium	10	50	-	-	-	-	-	-	-	-	-	-	-
Silver	50	NA	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	NA	14100	21800 N	13900	47300	44700	33900	21300	56800	7110	52300	65100
Thallium	0.5	2	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Zinc	2000	NA	-	-	-	-	-	-	-	-	-	-	-

See notes on page 10.

Table 4
Summary of Inorganics Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	BL-10												
Date Sampled	NYS TOGS 1.1.1	Federal MCLs	06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/13/14	06/01/15	05/25/16	06/22/17
Inorganics													
Aluminum	NA	NA	-	183	-	101	-	162	133	-	-	-	-
Antimony	3	6	-	-	-	-	-	-	-	-	-	-	-
Arsenic	25	10	37.4	42.4	37	40.5	36.3	47.7	33.6	31.1	37.2	38.2	38.7
Barium	1000	2000	1530	599	765	1300	1330	944	1330	1130	1180	1160	1220
Beryllium	3	4	-	-	-	-	-	-	-	-	-	-	-
Cadmium	5	5	-	-	-	-	-	-	-	-	-	-	-
Calcium	NA	NA	121000	93200	102000	110000	113000	102000	109000	96000 E	98900	107000	117000
Chromium	50	100	-	-	-	-	-	13.4	-	-	-	-	-
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Copper	200	1300 [1]	-	-	-	-	-	-	-	-	-	-	-
Iron	300	NA	15100	8570	9280	13500	15000	12300	14300	12100	12800	12500	13500
Lead	25	15 [1]	-	-	-	-	-	-	-	-	-	-	-
Magnesium	35000	NA	129000	69900	84100	117000	119000	91300	116000	102000	104000	104000	110000
Manganese	300	NA	20.1	112	104	22	24.1	66.8	26.9	25.7	30.1	26.3	31.6
Mercury	0.7	2	-	-	-	-	-	-	-	-	-	-	-
Nickel	100	NA	-	-	-	-	-	-	-	-	-	-	-
Potassium	NA	NA	40800	13900 N	20200	36500	38200	25400	36200	31600	32500	30800	33900
Selenium	10	50	-	-	-	-	-	-	-	-	-	-	-
Silver	50	NA	-	-	-	-	-	-	-	-	-	-	-
Sodium	20000	NA	94800	80300 N	83600	111000	120000	98000	124000	103000	107000	108000	125000
Thallium	0.5	2	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	NA	-	-	-	-	-	-	-	-	-	-	-
Zinc	2000	NA	-	-	-	-	-	-	-	-	-	-	-

See notes on page 10.

Table 4

Summary of Inorganic Analytical Results for Groundwater Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York



Notes:

Water quality results are expressed in micrograms per liter ($\mu\text{g/L}$), equivalent to parts per billion (ppb).

Groundwater Effluent Limits criteria are taken from the New York State Division of Water Technical and Operational Guidance Series 1.1.1 (NYS TOGS 1.1.1) *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*. June 1998.

National Primary Drinking Water Regulations Maximum Contaminant Levels (MCLs) taken from USEPA 816-F-03-016, June 2003.

E: Exceeds calibration range.

- : Denotes a nondetectable concentration.

* : Indicates that a quality control parameter exceeded laboratory limits.

NA: Not applicable, a standard has not been established for this metal.

[1]: Lead and copper are regulated by a treatment technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is $1,300 \mu\text{g/L}$, and for lead is $15 \mu\text{g/L}$.

Yellow shaded results indicate the concentration exceeds the federal MCLs.

Red shaded results indicate the concentration exceeds the state TOGS 1.1.1.

Blue shaded results indicate the concentration exceeds the federal MCLs and state TOGS 1.1.1.

Table 5

Summary of Volatile Organic Compounds Analytical Results for Surface-Water Samples
 2017 Groundwater and Surface-Water Sampling and Analysis Report
 Batavia Landfill Superfund Site
 Batavia, New York

Well I.D.	NYS TOGS 1.1.1	Federal WQCs	Wetland B-1										
Date Sampled			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/12/14	06/01/15	05/25/16	06/22/17
Volatiles													
Acetone	NA	NA	NS	-	7.4 J	4.6 J	5.3 J	NS	4.3 J	9.3 J	-	NS	NS
Benzene	210	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Bromodichloromethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Bromoform	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Bromomethane	NA	NA	NS	-	-	-	-	NS	-	0.41 BJ	-	NS	NS
2-Butanone (MEK)	NA	NA	NS	-	-	-	1.4 J	NS	-	-	-	NS	NS
Carbon Disulfide	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Carbon Tetrachloride	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Chlorobenzene	5	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Chloroethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Chloroform	NA	NA	NS	-	1.2 J	-	-	NS	-	-	-	NS	NS
Chloromethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Dibromochloromethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
1,1-Dichloroethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
1,2-Dichloroethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
1,1-Dichloroethene	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
cis-1,2-Dichloroethene	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
trans-1,2-Dichloroethene	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
1,2-Dichloropropane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
cis-1,3-Dichloropropene	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
trans-1,3-Dichloropropene	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Ethylbenzene	17	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
2-Hexanone	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Dichloromethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
4-Methyl-2-Pentanone (MIBK)	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Styrene	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
1,1,2,2-Tetrachloroethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Tetrachloroethene	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Toluene	100	NA	NS	-	-	-	-	NS	-	0.36 J	-	NS	NS
1,1,1-Trichloroethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
1,1,2-Trichloroethane	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Trichloroethene	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Vinyl Chloride	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
O-Xylene	65 [1]	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
M,P-Xylenes	65 [1]	NA	NS	-	-	-	-	NS	-	-	-	NS	NS

See notes on page 3.

Table 5

Summary of Volatile Organic Compounds Analytical Results for Surface-Water Samples
 2017 Groundwater and Surface-Water Sampling and Analysis Report
 Batavia Landfill Superfund Site
 Batavia, New York

Well I.D.	NYS TOGS 1.1.1	Federal WQCs	Wetland C-1										
Date Sampled			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/08/12	06/12/13	05/12/14	06/01/15	05/25/16	06/22/17
Volatiles													
Acetone	NA	NA	6.0 J	5.8 J	2.2 J	4.1 J	21	3.2 J	3.9 J	3.3 J	-	4.0 J	NS
Benzene	210	NA	-	-	-	-	-	-	-	-	-	-	NS
Bromodichloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Bromoform	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Bromomethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
2-Butanone (MEK)	NA	NA	-	-	-	1.0 J	6.6 J	-	-	-	-	-	NS
Carbon Disulfide	NA	NA	-	-	-	-	-	-	-	0.23 J	-	-	NS
Carbon Tetrachloride	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Chlorobenzene	5	NA	-	-	-	-	-	-	-	-	-	-	NS
Chloroethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Chloroform	NA	NA	-	-	-	-	-	-	-	-	-	0.51 J	NS
Chloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Dibromochloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
1,1-Dichloroethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
1,2-Dichloroethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
1,1-Dichloroethene	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
cis-1,2-Dichloroethene	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
trans-1,2-Dichloroethene	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
1,2-Dichloropropane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
cis-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
trans-1,3-Dichloropropene	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Ethylbenzene	17	NA	-	-	-	-	-	-	-	-	-	-	NS
2-Hexanone	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Dichloromethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
4-Methyl-2-Pentanone (MIBK)	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Styrene	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
1,1,2,2-Tetrachloroethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Tetrachloroethene	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Toluene	100	NA	-	-	-	-	1.3 J	-	0.38 J	-	-	-	NS
1,1,1-Trichloroethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
1,1,2-Trichloroethane	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Trichloroethene	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Vinyl Chloride	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
O-Xylene	65 [1]	NA	-	-	-	-	-	-	-	-	-	-	NS
M,P-Xylenes	65 [1]	NA	-	-	-	-	-	-	-	-	-	-	NS

See notes on page 3.

Table 5

**Summary of Volatile Organic Compounds Analytical Results for Surface-Water Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York**

Notes:

Water quality results are expressed in micrograms per liter ($\mu\text{g/L}$), equivalent to parts per billion (ppb).

Criterion Continuous Concentration (CCC) values are taken from *National Recommended Water Quality Criteria: 2002*. USEPA 822-R-02-047. November 2002.

Freshwater Fish Propagation/Survival criteria are taken from the New York State Division of Water Technical and Operational Guidance Series 1.1.1 (NYS TOGS 1.1.1) *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*. June 1998.

