Division of Environmental Remediation

2021 Groundwater Monitoring Report

Niagara Sanitation Landfill
Wheatfield, Niagara County, New York
Site Number 932054

October 2023

New York State Department of Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203

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1.0 INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC) has prepared this Monitoring Report to summarize groundwater sampling activities completed between October 19, 2021 and November 8, 2021 at the Niagara Sanitation Landfill located on Nash Road in the Town of Wheatfield, Niagara County, New York (Figure 1-1). These sampling activities were completed to evaluate current groundwater conditions at the site, and to supplement the results obtained in 2017 during the NYSDEC Remedial Investigation, and in a separate sampling event completed between October 22, 2019 and January 9, 2020.

The remaining sections of this report are organized as follows:

- **Section 2.0, Site History and Background:** This section describes the site, discusses the history and previous investigations completed at the site, and summarizes site geology and hydrogeology;

- **Section 3.0, 2021 Sampling Event:** This section describes the sampling activities that were completed at the site in 2021, and discusses the analytical results of the groundwater samples that were collected;

- **Section 4.0, Evaluation of Long-Term Monitoring Results:** This section evaluates the analytical results of the groundwater samples collected in 2021 against the results of historic groundwater samples collected from the site;

- **Section 5.0, Discussion and Recommendations:** This section summarizes the findings of Sections 3.0 and 4.0, and makes recommendations for future activities at the site; and

- **Section 6.0, References:** This section contains a list of references utilized or cited in this report.

2.0 SITE HISTORY AND BACKGROUND

2.1 Site Description

The Niagara Sanitation Company Site, also known as the Niagara Sanitation Landfill or Nash Road Site, is an inactive landfill located on Nash Road in the Town of Wheatfield, Niagara County, New York (Figure 1-1). The property is owned by the Town of Wheatfield and is adjacent to the municipal boundary that separates the Town of Wheatfield from the City of North Tonawanda (Figures 1-1 and 2-1). The landfill is located approximately 1,400 feet east of Nash Road (Figures 1-1 and 2-1). The portion of the property that was landfilled is rectangular in shape and consists of approximately 18.7 acres of a single 20.8-acre parcel (Figure 2-2). The property is zoned for Public Service use.

The site is bordered by the Society of Catholic Apostolate property to the north; a property that contains a former motel and livery service to the east; a utility right-of-way (both overhead electric and underground natural gas and brine lines) and residential properties to the south; and Nash Road and residential properties to the west (Figure 2-1).

2.2 Site Features

The Niagara Sanitation property is vacant and overgrown with mature trees, dense brush, and large areas of phragmites. The site is poorly drained and contains wetlands on the western, northern, and eastern portions of the property (Figure 2-2). These wetlands are dry during the summer and early fall months. In December 2017, the Town of Wheatfield installed a 6-foot tall perimeter fence with locking gates that encompasses most of the landfill. Prior to that time access to the site was not restricted.

Historic landfilling activities resulted in irregular ground surface topography across the site.

2.3 Site History

Available records indicate that the site was operated as a landfill by the Niagara Sanitation Company from approximately 1955 to 1968. The landfill accepted both municipal and industrial

solid wastes, including caustic materials, plating tank sludge, fly ash, salt solids, graphite, carbon, scrap adhesives, and miscellaneous laboratory chemicals. Records from the NYSDEC indicate that Bell Aerospace, Carborundum, Graphite Specialties, and Greif Brothers disposed of waste at the site.

In June 1968, shortly before the site's formal disposal operations were discontinued, the New York State Department of Transportation (NYSDOT) discovered waste while constructing the LaSalle Expressway in Niagara Falls. This material was excavated from the area that later became known as Love Canal. Niagara Sanitation Landfill records indicate that 1,600 cubic yards of excavated materials were placed into a 30-foot wide by 100-foot long by 27-foot deep trench at the eastern end of the landfill. The waste was reportedly placed in the bottom 15 feet of the trench and covered with 12 feet of excavated soil.

The NYSDEC completed a Phase I Investigation (historical records review and site walk over) of the site in 1983, a Phase II Investigation (on-site data collection) in 1985, and an expanded Phase II Investigation in 1989. In association with these investigations, the New York State Department of Health (NYSDOH) completed surface soil sampling in 1991 to evaluate potential exposure risks. At that time, it was determined that the site did not pose a significant threat to public health or the environment because the exposure was limited; the wastes were buried, contained or sufficiently covered to avoid significant exposure. Groundwater as a potential exposure path was also limited because the area was served by public water and the closest private well was approximately one mile away. As a result, the site was designated as Class 3 (action can be deferred) in the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites.

NYSDEC continuously monitors and evaluates sites on the Registry of Inactive Hazardous Waste Disposal Sites. In 2013, as part of these efforts, the NYSDEC completed a Site Characterization Study to re-evaluate the Class 3 NYSDEC Registry designation for the site, to confirm the location of the wastes from the LaSalle Expressway project, and to re-evaluate the potential for direct contact exposures. The Site Characterization was heavily focused on the eastern portion of the site where the wastes associated with the construction of the LaSalle Expressway were placed (Figure 2-3). This report can be found online at https://www.dec.ny.gov/data/DecDocs/932054/.

Later in 2013, Glenn Spring Holdings, an affiliate of the Occidental Chemical Corporation, began an Interim Remedial Measure (IRM) to characterize and remove the LaSalle Expressway wastes. These wastes were excavated from the site during the Fall/Winter of 2014 and the Winter/Spring of 2015 and transported out of state for incineration. The IRM Closure Report can be

found online at https://www.dec.ny.gov/data/DecDocs/932054/.

In 2014, the NYSDEC conducted a Supplemental Site Characterization Study to characterize the municipal and industrial waste in the remainder of the landfill. While the majority of the site contained contaminant concentrations typical of non-hazardous municipal/industrial waste, three locations were identified that contained hazardous concentrations of lead or PCBs. Several surface soil samples exceeded residential soil cleanup objectives (SCOs) for polycyclic aromatic hydrocarbons (PAHs) and metals. Groundwater within the footprint of the landfill contained elevated concentrations of volatile organic compounds, semi-volatile organic compounds, pesticides and metals that exceeded Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Groundwater. These results are described in more detail in the Supplemental Site Characterization Study Report (GES, 2014). This report can be found online at https://www.dec.ny.gov/data/DecDocs/932054/.