- J: The compound was positively identified; however, the associated numerical value is an estimated concentration.
- B: Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- : Denotes a non-detectable concentration.
- NA: Not applicable, a standard has not been established for this compound.
- NS: Not samples - Wetland B was dry at time of the monitoring event.
- WQC: water quality criteria
- [1]: Criteria applies to total xylene concentration.

Table 6
Summary of Inorganics Analytical Results for Surface-Water Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	NYS TOGS 1.1.1	Federal WQCs	Wetland B-1										
			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/07/12	06/12/13	05/12/14	06/01/15	05/25/16	06/22/17
Inorganics													
Aluminum	100	87	NS	148	-	175	-	NS	-	1640*	-	NS	NS
Antimony	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Arsenic	150	150	NS	-	-	-	-	NS	-	-	-	NS	NS
Barium	NA	NA	NS	351	359	589	239	NS	213	508	186	NS	NS
Beryllium	1100	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Cadmium ^{1,2}	4.4	0.25	NS	-	-	-	-	NS	-	-	-	NS	NS
Calcium	NA	NA	NS	22200	26100	28300	43200	NS	36600	47700 E	24600	NS	NS
Chromium ^{1,2,3}	161.2	74	NS	-	-	-	-	NS	-	-	-	NS	NS
Cobalt	NA	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Copper ^{1,2}	20	9	NS	-	-	-	-	NS	-	-	-	NS	NS
Iron	300	1000	NS	5730	830	4350	1580	NS	1600	7350	413	NS	NS
Lead ^{1,2}	3	2.5	NS	-	-	-	-	NS	-	-	-	NS	NS
Magnesium	NA	NA	NS	33800	39500	35400	21900	NS	16600	15800	14900	NS	NS
Manganese	NA	NA	NS	205	62	218	340	NS	462	1730	194	NS	NS
Mercury	0.77	0.77	NS	-	-	-	-	NS	-	-	-	NS	NS
Nickel ^{1,2}	116	52	NS	-	-	-	-	NS	-	-	-	NS	NS
Potassium	NA	NA	NS	22000 N	9900	3580	2730	NS	3160	3420	6890	NS	NS
Selenium	4.6	5	NS	-	-	-	-	NS	-	-	-	NS	NS
Silver	0.1	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Sodium	NA	NA	NS	5380 N	3600	1740	1530	NS	1140	1860	1280	NS	NS
Thallium	8	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Vanadium	14	NA	NS	-	-	-	-	NS	-	-	-	NS	NS
Zinc ^{1,4}	185	264	NS	23	-	61.1	-	NS	-	-	-	NS	NS

See notes on page 3.

Table 6
Summary of Inorganics Analytical Results for Surface-Water Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Well I.D.	NYS TOGS 1.1.1	Federal WQCs	Wetland C-1										
Date Sampled			06/12/07	06/11/08	06/29/09	06/29/10	06/01/11	06/08/12	06/12/13	05/12/14	06/01/15	05/25/16	06/22/17
Inorganics													
Aluminum	100	87	266	-	9100	266	-	596	2250	102*	143	-	NS
Antimony	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Arsenic	150	150	-	-	-	-	-	-	-	-	-	-	NS
Barium	NA	NA	-	-	70	-	21.5	26.9	33	35.4	21.2	32.9	NS
Beryllium	1100	NA	-	-	-	-	-	-	-	-	-	-	NS
Cadmium ^{1,2}	4.4	0.25	-	-	-	-	-	-	-	-	-	-	NS
Calcium	NA	NA	15000	13300	29900	27000	39400	28200	40900	51000 E	35600	32800	NS
Chromium ^{1,2,3}	161.2	74	-	-	11	-	-	-	-	-	-	-	NS
Cobalt	NA	NA	-	-	-	-	-	-	-	-	-	-	NS
Copper ^{1,2}	20	9	-	-	-	-	-	-	-	-	-	-	NS
Iron	300	1000	665	344	10100	743	528	1760	2770	521	1330	1340	NS
Lead ^{1,2}	3	2.5	-	-	11.5	-	-	-	-	-	-	-	NS
Magnesium	NA	NA	13600	10800	18100	11500	12900	15800	16800	18300	13600	19300	NS
Manganese	NA	NA	106	63.8	600	39.9	186	210	387	57.3	91.8	88.3	NS
Mercury	0.77	0.77	-	-	-	-	-	-	-	-	-	-	NS
Nickel ^{1,2}	116	52	-	-	-	-	-	-	-	-	-	-	NS
Potassium	NA	NA	2970	-	3100	-	2320	-	-	-	2870	5050	NS
Selenium	4.6	5	-	-	-	-	-	-	-	-	-	-	NS
Silver	0.1	NA	-	-	-	-	-	-	-	-	-	-	NS
Sodium	NA	NA	3020	1440 N	1500	1630	1680	1520	2000	2530	1690	3550	NS
Thallium	8	NA	-	-	-	-	-	-	-	-	-	-	NS
Vanadium	14	NA	-	-	-	-	-	-	-	-	-	-	NS
Zinc ^{1,4}	185	264	-	-	334	-	-	-	26.6	-	-	-	NS

See notes on page 3.

Table 6
Summary of Inorganic Analytical Results for Surface-Water Samples
2017 Groundwater and Surface-Water Sampling and Analysis Report
Batavia Landfill Superfund Site
Batavia, New York

Notes:
Water quality results are expressed in micrograms per liter (µg/L), equivalent to parts per billion (ppb).

Criterion Continuous Concentration (CCC) values are taken from *National Recommended Water Quality Criteria: 2002* (WQC). USEPA 822-R-02-047. November 2002.

Fresh water Fish Propagation/Survival criteria are taken from the New York State Division of Water Technical and Operational Guidance Series 1.1.1 (NYS TOGS 1.1.1) *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*. June 1998.

1 The NYS TOGS 1.1.1 criterion for these metals were determined based on an average site hardness value of 258 mg/L for surface water at Wetlands B and C (calculated using the calcium and magnesium concentrations for the samples). The sample collected from WETLAND-C1 in March 2004 was not used in the hardness calculations due to the anomalously low magnesium concentration reported.

2 The criterion for these metals is hardness-dependent. The concentration shown are the default numbers calculated based on a hardness of 100 mg/L; however, these concentrations can be adjusted based on site-specific hardness values as established in Recommended WQC: 2002. (USEPA 822-R-02-047. November 2002).

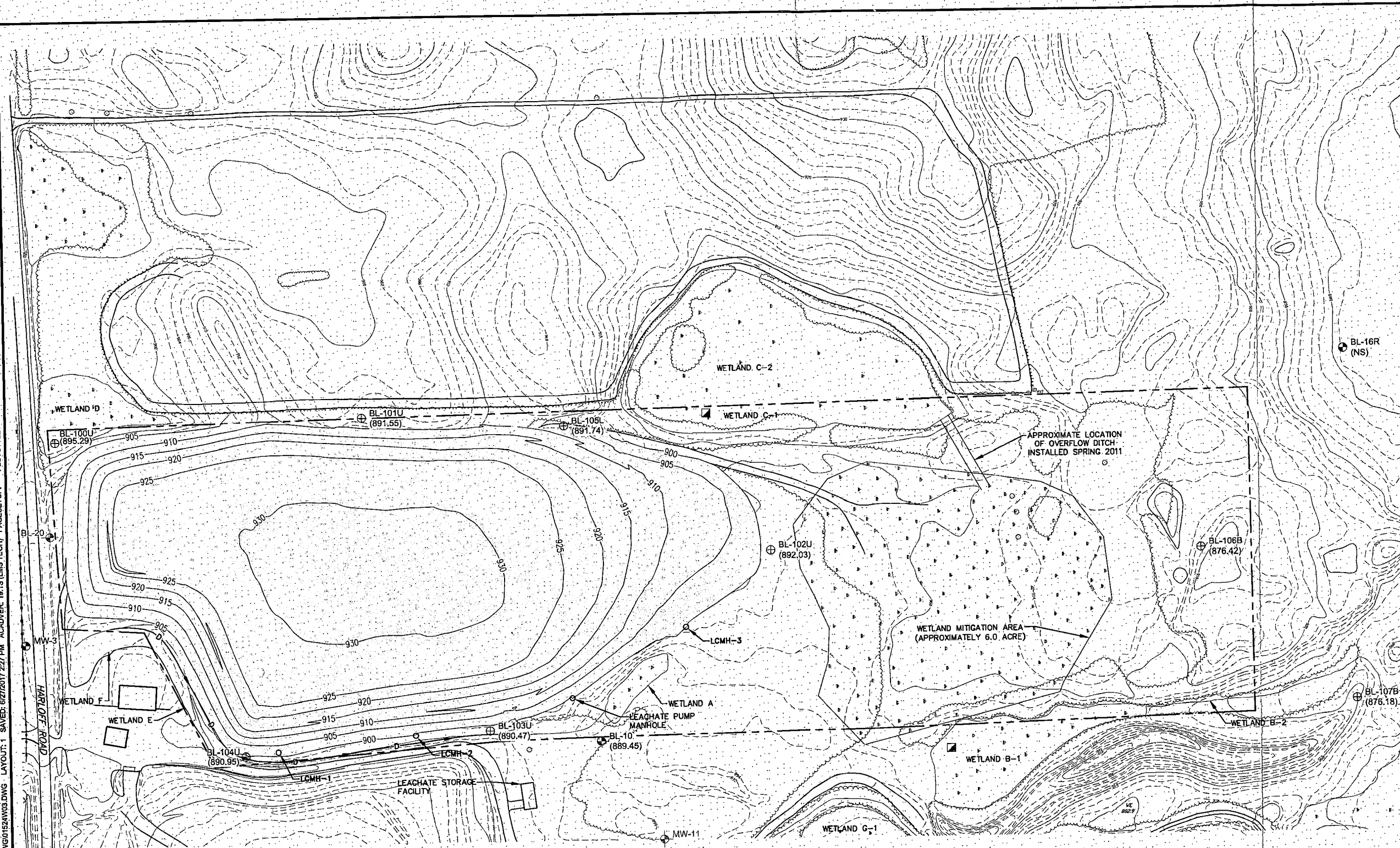
3 Chromium III criteria is used.