Based upon the results of the Supplemental Site Characterization Study, the NYSDEC reclassified the site to Class 2 (potential significant threat to public health and/or the environment) and completed a comprehensive, state funded, Remedial Investigation of the site in 2016 and 2017. A more detailed history of the Niagara Sanitation Landfill, along with the analytical results of the samples collected, are presented in the Remedial Investigation Report (LiRo, 2019). This report can be found online at https://www.dec.ny.gov/data/DecDocs/932054/.

2.4 Site Geology and Hydrogeology

There are seven stratigraphic units underlying the Niagara Sanitation Landfill, which are described as follows:

- Fill material (glass, refuse, etc.) mixed with fine sand and clay that ranges in thickness from 0 to 16 feet;
- An upper gray sand lens that ranges in thickness from 0 to 8 feet. This deposit is thickest in the southwest portion of the site and is absent in the northeast;
- A gray-brown silty clay that ranges in thickness from 3 to 7 feet;
- A red-gray layered clay containing thin sand seams. This deposit ranges in thickness from 17 to 32 feet;

- A lower red/brown sand lens that ranges in thickness from 3 to 6 feet. This deposit is thickest in the northern portion of the site, and thins to the south, east and west;
- A pink, very dense till that ranges in thickness from 22 to 42 feet; and
- Dolostone bedrock at depths ranging from 65 to 71 feet below ground surface.

The gray-brown silty clay deposit and underlying red-gray layered clay act as an aquitard, preventing the downward migration of contaminants from the landfill to lower water-bearing zones. As a result, the focus of the 2021 sampling event was on the fill/upper sand water-bearing unit. Well construction diagrams for wells that screen this unit are given in Appendix A.

A groundwater contour map for the fill/upper sand water-bearing zone was generated during the NYSDEC Remedial Investigation from water levels measured on September 25, 2017 (Figure 2-4). This figure shows that groundwater generally flows toward the south and east. During the NYSDEC Remedial Investigation, however, groundwater elevations in the fill/upper sand water-bearing zone were observed to fluctuate in direct response to significant (i.e., >1.0-inch within 24-hours) precipitation events. The September 25, 2017, elevation measurements were recorded at the end of an approximate 2-week long dry period with little to no precipitation.

Subsequent water level measurements collected on October 17, 2017 after a significant precipitation event show that groundwater flow in the fill/upper sand water-bearing zone reversed from southward to northward along the southern boundary of the site (Figure 2-5).

3.0 2021 GROUNDWATER SAMPLING EVENT

In an ongoing effort by the NYSDEC to investigate the Niagara Sanitation Landfill, groundwater samples were collected from the site between October 29, 2021 and November 8, 2021. These samples were collected to evaluate current groundwater conditions at the site. This section describes the 2021 groundwater monitoring activities, and discusses the results of that monitoring. An evaluation of these data against historic groundwater results is presented in Section 4.0.

During sampling activities in 2021, the NYSDEC's Standby Spill Contractor observed that well LDP-2R had been destroyed. This was the second time in two (2) years that the well at this location was destroyed so the NYSDEC decided not to replace it.

3.1 Monitoring Well Installation

On July 21, 2020, National Fuel Gas (NFG) encountered municipal landfill waste in an excavation completed on their Nash Road Station, and west of the Niagara Sanitation Landfill. Four (4) excavations were completed by NFG to facilitate repairs to their high-pressure 24-inch gas pipeline. These excavations were inspected by NYSDEC staff on July 21st and July 22nd. All four (4) excavations contained municipal waste from about 6-inches to 9-feet depth. Depth to the bottom of the waste material was not determined. There were no odors, sheens, discoloration, or elevated PID readings. As a result, samples were not collected for analysis.

These findings indicate that municipal landfill waste extends farther west onto NFG's property than documented during the 2017 Remedial Investigation (Figure 3-1). Based upon the observations from the NFG excavations and the westward extent of hummocky topography, the landfill waste may extend about 545 feet west of the Niagara Sanitation Landfill.

To determine if the municipal landfill waste on the National Fuel Gas property has adversely impacted groundwater in this area, the NYSDEC used a Standby Spill Contractor to install two (2) monitoring wells (LPZ-14S & LPZ-15S) that screen the fill/upper sand water bearing zone. The locations of these wells are shown on Figure 3-2, while the well construction diagrams are given in Appendix A. These wells were installed in accordance with a NYSDEC work plan entitled "*Well Installation Scope of Work"*, May 2021, which can be found online at: https://www.dec.ny.gov/data/DecDocs/932054/.

3.2 Soil/Fill Samples

Two (2) soil borings were completed on October 19, 2021 to facilitate the installation of monitoring wells LPZ-14S & LPZ-15S along the gravel access road leading to the landfill (Figure 3-2). The soil boring logs are given in Appendix G. At each soil boring location, one (1) fill or native soil sample was collected for chemical analysis. Samples were collected by the Standby Spill Contractor in consultation with the NYSDEC field representative and placed into laboratory supplied, pre-cleaned sample jars. All samples collected for VOC analysis were discrete, non-homogenized grab samples. The jars were labeled with a unique sample identification code and stored in a cooler at approximately 4 degrees Celsius for transport to Eurofins TestAmerica in Amherst, New York for analysis. Both soil/fill samples were analyzed for Target Compound List (TCL) volatile organic compounds, TCL semi-volatile organic compounds, TCL pesticides, TCL polychlorinated biphenyls (PCBs) and Target Analyte List (TAL) metals. Information concerning sample collection and analysis is given in Table 3-1.

The soil/fill analytical results were validated by Vali-Data of WNY, LLC, a certified data validator, in accordance with NYSDEC DER-10 and USEPA Region II data validation procedures. The laboratory reports are included in Appendix C, while the Data Usability Summary Reports are included in Appendix E. The validated analytical results for these samples are summarized in Table 3-2.

Soil/fill analytical results were evaluated against the unrestricted, restricted residential, commercial, and groundwater protection soil cleanup objectives contained in the NYSDEC publication entitled "*6NYCRR Part 375: Environmental Remediation Programs*", Division of Environmental Remediation, December 2006. The soil/fill soil cleanup objectives for individual contaminants were taken directly from Tables 375-6.8(a) and 375-6.8(b) of that document. For contaminants not included in 6 NYCRR Part 375, the soil cleanup objectives identified in the October 2010 NYSDEC Commissioner's Policy CP-51 entitled "*Soil Cleanup Guidance*" were utilized.