4 The WQC zinc criteria was adjusted using an average hardness value of 258 mg/L for surface water at Wetlands B and C (calculated using the calcium and magnesium concentrations for the samples). The sample collected from WETLAND-C1 in March 2004 was not used in the hardness calculations due to the anomalously low magnesium concentration reported.

N : Spiked sample recovery was not within control limits.
- : Denotes a nondetectable concentration.
* : Indicates that a quality control parameter exceeded laboratory limits.
NA: Not applicable, a standard has not been established for this metal.
NS: Not samples - Wetland B was dry at time of the monitoring event.

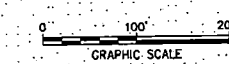
Yellow shaded results indicate the concentration exceeds the federal WQC.
Red shaded results indicate the concentration exceeds the state TOGS 1.1.1.
Blue shaded results indicate the concentration exceeds the federal WQC and state TOGS 1.1.1.

CITY: SYRACUSE NY DIV: GROUP: ENV: CAD DB: E. KRAHMER R. BASSETT LD: (00) PC: (01) PM: A. MOLINA TM: A. RICHARDSON TR: T. ERTTEL LV: (01) (01) OFF: REF
C:\Local-GEN\CAD\SYRACUSE\ACT1800015242017000020\DWG\01524201.DWG LAYOUT: 1 SAVED: 6/27/2017 2:27 PM ACADYER: 10:13 (LMS TECH) PAGES: 10 PAGESETUP: 1 PLOTSTYLETABLE: PLT: FULL.CTB PLOTTED: 6/27/2017 2:27 PM BY: KRAHMER, ERIC
XREFS: IMAGES: PROJECTNAME: 01524201.DWG



- LEGEND:**
- APPROXIMATE PROPERTY LINE
 - APPROXIMATE LIMIT OF EXISTING WASTE
 - 920 --- INDEX ELEVATION CONTOUR
 - 922 --- INTERMEDIATE ELEVATION CONTOUR
 - CHANGE-IN-GRADE
 - APPROXIMATE AREA OF FINAL COVER SYSTEM
 - LCMH-3 LEACHATE COLLECTION MANHOLE
 - DRAINAGE DITCH
 - SURFACE WATER SAMPLING LOCATION
 - ⊕ EXISTING WELL
 - ⊕ NEW WELL
 - ⊕ EXISTING WELL (SEE NOTE 5)
 - (876.42) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

- NOTES:**
1. BASE MAP INFORMATION PREPARED BY LOCKWOOD MAPPING AND IS BASED ON AERIAL PHOTOGRAPHY OF THE SITE TAKEN IN MARCH 1998, AND A FIELD SURVEY COMPLETED BY WENDEL IN MAY 1996.
 2. REFER TO DRAWING NO. 12 FOR LEACHATE COLLECTION SYSTEM INFORMATION
 3. CONTOUR INTERVAL EQUALS 2 FEET.
 4. CONTOURS REPRESENT TOP OF FINAL COVER SYSTEM.
 5. EXISTING WELL RETAINED AT REQUEST OF NYSDEC, NOT INCLUDED IN SITE GROUNDWATER MONITORING PLAN



BATAVIA LANDFILL SUPERFUND SITE
TOWN OF BATAVIA, NEW YORK
**GROUNDWATER AND SURFACE WATER
SAMPLING AND ANALYSIS REPORT**

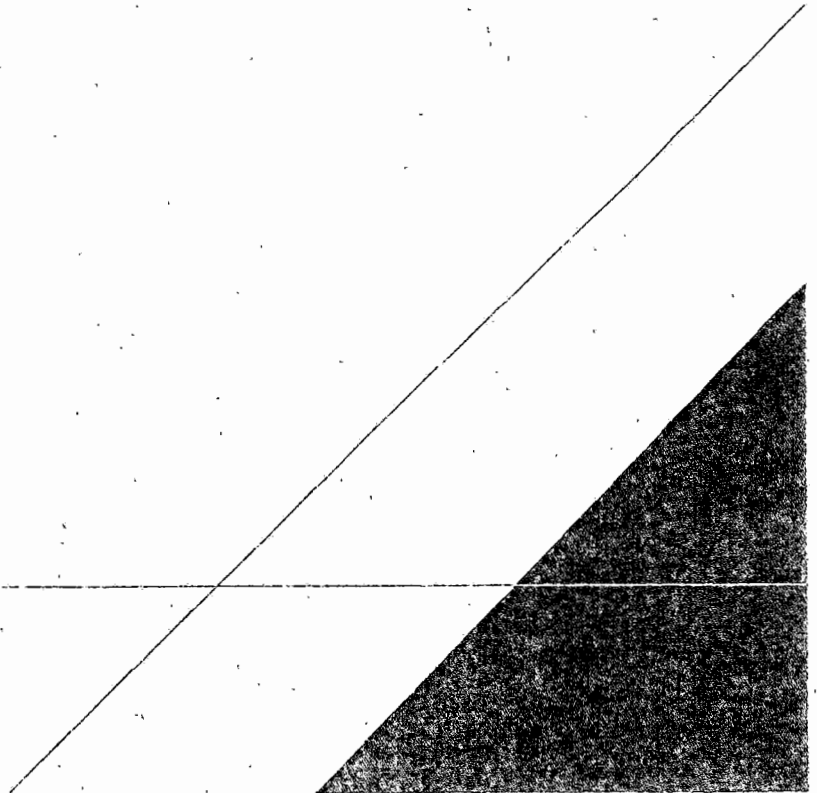
**MONITORING WELL NETWORK
WITH GROUNDWATER ELEVATIONS
(UPPER SAND) JUNE 22, 2017**

ARCADIS Design & Consultancy
for natural and
built assets

FIGURE
1

APPENDIX A

March 29, 2007 USEPA Comment Letter on Proposed Environmental
Monitoring Plan Modifications





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1888

MAR 27 2007

Joseph Molina III, P.E.
Project Coordinator
Blasland, Bouck and Lee, Inc.
295 Woodcliff Drive,
3rd Floor, Suite 301
Fairport, NY 14450

Re: Technical Review of Proposed Modification to the Environmental Monitoring Plan for the
Batavia Landfill Site, Genesee County, New York; Consent Decree Civil Action No.:
00-0838-SR.

Dear Mr. Molina:

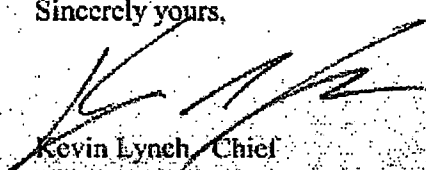
The United States Environmental Protection Agency ("EPA") has completed a review on your recommended changes to the Environmental Monitoring Plan (EMP) for the Batavia Landfill Superfund Site ("Site"). The request to reduce the parameters sampled for was based on the results from the monitoring information obtained during the first three years of the operation of the landfill cap system. While it is encouraging that the monitoring data so far indicates that the landfill cap system is effective in containing the contamination, the purpose of the monitoring system also serves to ensure the long-term effectiveness of the site remedy in place over the functional life of the landfill cap. Consequently, the majority of your recommended changes to the EMP cannot be incorporated at this time. The following are our comments:

1. Monitoring wells MW-5, MW-11 and BL-20 are located in the area south of the landfill that historically detected the highest levels of VOCs. In addition, the September 2005 Five Year Review for the Site included the comment that the groundwater monitoring system should be optimized so that at least one well each in the respective upper and lower soil units be sampled. A sampling exercise for these wells must be conducted before a final decision to decommission them can be considered.
2. Monitoring well BL-16R can be decommissioned since it has consistently shown no level of contaminants above Federal or State Drinking Water Standards and also since the Village of Oakfield Wells, located 3/4 of a mile to the north the landfill, are no longer in public use.