The results of the soil/fill samples collected west of the Niagara Sanitation Landfill in 2021 reveal the presence of volatile organic compounds including 1,4-dichlorobenzene, acetone, and chlorobenzene (Table 3-2). None of the concentrations, however, exceeded any of the NYSDEC soil cleanup objectives (Table 3-2).

Only two (2) semi-volatile organic compounds were detected in the soil/fill samples collected

west of the Niagara Sanitation Landfill with both being phthalates (Table 3-2). None of the concentrations, however, exceeded any of the NYSDEC soil cleanup objectives (Table 3-2).

Only two (2) pesticides (endrin aldehyde and endrin ketone) were detected in the soil/fill samples collected west of the Niagara Sanitation Landfill (Table 3-2). Once again, none of the concentrations exceeded any of the NYSDEC soil cleanup objectives (Table 3-2). No PCBs were detected in any of the samples (Table 3-2).

Twenty (20) metals were detected in the soil/fill samples collected west of the Niagara Sanitation Landfill (Table 3-2). Of these metals, the concentration of iron in both samples exceeded the NYSDEC CP-51 residential soil cleanup objective (Table 3-2). No other metal exceedances were documented in these samples (Table 3-2).

3.3 Groundwater Samples

Twenty-six (26) groundwater samples were collected from select fill/upper sand monitoring wells at the Niagara Sanitation Landfill between October 29 and November 8, 2021. Most of these wells are located near the perimeter of the landfill, but also included wells OW-13, OW-35, LPZ-02S, and LPZ-08S as elevated contaminant concentrations were previously documented in these wells. The locations of these wells are shown on Figure 3-2, while information concerning sample collection and analysis is given in Table 3-1.

Prior to sampling, each well was purged using the low-flow sampling technique. Monitoring well LDP-04 was purged using a micro-bailer. During purging, conductivity, temperature, pH, oxidation-reduction potential (ORP), dissolved oxygen, and turbidity of the groundwater were measured to ensure that the well had stabilized prior to sampling. The groundwater samples were submitted to Eurofins TestAmerica in Amherst, New York for chemical analysis of TCL volatile organic compounds, TCL semi-volatile organic compounds, TCL pesticides, Mirex, TCL polychlorinated biphenyls (PCBs) and TAL metals. The purge and sample logs are included in Appendix B, while the laboratory reports are included in Appendix C.

The groundwater analytical results were validated by Vali-Data of WNY, LLC, a certified data validator, in accordance with NYSDEC DER-10 and USEPA Region II data validation procedures. The Data Usability Summary Reports are included in Appendix E, while the validated analytical results are summarized in Tables 3-3A thru 3-3C.

Groundwater analytical results were evaluated against the water quality standards and guidance values contained in the NYSDEC publication entitled "*Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*", Division of Water, June 1998, with addenda. The groundwater standards and guidance values for individual contaminants were taken directly from Table 1 of that document.

The results of the groundwater samples collected from the Niagara Sanitation Landfill in 2021 reveal the presence of volatile organic compounds including benzene, chlorobenzene, ethylbenzene, isopropylbenzene, toluene, and xylenes (Tables 3-3A thru 3-3C). Of these compounds, benzene (2 samples), chlorobenzene (4 samples), isopropylbenzene (1 sample), toluene (1 sample), and xylenes (1 sample) were detected at concentrations that exceeded the NYSDEC groundwater standards or guidance values (Tables 3-3A thru 3-3C). These exceedances are shown on Figure 3-3, and were associated with wells OW-16, OW-35, OW-36, and LPZ-15S. These wells are located in the western portion of the landfill and along the NFG property to the west (Figure 3-3).

Twelve (12) semi-volatile organic compounds were detected in the 2021 groundwater samples collected from the Niagara Sanitation Landfill (Tables 3-3A thru 3-3C). Of these compounds, 4-methylphenol (P-Cresol) (1 sample), biphenyl (1 sample), and phenol (2 samples) were detected at concentrations that exceeded NYSDEC groundwater standards or guidance values (Tables 3-3A thru 3-3C). These exceedances are shown on Figure 3-3, and were associated with wells OW-13 and OW-36.

Six (6) pesticides were detected in the groundwater samples collected from the Niagara Sanitation Landfill in 2021 (Tables 3-3A thru 3-3C). Of these compounds, only the concentration of mirex in well LPZ-02S exceeded the NYSDEC groundwater standards or guidance values (Tables 3-3A thru 3-3C). This exceedance is shown on Figure 3-3. No pesticides were detected in twenty (20) of the wells sampled in 2021.

PCBs were detected in the groundwater sample collected from well OW-36 in 2021 at a concentration that exceeded the NYSDEC groundwater standard (Tables 3-3A thru 3-3C). This exceedance is shown on Figure 3-3. No PCBs were detected in the other monitoring wells sampled in 2021 (Tables 3-3A thru 3-3C).

Fifteen (15) metals were detected in the groundwater samples collected from the Niagara Sanitation Landfill in 2021 (Tables 3-3A thru 3-3C). Of these compounds, six (6) were detected at

concentrations that exceeded the NYSDEC groundwater standards or guidance values, with three (3) of these metals being EPA priority pollutant metals (Tables 3-3A thru 3-3C). The EPA priority pollutant metal exceedances are shown on Figure 3-3. EPA priority pollutant metals are toxic metals for which technology-based effluent limitations and guidelines are required by Federal law. The priority pollutant metals exceeding the groundwater standards or guidance values included antimony (1 sample), arsenic (2 samples) and cadmium (1 sample). Other metals that exceeded the NYSDEC groundwater standards or guidance values included barium (1 sample), iron (22 samples) and manganese (14 samples). It is important to note that groundwater standards for iron and manganese are secondary standards based on aesthetic considerations (taste, odor, and fixture staining) rather than potential adverse health effects.