3. Discontinuing to the reporting of the VOC analyses for monitoring well BL-105L diminishes the ability to monitor the remedy effectiveness along the western region of the landfill cap. However, the VOC analyses for monitoring well BL-107B can be dropped.

If there are any questions, please contact Michael Walters of my staff at (212) 637-4279.

Sincerely yours,

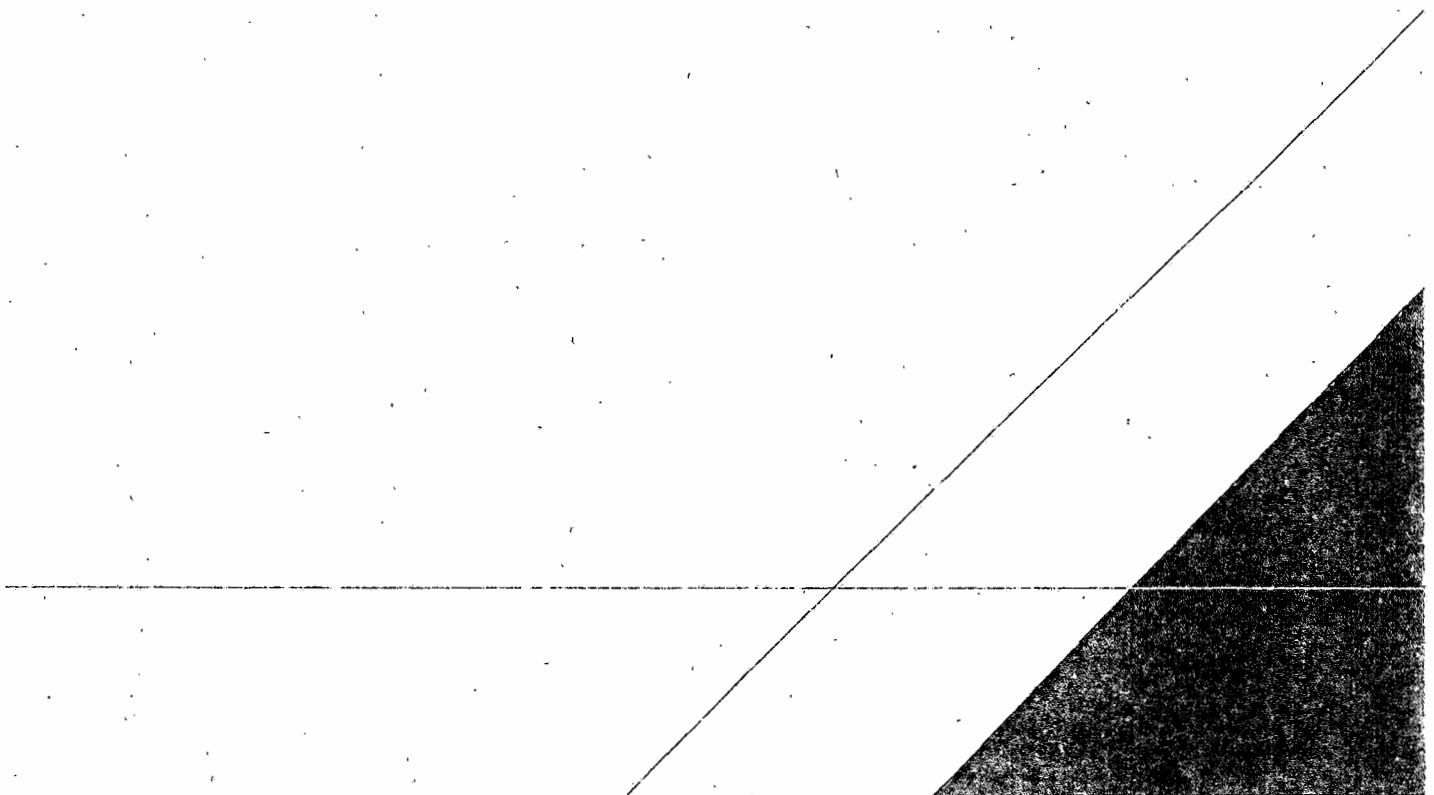


Kevin Lynch, Chief
Western New York Remediation Section

cc: Beverly Kolenberg, EPA-ORC
David Pratt, NYSDEC
Leslie Greenbaum, Gross Shuman Brizdick & Gilfillan
Greg Post, Town of Batavia
Len Walker, City of Batavia

APPENDIX B

Field Sampling Logs



Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog
Job Number: B0001524
Weather: Partly Cloudy, 70

Well ID: BL-100U
Date: June 22, 2017
Time In: 1115 Time Out: 1230

WELL INFORMATION (record from top of inner casing at minimum)			
	TIC	TOC	BGS
Well Depth (feet)	20.42		
Water Table Depth (feet)	5.20		

check where appropriate

Well Type:	Flushmount	Stick-Up
Well Locked:	Yes	No
Measuring Point Marked:	Yes	No

Well Diameter: 1" 2" 4"

WELL WATER INFORMATION

Length of Water Column:	(feet)	15.22
Volume of Water in Well:	(gal)	2.4352
Pumping Rate of Pump:	(mL/min)	150
Pumping Rate of Pump:	(GPM)	
Minutes of Pumping:		
Total Volume Removed:	(gal)	4

Conversion Factors				
gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5
1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.				

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials) ☐

TAL Metals (500 mL poly) ☐

Sample ID: BL-100U

Sample Time: 1215

MS/MSD: Yes ☐ No ☒

Duplicate: Yes ☐ No ☒

Total Bottles: 4

EVACUATION INFORMATION

Evacuation Method: Bailer ☐ Bladder Pump ☒ Peristaltic ☐

Tubing Used: Dedicated ☒ Deconned ☐ Type Polyethylene Tubing

Sampling Method: Bailer ☐ Bladder Pump ☒ Other Pump ☐

Did well go dry? Yes ☐ No ☒

Water Quality Meter Type: YSI

Time	1 1125	2 1130	3 1135	4 1140	5 1145	6 1150	7 1155	8 1200	9 1205
Parameter	Initial								
Volume Purged (gal)									
Depth to Water (ft. TIC)	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
Temp (°C)	12.1	11.2	11.1	11.1	11.1	11.0	11.0	11.0	11.1
DO (mg/L)	1.99	0.25	0.14	0.09	0.06	0.10	0.02	0.01	0.01
Conductance (mS/cm)	2.115	1.982	1.982	2.032	2.089	2.118	2.141	2.150	2.155
pH	7.07	7.11	7.11	7.11	7.10	7.09	7.09	7.09	7.09
ORP (mV)	-91.1	-102.1	-105.2	-108.2	-111.1	-105.1	-111.5	-113.2	-114.4
Turbidity	999	750	591	403	243	145	98.1	56.2	36.7

Time	10 1210	11 1215	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)	5.20	5.20							
Temp (°C)	11.0	11.0							
DO (mg/L)	0.00	0.00							
Conductance (mS/cm)	2.163	2.164							
pH	7.08	7.08							
ORP (mV)	-115.5	-115.8							
Turbidity	33.5	31.6							

SAMPLE DESTINATION

Laboratory: ALS Global Sample was ☐ shipped day of sampling ☐ sent on _____ Chain of Custody Signed By: _____

Shipped Via: ☐ Federal Express Other: ARCADIS

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog
 Job Number: B0001524
 Weather: Sunny, 60

Well ID: BL-101U
 Date: June 22, 2017
 Time In: 820 Time Out: 1005

WELL INFORMATION (record from top of inner casing at minimum)			
	TIC	TOC	BGS
Well Depth (feet)	30.18		
Water Table Depth (feet)	16.75		

check where appropriate

Well Type: Flushmount ☐ Stick-Up ☒
 Well Locked: Yes ☒ No ☐
 Measuring Point Marked: yes ☐ No ☒

Well Diameter: 1" ☐ 2" ☒ 4" ☐

WELL WATER INFORMATION

Length of Water Column: (feet)	13.43
Volume of Water in Well: (gal)	2.1488
Pumping Rate of Pump: (mL/min)	200
Pumping Rate of Pump: (GPM)	
Minutes of Pumping:	
Total Volume Removed: (gal)	5

Conversion Factors

gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5

1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials) ☒
 TAL Metals (500 mL poly) ☒
☐
☐
☐

Sample ID: BL-101U

Sample Time: 0945

MS/MSD: Yes ☐ No ☒Duplicate: Yes ☐ No ☒

Total Bottles: 4

EVACUATION INFORMATION

Evacuation Method: Bailer ☐ Bladder Pump ☒ Peristaltic ☐
 Tubing Used: Dedicated ☒ Deconned ☐ Type Polyethylene Tubing
 Sampling Method: Bailer ☐ Bladder Pump ☒ Other Pump ☐
 Did well go dry? Yes ☐ No ☒

Water Quality Meter Type: YSI

Time	1 0900	2 0905	3 0910	4 0915	5 0920	6 0925	7 0930	8 0935	9 0940
Parameter	Initial								
Volume Purged (gal)									
Depth to Water (ft. TIC)	16.75	16.79	16.82	16.86	16.89	16.93	16.97	17.02	17.05
Temp (°C)	12.2	11.5	10.5	10.4	10.4	10.4	10.4	10.4	10.4
DO (mg/L)	2.65	1.46	0.51	0.41	0.21	0.18	0.16	0.13	0.13
Conductance (mS/cm)	1.468	1.458	1.443	1.399	1.362	1.338	1.323	1.317	1.317
pH	6.77	6.77	6.76	6.78	6.80	6.82	6.83	6.83	6.83
ORP (mV)	-46.7	-48.2	-51.7	-54.2	-56.9	-28.3	-53.2	-53.4	-53.1
Turbidity	889	891	954	681	333	180	75	60.4	45.7

Time	10 0945	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)	17.08	17.10							
Temp (°C)	10.5	10.4							
DO (mg/L)	0.12	0.13							
Conductance (mS/cm)	1.316	1.316							
pH	6.83	6.83							
ORP (mV)	-53.3	-53.3							
Turbidity	35.2	36.1							

SAMPLE DESTINATION

Laboratory: ALS Global Sample was ☐ shipped day of sampling Chain of Custody Signed By:
 Shipped Via: ☐ Federal Express Other: ARCADIS ☐ sent on

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog

Job Number: B0001524

Weather: Light Rain

Well ID: BL-102U

Date: June 22, 2017

Time In: 1200 Time Out: 1305

WELL INFORMATION

(record from top of inner casing at minimum)

		TIC	TOC	BGS
Well Depth	(feet)	26.54		
Water Table Depth	(feet)	8.98		

check where appropriate

Well Type: Flushmount ☐Stick-Up ☐Well Locked: Yes ☐No ☐Measuring Point Marked: yes ☐No ☐Well Diameter: 1" ☐ 2" ☒ 4" ☐

WELL WATER INFORMATION

Length of Water Column:	(feet)	17.56
Volume of Water in Well:	(gal)	2.8096
Pumping Rate of Pump:	(mL/min)	150
Pumping Rate of Pump:	(GPM)	
Minutes of Pumping:		
Total Volume Removed:	(gal)	2.8

Conversion Factors

gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5
1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.				

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials) ☒TAL Metals (500 mL poly) ☒

Sample ID: BL-102U

Sample Time: 1255

MS/MSD: Yes ☐ No ☒Duplicate: Yes ☐ No ☒

FD-052616

Total Bottles: 8

EVACUATION INFORMATION

Evacuation Method:

Bailer ☐Bladder Pump ☒Peristaltic ☐

Tubing Used:

Dedicated ☒Deconned ☐Type ☐

Sampling Method

Bailer ☐Bladder Pump ☒Other Pump ☐

Did well go dry?

Yes ☐No ☒

Water Quality Meter Type:

YSI

Time	1 1225	2 1230	3 1235	4 1240	5 1245	6 1250	7	8	9
Parameter	Initial								
Volume Purged (gal)									
Depth to Water (ft. TIC)	9.15	9.25	9.35	9.45	9.55	9.62			
Temp (°C)	15.2	16.0	12.9	12.4	12.4	12.4			
DO (mg/L)	1.04	0.87	0.47	0.32	0.27	0.24			
Conductance (mS/cm)	0.811	0.623	0.562	0.554	0.553	0.553			
pH	6.60	6.58	6.57	6.57	6.57	6.57			
ORP (mV)	-34.2	-34.0	-33.3	-35.4	-36.5	-37.5			
Turbidity	10.2	8.8	14.4	11.7	10.8	12.7			

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory: ALS Global

Shipped Via: ☐ Federal Express ☐ Other: ARCADISSample was ☐ shipped day of sampling☐ sent on

Chain of Custody Signed By:

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog
Job Number: B0001524
Weather: Partly Cloudy, 75

Well ID: BL-103U
Date: June 22, 2017
Time In: 1335 Time Out: 1420

WELL INFORMATION

(record from top of inner casing at minimum)

	TIC	TOC	BGS
Well Depth (feet)	19.88		
Water Table Depth (feet)	9.82		

check where appropriate

Well Type: Flushmount ☐ Stick-Up ☒
Well Locked: Yes ☒ No ☐
Measuring Point Marked: res ☐ No ☒

Well Diameter: 1" ☐ 2" ☒ 4" ☐

WELL WATER INFORMATION

Length of Water Column: (feet)	10.06
Volume of Water in Well: (gal)	1.6096
Pumping Rate of Pump: (mL/min)	200
Pumping Rate of Pump: (GPM)	
Minutes of Pumping:	
Total Volume Removed: (gal)	1.25

Conversion Factors

gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5

1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials) ☒TAL Metals (500 mL poly) ☒

Sample ID: BL-103U

Sample Time: 1415

MS/MSD: Yes ☐ No ☒Duplicate: Yes ☐ No ☒

Total Bottles: 4

EVACUATION INFORMATION

Evacuation Method:

Bailer ☐Bladder Pump ☒Peristaltic ☐

Tubing Used:

Dedicated ☒Deconned ☐

Type

Polyethylene Tubing

Sampling Method

Bailer ☐Bladder Pump ☒Other Pump ☐

Did well go dry?

Yes ☐No ☒

Water Quality Meter Type: YSI

Time	1 1345	2 1350	3 1355	4 1400	5 1405	6 1410	7	8	9
Parameter	Initial								
Volume Purged (gal)									
Depth to Water (ft. TIC)	9.82	9.83	9.83	9.85	9.89	9.92			
Temp (°C)	14.6	12.5	12.7	12.7	12.7	13.0			
DO (mg/L)	1.55	0.26	0.14	0.10	0.06	0.04			
Conductance (mS/cm)	0.882	0.903	0.873	0.884	0.884	0.885			
pH	6.77	6.74	6.74	6.74	6.74	6.74			
ORP (mV)	-92.0	-91.1	-93.5	-94.7	-96.1	-97.3			
Turbidity	120.7	27.7	6.2	4.5	3.4	2.6			

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory: ALS Global
Shipped Via: ☐ Federal Express ☐ Other: ARCADIS
Sample was ☐ shipped day of sampling ☐ sent on

Chain of Custody Signed By:

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog

Job Number: B0001524

Weather: Light Rain, 75

Well ID: BL-104U

Date: June 22, 2017

Time In: 1235 Time Out: 1330

WELL INFORMATION

(record from top of inner casing at minimum)

		TIC	TOC	BGS
Well Depth	(feet)	17.34		
Water Table Depth	(feet)	10.12		

check where appropriate

Well Type: Flushmount ☐ Stick-Up ☐Well Locked: Yes ☐ No ☐Measuring Point Marked: Yes ☐ No ☐

Well Diameter:

1" ☐ 2" ☒ 4" ☐

WELL WATER INFORMATION

Length of Water Column:	(feet)	7.22
Volume of Water in Well:	(gal)	1.1552
Pumping Rate of Pump:	(mL/min)	200
Pumping Rate of Pump:	(GPM)	
Minutes of Pumping:		
Total Volume Removed:	(gal)	1.25

Conversion Factors

gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5
1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.				

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials) ☒TAL Metals (500 mL poly) ☒

Sample ID: BL-104U

Sample Time: 1315

MS/MSD: Yes ☐ No ☒Duplicate: Yes ☐ No ☒

Total Bottles: 4

EVACUATION INFORMATION

Evacuation Method:

Bailer ☐Bladder Pump ☒Peristaltic ☐

Tubing Used:

Dedicated ☒Deconned ☐Type ☐

Polyethylene Tubing

Sampling Method

Bailer ☐Bladder Pump ☒Other Pump ☐

Did well go dry?