4.0 EVALUATION OF LONG-TERM MONITORING RESULTS

4.1 General

Groundwater and surface water samples from the Niagara Sanitation Landfill have been collected on numerous occasions since 1983. The results from the samples collected in 2021 were discussed in Section 3.0 of this report. In Section 4.0, the 2021 results are evaluated against the results from historic groundwater samples collected from the site. Long-term monitoring results for surface water samples are not discussed in this report as surface water samples were not collected in 2021. For a discussion of the long-term monitoring results for surface water the reader is referred to the Groundwater & Surface Water Monitoring Report dated May 2022. This report can be found online at https://www.dec.ny.gov/data/DecDocs/932054/.

Once again groundwater analytical results were evaluated against the water quality standards and guidance values contained in the NYSDEC publication entitled "*Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*", Division of Water, June 1998, with addenda.

Except for the analytical results from the 1985 Phase II Investigation, all groundwater results have been validated and are summarized in Tables 4-2 thru 4-4. The Phase II Report gives no indication that the results were validated. The historic laboratory reports are included in Appendix D, while the historic Data Usability Summary Reports are included in Appendix F.

4.2 Groundwater Samples

Seventy-nine (79) groundwater samples from fill/upper sand monitoring wells were collected from the Niagara Sanitation Landfill between 1984 and 2021 (Table 4-1). One (1) sample was collected by Engineering Science/Dames & Moore in 1984 during the Phase II Investigation, two (2) samples were collected by Engineering Science in 1988 during the Supplemental Phase II Investigation, four (4) samples were collected by GES in 2013 during the Site Characterization Study, five (5) samples were collected by GES in 2014 during the Supplemental Site Characterization Study, twenty (20) samples were collected by LiRo in 2017 during the Remedial Investigation, twenty-one (21) samples were collected by LiRo during the 2019/2020 groundwater sampling event, and twenty-six (26) samples were collected by LiRo during the 2021 groundwater sampling event. The

locations of the wells sampled are shown on Figures 4-1 thru 4-3.

4.2.1 *Volatile Organic Compounds*

Historically, volatile organic compounds (VOCs) have been detected in isolated wells that screen the fill/upper sand water-bearing zone at the Niagara Sanitation Landfill (Figure 4-1). VOCs that exceeded the NYSDEC groundwater standards or guidance values have been documented in wells OW-16, OW-35, OW-36, LPZ-08S, LPZ-12S, and LPZ-15S. Five (5) of these wells are located in the western portion of the landfill and along the NFG property to the west, while the sixth well (LPZ-08S) is located near the IRM excavation area (Figure 4-1). VOCs that exceeded NYSDEC groundwater standards or guidance values include 1,4-dichlorobenze (well OW-16; 2 samples), benzene (wells OW-16, OW-35, OW-36 and LPZ-12S; 12 samples), chlorobenzene (wells OW-16, OW-35, OW-36, and LPZ-15S; 13 samples), ethylbenzene (wells OW-16 and OW-36; 4 samples), isopropylbenzene (well OW-36; 3 samples), toluene (wells OW-16 and LPZ-08S; 3 samples), and xylenes (wells OW-16 and OW-36; 5 samples) (Tables 4-2 thru 4-4). These exceedances are shown on Figure 4-1.

Of the fill/upper sand wells exhibiting VOC exceedances, wells OW-16, OW-35, OW-36, LPZ-08S, and LPZ-12S have been sampled at least three (3) times. The long-term results for these wells are discussed in the following paragraphs.

Well OW-16 was sampled six (6) times between 1988 and 2021 (Table 4-2E). Groundwater samples from this well have exceeded NYSDEC groundwater standards or guidance values for 1,4-dichlorobenze (2 samples), benzene (4 samples), chlorobenzene (5 samples), ethylbenzene (1 sample), toluene (2 samples) and xylenes (1 sample). Ethylbenzene and xylenes were detected in this well in 1988 but have not been detected since. Toluene was also detected in this well in 1988 and was not detected again until 2021. Concentrations of benzene decreased between the 1988 and 2013 sampling events and have remained relatively constant since. Concentrations of chlorobenzene also decreased between the 1988 and 2013 sampling events, remained relatively constant until 2017, decreased below the groundwater standard in 2019, but increased above the groundwater standard in 2021. 1,4-dichlorobenze was only detected in well OW-16 in 2014 and 2017. This well is located along the western boundary of the landfill (Figure 4-1).

Well OW-35 was sampled four (4) times between 2014 and 2021 (Table 4-2I). Groundwater samples from this well have exceeded NYSDEC groundwater standards or guidance values for benzene (4 samples) and chlorobenzene (4 samples). Concentrations of benzene remained stable

through 2019 at concentrations ranging from 3.8 to 4.9 µg/L but decreased to 2.4 µg/L in 2021. Concentrations of chlorobenzene were similar in 2014 and 2017 (80.0 µg/L and 78.0 µg/L, respectively), but increased to 120.0 µg/L in 2019. Concentrations decreased to 63.0 µg/L in 2021. This well is located within the landfill at the northwest portion of the site (Figure 4-1).

Well OW-36 was sampled four (4) times between 2014 and 2021 (Table 4-2J). Groundwater samples from this well have exceeded NYSDEC groundwater standards or guidance values for benzene (3 samples), chlorobenzene (3 samples), ethylbenzene (3 samples), isopropylbenzene (3 samples) and xylenes (4 samples). Concentrations of benzene, chlorobenzene and isopropylbenzene were relatively consistent in 2014 and 2017 but were not detected during the 2019 sampling event. These contaminants were detected again in 2021 at concentrations that exceeded NYSDEC groundwater standards or guidance values (Table 4-2J).

The concentrations of ethylbenzene and xylenes in well OW-36 were relatively high in 2014 but decreased significantly in 2017. The concentration of ethylbenzene decreased significantly between 2014 and 2017, decreased slightly in 2019, and was detected at a concentration below the NYSDEC groundwater standard in 2021 (Table 4-2J). The concentration of xylenes decreased significantly between 2014 and 2017, increased in 2019 to 580.0 µg/L in 2019, but decreased to its lowest concentration (130.0 µg/L) in 2021 (Table 4-2J). Well OW-36 is located at the northwest portion of the site (Figure 4-1).

Well LPZ-08S was sampled three (3) times between 2017 and 2021 (Table 4-3H). Toluene exceeded the NYSDEC groundwater standard in this well in 2017 but was not detected in 2019 or 2021. This well is located within the landfill at the east-central portion of the site near the IRM excavation area (Figure 4-1).

Well LPZ-12S was sampled three (3) times between 2017 and 2021 (Table 4-3J). Benzene exceeded the NYSDEC groundwater standard in this well in 2017 but was not detected in 2019 or 2021. This well is located along the northern boundary of the landfill at the northwest portion of the site (Figure 4-1).

4.2.2 *Semi-Volatile Organic Compounds*

Historically, phenolic compounds have been the principal semi-volatile organic compounds (SVOCs) detected in wells that screen the fill/upper sand water-bearing zone at the Niagara Sanitation Landfill (Figure 4-1). Phenolic compounds that exceeded the NYSDEC groundwater

standards or guidance values have been documented in wells OW-13, OW-14BR, OW-16, OW-21, OW-31, OW-36, LPZ-01S, LPZ-05S, LPZ-07S, and LPZ-08S. Seven (7) of these wells are located in the eastern portion of the landfill, while the remaining wells are located in the south-central and western portions of the site (Figure 4-1).

Phenolic compounds that exceeded the NYSDEC groundwater standards or guidance values include 2-methylphenol (O-Cresol) (wells OW-21, LPZ-05S, and LPZ-08S; 3 samples), 4-chloro-3-methylphenol (well OW-36; 1 sample), 4-methylphenol (P-Cresol) (wells OW-13, OW-14BR, OW-16, OW-21, LPZ-01S, LPZ-05S, LPZ-07S, and LPZ-08S; 9 samples), and phenol (wells OW-13, OW-21, OW-31, OW-36, and LPZ-05S; 7 samples) (Tables 4-2 thru 4-4; Figure 4-1).

Of the fill/upper sand wells exhibiting phenolic compound exceedances, wells OW-14BR, OW-16, OW-21, OW-31, OW-36, LPZ-01S, LPZ-05S, and LPZ-08S have been sampled at least three (3) times. The long-term results for these wells are discussed in the following paragraphs.

Well OW-14BR was sampled three (3) times between 2017 and 2021 (Table 4-2D). 4-methylphenol (P-Cresol) exceeded the NYSDEC groundwater standard in 2017 and hasn't been detected since. No SVOCs were detected in this well in 2019 and 2021 (Table 4-2D).

Well OW-16 was sampled six (6) times between 1988 and 2021 (Table 4-2E). 4-methylphenol (P-Cresol) exceeded the NYSDEC groundwater standard in 1988 and hasn't been detected since. Since 1988, no SVOCs were detected in this well at concentrations that exceeded NYSDEC groundwater standards or guidance values (Table 4-2E).

Well OW-21 was sampled four (4) times between 2013 and 2021 (Table 4-2F). Groundwater samples from this well have exceeded NYSDEC groundwater standards or guidance values for 2-methylphenol (O-Cresol) (2017 only), 4-methylphenol (P-Cresol) (2017 only), and phenol (2013 only). In 2019 and 2021, no SVOCs were detected in this well at concentrations that exceeded NYSDEC groundwater standards or guidance values (Table 4-2F).

Well OW-31 was sampled four (4) times between 2014 and 2021 (Table 4-2G). Phenol exceeded the NYSDEC groundwater standard in 2014 and hasn't been detected since. No SVOCs were detected in this well in 2020 and 2021 (Table 4-2G).

Well OW-36 was sampled four (4) times between 2014 and 2021 (Table 4-2J). Groundwater samples from this well have exceeded NYSDEC groundwater standards or guidance values for 4-

chloro-3-methylphenol (2014 only) and phenol (2014, 2017, and 2021). 4-chloro-3-methylphenol has not been detected in this well since 2014. Concentrations of phenol have remained stable, ranging from 2.7J to 4.6J µg/L (Table 4-2J).

Well LPZ-01S was sampled three (3) times between 2017 and 2021 (Table 4-3A). 4-methylphenol (P-Cresol) exceeded the NYSDEC groundwater standard in 2017 and hasn't been detected since. No SVOCs were detected in this well in 2019 and 2021 (Table 4-3A).

Well LPZ-05S was sampled three (3) times between 2017 and 2021 (Table 4-3E). Groundwater samples from this well have exceeded NYSDEC groundwater standards or guidance values for 2-methylphenol (O-Cresol) (2017 only), 4-methylphenol (P-Cresol) (2017 only), and phenol (2017 only). In 2019 and 2021, no SVOCs were detected in this well at concentrations that exceeded NYSDEC groundwater standards or guidance values (Table 4-3E).

Well LPZ-08S was sampled three (3) times between 2017 and 2021 (Table 4-3H). Groundwater samples from this well have exceeded NYSDEC groundwater standards or guidance values for 2-methylphenol (O-Cresol) (2017 only) and 4-methylphenol (P-Cresol) (2017 only). No SVOCs were detected in this well in 2019 and 2021 (Table 4-3H).

4.2.3 *Pesticides and Herbicides*

Pesticides have been detected in wells that screen the fill/upper sand water-bearing zone, and have been found in numerous wells throughout the Niagara Sanitation Landfill (Figure 4-2). Pesticides that exceeded the NYSDEC groundwater standards or guidance values have been documented in wells OW-1, OW-13, OW-16, OW-21, OW-22, OW-31, OW-32, OW-34, OW-35, OW-36, OW-37, LPZ-02S, LPZ-06S, LPZ-07S, LPZ-08S, LDP-01, LDP-02, LDP-03, and LDP-04. These wells are located throughout the landfill (Figure 4-2).

Pesticides that exceeded the NYSDEC groundwater standards or guidance values include BHC (alpha-, beta-, delta-, and gamma-) (wells OW-1, OW-13, OW-16, OW-21, OW-22, OW-32, OW-35, OW-36, LPZ-07S, LPZ-08S, LDP-01, LDP-02, and LDP-04; 16 samples), aldrin (wells OW-13, OW-16, OW-32, OW-34, OW-35, OW-36, LPZ-06S, LDP-01, LDP-02, and LDP-03; 10 samples), chlordane (wells OW-13 and OW-16; 2 samples), dieldrin (wells OW-16, OW-31, OW-32, OW-37; 4 samples), endrin (wells OW-31, OW-32, and OW-37; 3 samples) and mirex (well LPZ-02S; 1 sample) (Tables 4-2 thru 4-4; Figure 4-2). In 2019/2020, pesticides (delta-BHC and aldrin) were only detected in wells OW-36 and LPZ-06S at concentrations that exceeded NYSDEC groundwater standards or guidance values

(Tables 4-2 thru 4-4; Figure 4-2). In 2021, only the concentration of mirex in well LPZ-02S exceeded the NYSDEC groundwater standards or guidance values (Tables 4-2 thru 4-4; Figure 4-2). No pesticides were detected in twenty (20) of the wells sampled in 2021.