Yes ☐No ☒

Water Quality Meter Type:

YSI

Time	1	1245	2	1250	3	1255	4	1300	5	1305	6	1310	7	1315	8	9
Parameter		Initial														
Volume Purged (gal)																
Depth to Water (ft. TIC)		10.12		12.13		10.13		10.14		10.15		10.16		10.16		
Temp (°C)		13.6		11.2		11.0		11.0		10.9		10.9		10.9		
DO (mg/L)		2.40		0.24		0.14		0.08		0.04		0.05		0.06		
Conductance (mS/cm)		4.158		4.439		4.423		4.412		4.407		4.404		4.403		
pH		6.24		6.28		6.29		6.29		6.29		6.30		6.30		
ORP (mV)		-48.6		-61.9		-66.4		-70.6		-73.1		-74.2		-75.1		
Turbidity		45.8		24.0		10.9		4.3		1.6		0.8		0.8		

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory:

ALS Global

Shipped Via:

☐

Federal Express

Other: ARCADIS

Sample was

☐

shipped day of sampling

☐

sent on

Chain of Custody Signed By:

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog
 Job Number: B0001524
 Weather: Sunny, 65

Well ID: BL-105L
 Date: June 22, 2017
 Time In: 1005 Time Out: 1110

WELL INFORMATION (record from top of inner casing at minimum)			
	TIC	TOC	BGS
Well Depth (feet)	26.62		
Water Table Depth (feet)	18.94		

check where appropriate
 Well Type: Flushmount ☐ Stick-Up ☒
 Well Locked: Yes ☒ No ☐
 Measuring Point Marked: res ☒ No ☐
 Well Diameter: 1" ☐ 2" ☒ 4" ☐

WELL WATER INFORMATION

Length of Water Column: (feet)	7.68
Volume of Water in Well: (gal)	1.2288
Pumping Rate of Pump: (mL/min)	250
Pumping Rate of Pump: (GPM)	
Minutes of Pumping:	
Total Volume Removed: (gal)	2.25

Conversion Factors				
gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5
1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.				

SAMPLING INFORMATION

Analyses:
 TCL VOCs (40 ml vials) ☒
 TAL Metals (500 mL poly) ☒
 Sample ID: BL-105U
 Sample Time: 1045
 MS/MSD: Yes ☐ No ☒
 Duplicate: Yes ☐ No ☒
 Total Bottles: 4

EVACUATION INFORMATION

Evacuation Method: Bailer ☐ Bladder Pump ☒ Peristaltic ☐
 Tubing Used: Dedicated ☒ Deconned ☐ Type Polyethylene Tubing
 Sampling Method: Bailer ☐ Bladder Pump ☒ Other Pump ☐
 Did well go dry? Yes ☐ No ☒
 Water Quality Meter Type: YSI

Time	1 1015	2 1020	3 1025	4 1030	5 1035	6 1040	7 1045	8	9
Parameter	Initial								
Volume Purged (gal)									
Depth to Water (ft. TIC)	18.96	19.06	19.12	19.24	19.36	19.48	19.60		
Temp (°C)	11.5	10.3	10.1	10.0	9.9	9.9	9.9		
DO (mg/L)	1.65	0.40	0.72	1.00	1.24	1.25	1.28		
Conductance (mS/cm)	1.145	1.087	1.046	1.016	1.002	1.004	1.000		
pH	6.72	6.75	6.77	6.80	6.83	6.83	6.84		
ORP (mV)	-85.1	-91.4	-89.5	-87.5	-85.4	-85.0	-85.1		
Turbidity	17.9	208	263	132.5	12.7	13.0	12.4		

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory: ALS Global
 Shipped Via: ☐ Federal Express Other: ARCADIS
 Sample was ☐ shipped day of sampling sent on ☐
 Chain of Custody Signed By: _____

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog
Job Number: B0001524
Weather: Sunny, 70

Well ID: BL-106B
Date: June 22, 2017
Time In: 1000 Time Out: 1115

WELL INFORMATION (record from top of inner casing at minimum)			
	TIC	TOC	BGS
Well Depth (feet)	98.02		
Water Table Depth (feet)	34.10		

check where appropriate

Well Type:	Flushmount	☒	Stick-Up	☒
Well Locked:	Yes	☒	No	☒
Measuring Point Marked:	yes	☒	No	☒

Well Diameter: 1" ☒ 2" ☐ 4" ☐

WELL WATER INFORMATION

Length of Water Column:	(feet)	63.92
Volume of Water in Well:	(gal)	42.1872
Pumping Rate of Pump:	(mL/min)	125
Pumping Rate of Pump:	(GPM)	
Minutes of Pumping:		
Total Volume Removed:	(gal)	1.5

Conversion Factors				
gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5
1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.				

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials) ☒

TAL Metals (500 mL poly) ☒

Sample ID: BL-106B

Sample Time: 1055

MS/MSD: Yes ☒ No ☐

Duplicate: Yes ☐ No ☒

Total Bottles: 12

EVACUATION INFORMATION

Evacuation Method: Bailer ☐ Bladder Pump ☒ Peristaltic ☐

Tubing Used: Dedicated ☒ Deconned ☐ Type: Polyethylene Tubing

Sampling Method: Bailer ☐ Bladder Pump ☒ Other Pump ☐

Did well go dry? Yes ☐ No ☒

Water Quality Meter Type:

YSI

Time	1 1015	2 1020	3 1025	4 1030	5 1035	6 1040	7 1045	8 1050	9
Parameter	Initial								
Volume Purged (gal)									
Depth to Water (ft. TIC)	34.41	34.45	34.48	34.48	34.46	34.46	34.46	34.46	
Temp (°C)	12.7	11.9	11.6	11.2	11.1	11.1	11.1	11.1	
DO (mg/L)	1.32	0.75	0.44	0.30	0.22	0.19	0.18	0.16	
Conductance (mS/cm)	0.64	0.756	0.835	0.846	0.847	0.849	0.849	0.851	
pH	7.30	7.14	7.11	7.10	7.10	7.11	7.11	7.10	
ORP (mV)	-71.2	-55.6	-51.6	-50.9	-52.5	-53.6	-54.5	-55.3	
Turbidity	54.3	44.2	35.3	28.7	21.1	18.4	16.9	18.2	

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory: ALS Global Sample was ☐ shipped day of sampling

Shipped Via: ☐ Federal Express Other: ARCADIS ☐ sent on _____ Chain of Custody Signed By: _____

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog

Well ID: BL-107B

Job Number: B0001524

Date: June 22, 2017

Weather: Partly Cloudy, 65

Time In: 0800 Time Out: 0935

WELL INFORMATION

(record from top of inner casing at minimum)

check where appropriate

	TIC	TOC	BGS
Well Depth (feet)	71.29		
Water Table Depth (feet)	14.55		

Well Type: Flushmount ☐ Stick-Up ☒
Well Locked: Yes ☒ No ☐
Measuring Point Marked: Yes ☐ No ☒
Well Diameter: 1" ☐ 2" ☐ 4" ☒

WELL WATER INFORMATION

Length of Water Column: (feet)	56.74
Volume of Water in Well: (gal)	37.4484
Pumping Rate of Pump: (mL/min)	150 - 175
Pumping Rate of Pump: (GPM)	
Minutes of Pumping:	
Total Volume Removed: (gal)	1

Conversion Factors				
gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5
1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.				

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials) ☐TAL Metals (500 mL poly) ☒

Sample ID: BL-107B

Sample Time: 0920

MS/MSD: Yes ☐ No ☒Duplicate: Yes ☐ No ☒

Total Bottles: 1

EVACUATION INFORMATION

Evacuation Method:

Bailer ☐Bladder Pump ☒Peristaltic ☐

Tubing Used:

Dedicated ☒Deconned ☐Type ☐

Sampling Method

Bailer ☐Bladder Pump ☒Other Pump ☐

Did well go dry?