Nine (9) fill/upper sand monitoring wells were sampled and analyzed for herbicides during the 2013 and 2014 Site Characterization Studies. Herbicides were not detected in any of the samples (Tables 4-2 thru 4-4) so they were not included for analysis in 2017, 2019/2020, and 2021.

4.2.4 *Polychlorinated Biphenyls (PCBs)*

Groundwater samples from the fill/upper sand water-bearing zone were only analyzed for polychlorinated biphenyls (PCBs) during the 2017 Remedial Investigation, the 2019/2020 sampling event, and the 2021 sampling event. PCBs were only detected at concentrations that exceeded the NYSDEC groundwater standard in wells LPZ-09S (2017) and OW-36 (2021) (Tables 4-2 thru 4-4). PCBs were not detected in any of the samples collected in 2019/2020, nor in the other monitoring wells sampled in 2021 (Tables 4-2 thru 4-4).

4.2.5 *Metals*

Metals have been detected in wells that screen the fill/upper sand water-bearing zone, and have been found in wells throughout the Niagara Sanitation Landfill (Figure 4-3). Of these compounds, eleven (11) were detected at concentrations that exceeded the NYSDEC groundwater standards or guidance values, with seven (7) of these metals being EPA priority pollutant metals (Tables 4-2 thru 4-4; Figure 4-3). EPA priority pollutant metals that exceeded the NYSDEC groundwater standards or guidance values have been documented in wells OW-13, OW-14B, OW-16, OW-35, OW-36, LPZ-03S, LPZ-05S, LPZ-07S, and LDP-04. Four (4) of these wells are located in the western portion of the landfill, while two (2) wells are located near the IRM excavation area (Figure 4-3). Three (3) wells are located along the southern boundary of the landfill (Figure 4-3).

The priority pollutant metals exceeding the groundwater standards or guidance values included antimony (2 samples), arsenic (5 samples), beryllium (1 sample), cadmium (1 sample), chromium (1 sample), lead (3 samples) and mercury (1 sample). The beryllium, chromium, and mercury exceedances are associated with the groundwater sample collected from well OW-16 in 1988 (Table 4-2E). These metals did not exceed the NYSDEC groundwater standards or guidance values in the samples collected from this well between 2013 and 2021 (Table 4-2E).

Other metals that exceeded the NYSDEC groundwater standards or guidance values included barium (4 samples), iron (63 samples), manganese (45 samples) and nickel (1 sample) (Tables 4-2 thru 4-4).

Of the fill/upper sand wells exhibiting EPA priority pollutant metals exceedances, wells OW-14B, OW-16, OW-35, OW-36, LPZ-03S, LPZ-05S, and LDP-04 have been sampled at least three (3) times. The long-term results for these wells are discussed in the following paragraphs.

Well OW-14B was sampled four (4) times between 1988 and 2021 (Table 4-2C). The only EPA priority pollutant metal detected in this well that exceeded NYSDEC groundwater standards or guidance values was lead in 1988.

Well OW-16 was sampled six (6) times between 1988 and 2021 (Table 4-2E). Groundwater samples from this well have exceeded NYSDEC groundwater standards or guidance values for antimony (1988 only), beryllium (1988 only), chromium (1988 only), lead (1988 only), and mercury (1988 only). Groundwater exceedances for EPA priority pollutant metals have not been documented in this well since that time.

Well OW-35 was sampled four (4) times between 2014 and 2021 (Table 4-2I). The only EPA priority pollutant metal detected in this well that exceeded NYSDEC groundwater standards or guidance values was arsenic in 2021.

Well OW-36 was sampled four (4) times between 2014 and 2021 (Table 4-2J). The only EPA priority pollutant metal detected in this well that exceeded NYSDEC groundwater standards or guidance values was antimony in 2021.

Well LPZ-03S was sampled three (3) times between 2017 and 2021 (Table 4-3C). The only EPA priority pollutant metal detected in this well that exceeded NYSDEC groundwater standards or guidance values was arsenic in 2017 and 2019. Arsenic did not exceed the groundwater standard in the sample collected in 2021.

Well LPZ-05S was sampled three (3) times between 2017 and 2021 (Table 4-3E). The only EPA priority pollutant metal detected in this well that exceeded NYSDEC groundwater standards or guidance values was arsenic in 2017.

Well LDP-04 was sampled three (3) times between 2017 and 2021 (Table 4-4D). The only

EPA priority pollutant metal detected in this well that exceeded NYSDEC groundwater standards or guidance values was lead in 2019.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 Discussion

Groundwater samples were collected from the Niagara Sanitation Landfill between October 29 and November 8, 2021 to evaluate current groundwater conditions at the site. These results are summarized in Tables 3-3A thru 3-3C and were discussed in detail in Section 3.3 of this report.

In addition to the 2021 sampling event, upper sand/fill monitoring wells at the Niagara Sanitation Landfill have been sampled on numerous occasions since 1984. These long-term results are summarized in Tables 4-2A thru 4-4D and were discussed in detail in Section 4.2 of this report. Additional information concerning groundwater sampling between 1984 and 2021 can be found in the various reports listed in Section 6.0 of this report. These reports can be found online at https://www.dec.ny.gov/data/DecDocs/932054/.

5.1.1 *Groundwater*

Sixty-seven (67) groundwater samples were collected between 2017 and 2021 from fill/upper sand monitoring wells to evaluate groundwater conditions at the Niagara Sanitation Landfill (Tables 3-3A thru 3-3C and Tables 4-2A thru 4-4D). Twenty (20) groundwater samples were collected by LiRo in 2017 during the Remedial Investigation, twenty-one (21) groundwater samples were collected by LiRo during the 2019/2020 sampling event, and twenty-six (26) groundwater samples were collected by LiRo during the 2021 sampling event. The locations of these samples are shown on Figure 3-2 and Figures 4-1 thru 4-3.

VOC exceedances (benzene, chlorobenzene, ethylbenzene, and xylenes) were only documented in two (2) interior wells sampled in 2019 (OW-35 and OW-36) (Tables 4-2A thru 4-4D; Figure 4-1). This was a dramatic improvement over the 2017 results, where VOC exceedances (1,4-dichlorobenze, benzene, chlorobenzene, ethylbenzene, isopropylbenzene, toluene and xylenes) were documented in two (2) perimeter wells (OW-16 and LPZ-12S) and three (3) interior wells (OW-35, OW-36 and LPZ-08S) (Tables 4-2A thru 4-4D; Figure 4-1). In 2021, VOC exceedances (benzene, chlorobenzene, isopropylbenzene, toluene, and xylenes) were documented in wells OW-16, OW-35, OW-36, and LPZ-15S (Tables 3-3A thru 3-3C; Figure 3-3). These wells are located in the western portion of the landfill and along the National Fuel Gas property to the west (Figure 3-3).

No SVOC exceedances were documented in any well sampled in 2019 (Tables 4-2A thru 4-4D). This was a dramatic improvement over the 2017 results, where phenolic exceedances (2-methylphenol (O-Cresol), 4-methylphenol (P-Cresol), and phenol) were documented in four (4) perimeter wells (OW-14BR, OW-21, LPZ-01S and LPZ-05S) and three (3) interior wells (OW-36, LPZ-07S and LPZ-08S) (Tables 4-2A thru 4-4D; Figure 4-1). In 2021, phenolic exceedances (4-methylphenol (P-Cresol) and phenol) were documented in two (2) interior wells (OW-13 and OW-36) (Tables 3-3A thru 3-3C; Figure 3-3). Biphenyl exceeded the NYSDEC groundwater standard in interior well OW-36 in 2014, 2017, and 2021 (Table 4-2J; Figure 4-1).

In 2019, pesticide exceedances were only documented in wells OW-36 (delta-BHC) and LPZ-06S (aldrin), which was a dramatic improvement over the 2017 results (Tables 4-2A thru 4-4D; Figure 4-2). In 2017, pesticide exceedances were documented in eleven (11) wells (OW-16, OW-21, OW-35, OW-36, LPZ-02S, LPZ-07S, LPZ-08S, LDP-01, LDP-02, LDP-03 and LDP-04), and included aldrin (5 samples), alpha-BHC (6 samples), beta-BHC (1 sample) and gamma-BHC (1 sample) (Tables 4-2A thru 4-4D; Figure 4-2). In 2021, pesticide exceedances were only documented for mirex in well LPZ-02S (Tables 3-3A thru 3-3C; Figure 3-3).

In 2019, only two (2) EPA priority pollutant metal exceedances were documented: arsenic in well LPZ-03S and lead in well LDP-04 (Tables 4-2A thru 4-4D; Figure 4-3). In 2017, arsenic also exceeded the groundwater standard in well LPZ-03S at a similar concentration (Table 4-3C; Figure 4-3), but lead was not detected in well LDP-04 (Table 4-4D). Arsenic in well LPZ-05S was the only other EPA priority pollutant metal exceedance documented in 2017 (Tables 4-2A thru 4-4D; Figure 4-3). In 2021, EPA priority pollutant metal exceedances were documented in wells OW-13 (arsenic), OW-35 (arsenic), OW-36 (antimony), and LPZ-07S (cadmium) (Tables 3-3A thru 3-3C; Figure 3-3).

5.2 Recommendations

The analytical results from groundwater samples collected during the 2021 sampling event indicate that site related contaminants are not migrating from the Niagara Sanitation Landfill. The Department, however, plans to install three (3) additional monitoring wells at the site in 2023 to further assess the landfill waste encountered on National Fuel Gas property in July 2020.

It is recommended that select monitoring wells be sampled in 2023 to evaluate current groundwater conditions at the site. It is also recommended that surface water bodies on and adjacent to the Niagara Sanitation Landfill be sampled in 2023 to evaluate current surface water conditions at

the site.

6.0 REFERENCES

Engineering-Science, 1983, Phase I Report: Engineering Investigations and Evaluations at Inactive Hazardous Waste Disposal Sites, Niagara Sanitation, Nash Road, Niagara County, NY: Engineering-Science in association with Dames & Moore, June 1983.

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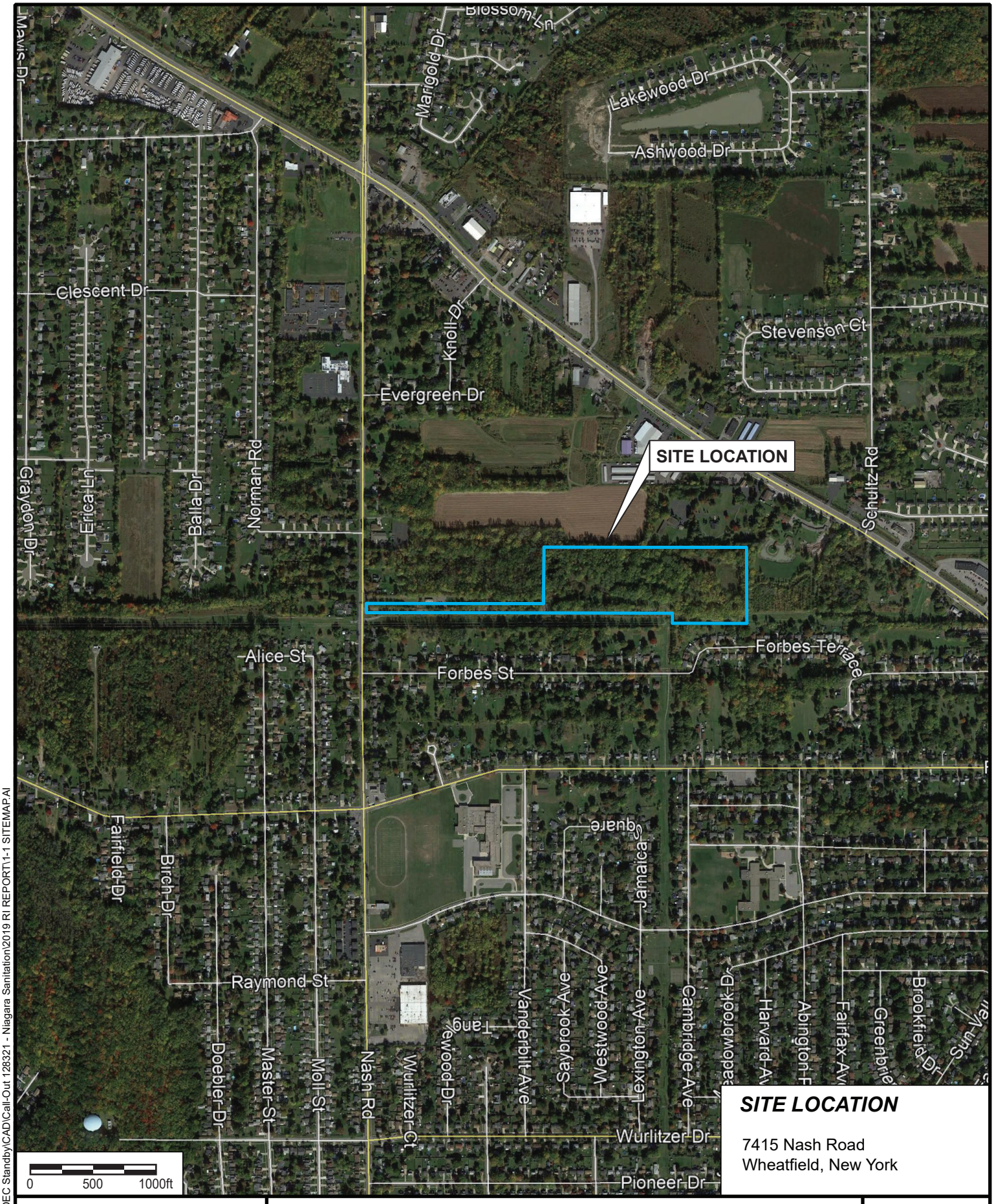
FIGURES