Yes ☐No ☒

Water Quality Meter Type: YSI

Time	1	0840	2	0845	3	0850	4	0855	5	0900	6	0905	7	0910	8	0915	9
Parameter		Initial															
Volume Purged (gal)																	
Depth to Water (ft. TIC)		14.05		14.60		14.65		14.65		14.65		14.65		14.65		14.65	
Temp (°C)		12.4		11.9		11.7		11.6		11.7		11.7		11.6		11.6	
DO (mg/L)		2.14		0.91		0.55		0.45		0.39		0.35		0.34		0.33	
Conductance (mS/cm)		1.067		1.135		1.214		1.226		1.230		1.234		1.233		1.232	
pH		7.33		7.15		7.09		7.09		7.08		7.08		7.08		7.08	
ORP (mV)		-62.7		-57.5		-65.1		-47.2		-71.1		-75.7		-76.5		-77.0	
Turbidity		30.5		18.4		12.3		12.8		18.5		19.7		20.5		21.9	

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory: ALS Global

Sample was ☐ shipped day of sampling

Chain of Custody Signed By:

Shipped Via: ☐ Federal Express Other: ARCADIS☐ sent on _____

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog

Job Number: B0001524

Weather: Cloudy, 75

Well ID: BL-10

Date: June 22, 2017

Time In: 1330 Time Out: 1440

WELL INFORMATION

(record from top of inner casing at minimum)

		TIC	TOC	BGS
Well Depth	(feet)	21.32		
Water Table Depth	(feet)	5.86		

check where appropriate

Well Type: Flushmount

Well Locked: Yes

Measuring Point Marked: Yes

Stick-Up

No

No

Well Diameter:

1"

2"

4"

WELL WATER INFORMATION

Length of Water Column:	(feet)	15.46
Volume of Water in Well:	(gal)	2.4736
Pumping Rate of Pump:	(mL/min)	300
Pumping Rate of Pump:	(GPM)	
Minutes of Pumping:		
Total Volume Removed:	(gal)	1.8

Conversion Factors

gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5
1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.				

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials)

TAL Metals (500 mL poly)

Sample ID: BL-10

Sample Time: 1430

MS/MSD: Yes No

Duplicate: Yes No

Total Bottles: 4

EVACUATION INFORMATION

Evacuation Method:

Bailer

Bladder Pump

Peristaltic

Tubing Used:

Dedicated

Deconned

Type

Sampling Method

Bailer

Bladder Pump

Other Pump

Did well go dry?

Yes

No

Water Quality Meter Type:

YSI

Time	1	1350	2	1355	3	1400	4	1405	5	1410	6	1415	7	1420	8	1425	9	1430
Parameter		Initial																
Volume Purged (gal)																		
Depth to Water (ft. TIC)		5.96		5.94		5.94		5.94		5.94		5.94		5.93		5.93		5.93
Temp (°C)		13.7		12.1		11.9		11.8		11.7		11.9		11.8		11.7		11.6
DO (mg/L)		1.05		0.40		0.35		0.25		0.20		0.14		0.12		0.11		0.09
Conductance (mS/cm)		0.810		1.003		1.137		1.421		1.513		1.552		1.558		1.557		1.557
pH		7.25		6.94		6.85		6.74		6.72		6.72		6.72		6.72		6.72
ORP (mV)		-77.5		-63.2		-54.8		-46.2		-44.9		-45.0		-45.7		-46.3		-46.9
Turbidity		29.9		31.5		23.2		12.2		13.0		10.5		7.0		7.0		5.6

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory: ALS Global

Shipped Via: Federal Express Other: ARCADIS

Sample was

shipped day of sampling sent on

Chain of Custody Signed By:

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog

Job Number: B0001524

Weather:

Well ID: Wetland B-1

Date: June 22, 2017

Time In:

Time Out:

WELL INFORMATION

(record from top of inner casing at minimum)

		TIC	TOC	BGS
Well Depth	(feet)			
Water Table Depth	(feet)			

check where appropriate

Well Type: Flushmount

Well Locked: Yes

Measuring Point Marked: Yes

Stick-Up

No

No

Well Diameter:

1"

2"

4"

WELL WATER INFORMATION

Length of Water Column:	(feet)	0
Volume of Water in Well:	(gal)	0
Pumping Rate of Pump:	(mL/min)	
Pumping Rate of Pump:	(GPM)	
Minutes of Pumping:		
Total Volume Removed:	(gal)	

Conversion Factors

gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5
1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.				

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials)

TAL Metals (500 mL poly)

Sample ID: Wetland B-1

Sample Time:

MS/MSD: Yes ☐ No ☐Duplicate: Yes ☐ No ☐

Total Bottles: NO SAMPLE

WETLAND IS DRY, NO WATER TO SAMPLE

EVACUATION INFORMATION

Evacuation Method:

Bailer ☐Grundfos Pump ☐Peristaltic ☐

Tubing Used:

Dedicated ☐Deconned ☐Type ☐

Sampling Method

Bailer ☐Grundfos Pump ☐Other Pump ☐

Did well go dry?

Yes ☐No ☐

Water Quality Meter Type:

YSI and LaMotte 2020

Time	1	2	3	4	5	6	7	8	9
Parameter	Initial								
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory:

ALS Global

Shipped Via:



Federal Express

Other: ARCADIS

Sample was



shipped day of sampling



sent on

Chain of Custody Signed By:

Batavia Landfill - Batavia, New York

LOW-FLOW SAMPLING PROGRAM

Site

Event

GROUNDWATER SAMPLING LOG

Sampling Personnel: Aaron Richardson, Geoff Greapentrog

Job Number: B0001524

Weather:

Well ID: Wetland C-1

Date: June 22, 2017

Time In:

Time Out:

WELL INFORMATION

(record from top of inner casing at minimum)

		TIC	TOC	BGS
Well Depth	(feet)			
Water Table Depth	(feet)			

check where appropriate

Well Type: Flushmount

Well Locked: Yes

Measuring Point Marked: yes

Stick-Up

No

No

Well Diameter:

1"

2"

4"

WELL WATER INFORMATION

Length of Water Column:	(feet)	0
Volume of Water in Well:	(gal)	0
Pumping Rate of Pump:	(mL/min)	
Pumping Rate of Pump:	(GPM)	
Minutes of Pumping:		
Total Volume Removed:	(gal)	

Conversion Factors

gallons per foot	1" ID	2" ID	4" ID	6" ID
of water column:	0.094	0.16	0.66	1.5

1 gal = 3.785 L = 3785 mL = 0.1337 cubic ft.

SAMPLING INFORMATION

Analyses:

TCL VOCs (40 ml vials)

TAL Metals (500 mL poly)

Sample ID: Wetland C-1

Sample Time: 1230

MS/MSD: Yes ☐ No ☐Duplicate: Yes ☐ No ☐

Total Bottles: 4

EVACUATION INFORMATION

Evacuation Method:

Bailer ☐Grundfos Pump ☐Peristaltic ☐

Tubing Used:

Dedicated ☐Deconned ☐

Type

Polyethylene Tubing

Sampling Method

Bailer ☐Grundfos Pump ☐Other Pump ☐

Did well go dry?

Yes ☐No ☐

Water Quality Meter Type:

YSI and LaMotte 2020

Time	1	2	3	4	5	6	7	8	9
Parameter	Initial								
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

Time	10	11	12	13	14	15	16	17	18
Parameter									
Volume Purged (gal)									
Depth to Water (ft. TIC)									
Temp (°C)									
DO (mg/L)									
Conductance (mS/cm)									
pH									
ORP (mV)									
Turbidity									

SAMPLE DESTINATION

Laboratory: ALS Global

Shipped Via:

☐ Federal Express

Other: ARCADIS

Sample was

☐

shipped day of sampling

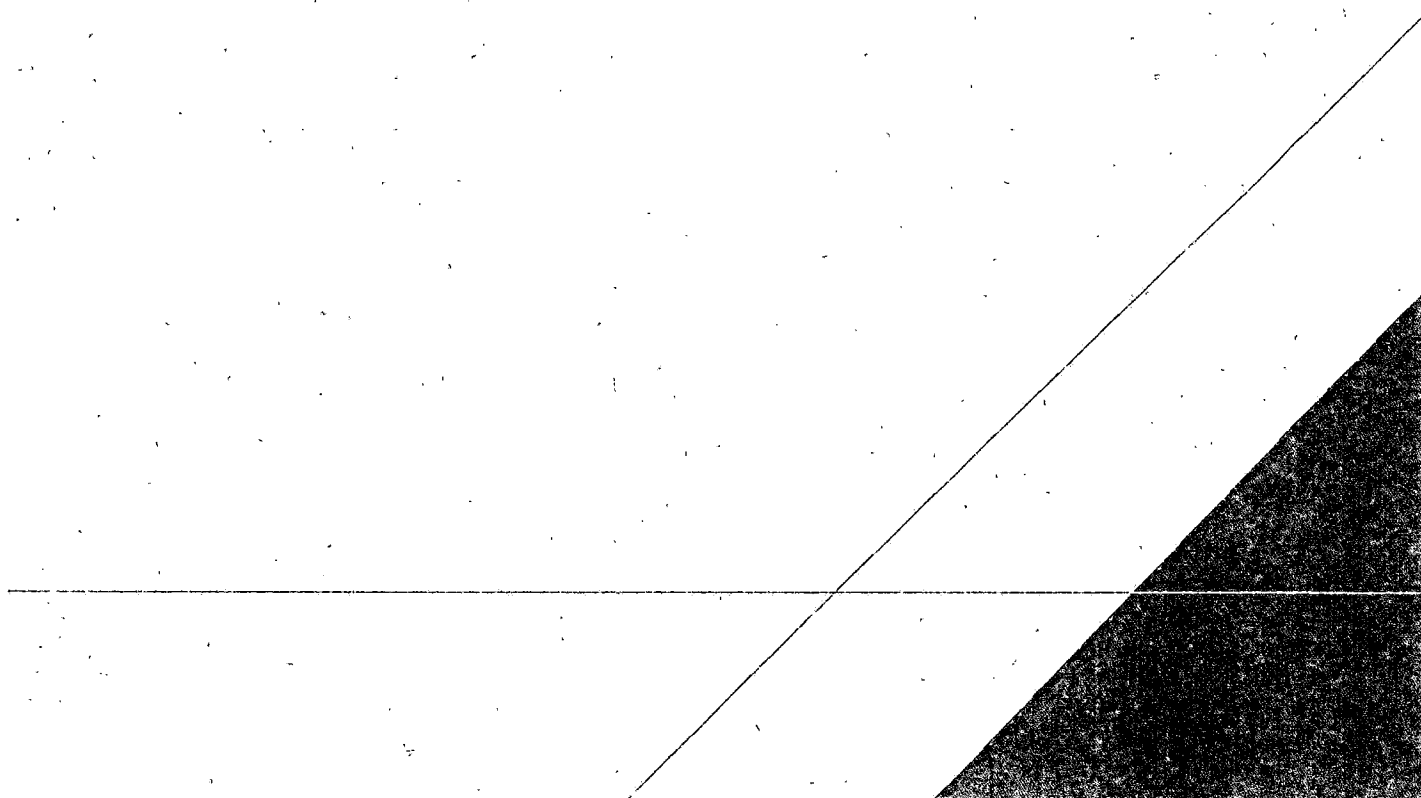
☐

sent on

Chain of Custody Signed By:

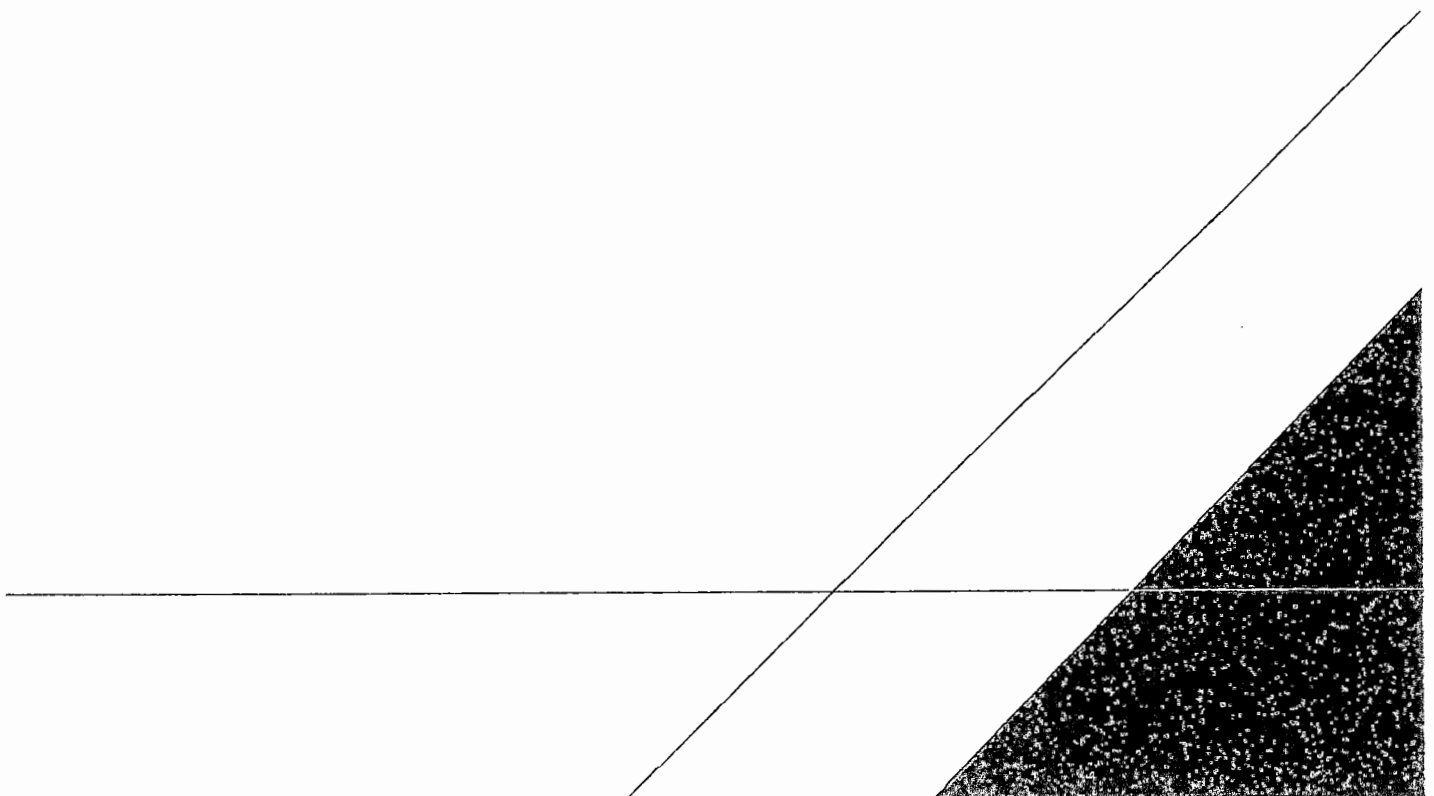
APPENDIX C

Laboratory Analytical Report



ATTACHMENT 2

2017 Site Inspection Checklist





BATAVIA LANDFILL SUPERFUND SITE
BATAVIA, NEW YORK
SITE INSPECTION FORM

Date: 22-Jun-17
Weather: Sun and short rain shower, 70

Inspectors: Aaron Richardson (Arcadis)
Geoff Greapentrog (Arcadis)

Inspection Items	Acceptable		Comments/Conditions
	Yes	No	
1 General Area Conditions			
Appearance	☒	☐	
Perimeter Fence/Warning Signs	☒	☐	Have been replaced recently
Litter	☒	☐	
2 Access Road Conditions			
Surface	☒	☐	
Accessibility	☒	☐	
3 Vegetation and Final Cover Conditions			
Grass Growth	☒	☐	
Bare Spots	☒	☐	
Erosion	☒	☐	
Settlement	☒	☐	
Ponding Water	☒	☐	
Protruding Objects	☒	☐	
Animal Burrows	☒	☐	None observed.
Presence of Trees/Brush	☒	☐	
Leachate Outbreaks	☒	☐	
4 Storm Water Drainage System Conditions			
Mid-slope Drainage Swales	☒	☐	
NW Flow Spreader	☒	☐	
NE Flow Spreader	☒	☐	
Perimeter Drainage Ditches	☒	☐	
Anchor Trench Drain Pipe Outlets (4)	☒	☐	
5 Leachate Handling System Conditions			
LCP Clean Outs (8)	☒	☐	
Manhole MH-1	☒	☐	
Manhole MH-2	☒	☐	
Manhole MH-3	☒	☐	
Leachate Pumping Manhole	☒	☐	
Leachate Storage Tank (LST)	☒	☐	
LST Secondary Containment	☒	☐	
LST Piping and Instruments	☒	☐	
LST Concrete Truck Pad and Sump	☒	☐	
Leachate Level in LST	☒	☐	Level: 2.11'
6 Gas Venting System Conditions			
Gas Vents (17)	☒	☐	
Vegetation Adjacent to Vents	☒	☐	
7 Groundwater Monitoring Well Conditions			
Well Casings	☒	☐	
Well Locks	☒	☐	Locks need to be replaced
8 Wetlands			
General Conditions	☒	☐	
Vegetation	☒	☐	
Water Levels	☒	☐	Wetland B-1 and C-1 dry
9 Others (list)			