SITE LOCATION

7415 Nash Road
Wheatfield, New York

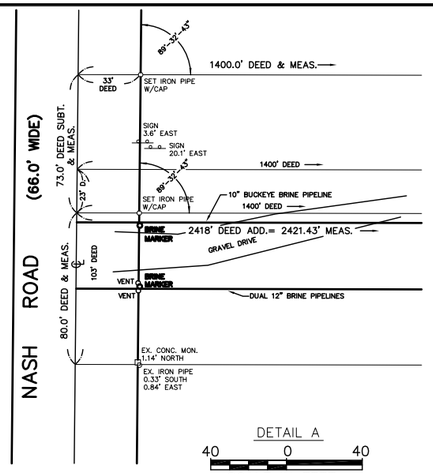
LiRo-Engineers, Inc.
690 Delaware Ave.
Buffalo, New York

NIAGARA SANITATION LANDFILL
SITE LOCATION MAP

FIGURE NO.

1-1

J:\17-013-0289 NYSDEC Standby\CAD\Call-Out 128321 - Niagara Sanitation\2019 RI REPORT\1-1 SITEMAP.AI



DETAIL A

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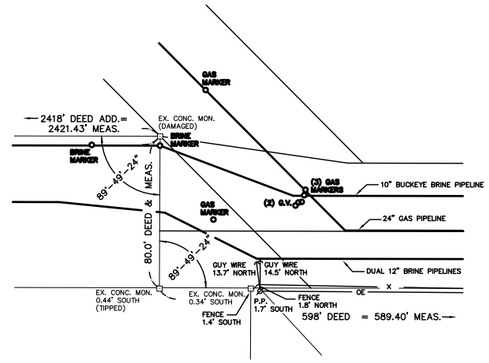
SCALE IN FEET



DETAIL B

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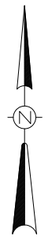

REPUTED OWNER
SOCIETY OF THE CATHOLIC APOSTOLATE
L-1263, P-201
L-1263, P-242

(66.0' WIDE)
EAST LINE LOT-29
WEST LINE LOT-22
EX. IRON PIPE 0.28' SOUTH
EX. IRON PIPE (TALL) 0.49' SOUTH 0.49' EAST
EX. IRON PIPE (TALL) 1.56' NORTH 1.45' WEST
SET IRON PIPE W/CAP
EX. ANGLE IRON 1.3' WEST
EX. ANGLE IRON 0.5' WEST
EX. ANGLE IRON 1.1' WEST
EX. ANGLE IRON
EX. REBAR 0.13' EAST
EX. REBAR 11.95' SOUTH 16.15' WEST
90°-27'-17"
448.0' MEAS. 521' DEED
PARALLEL WITH ℄ NASH ROAD
1602.0' DEED & MEAS.
PARALLEL WITH SOUTH LINE LOT-22
NORTH LINE WILLIAM VOLKSTADT L-668, P-85
N.E. COR. L-668, P-85
SET IRON PIPE W/CAP
EX. IRON PIPE 5.49' SOUTH 8.05' WEST
90°-25'-27"
EAST LINE L-668, P-85
601.0' DEED & MEAS.
PARALLEL WITH EAST LINE LOT-22 (DEED)
REPUTED OWNER
CAROL GUIDO
L-1438, P-914
L-3325, P-938
ROAD
NASH

REPUTED OWNER
JAMES LOVELAND
L-1434, P-829

REPUTED OWNER
ROBERT J. & ELAINE McCALL
L-1817, P-137

REPUTED OWNER
IROQUOIS GAS CORPORATION
L-1469, P-559
EX. REBAR W/CAP 0.85' NORTH
200' DEED
150' DEED
100' DEED
SEE DETAIL A
200' DEED
100' DEED
GATE POST
GRAVEL DR.
EX. CONC. MON. 1.14' NORTH
EX. IRON PIPE 0.33' SOUTH 0.84' EAST
80.0' DEED & MEAS.

REPUTED OWNER
JONATHON M. PETERSON
L-3305, P-765
1400' DEED

REPUTED OWNER
TOWN OF WHEATFIELD
L-1110, P-505
1ST DESCRIBED PARCEL
FENCE 1.6' SOUTH

REPUTED OWNER
IROQUOIS GAS CORPORATION
L-1482, P-771
CHAIN LINK FENCE
FENCE 1.3' SOUTH
1400.0' DEED & MEAS.
1400' DEED
1400' DEED

REPUTED OWNER
THE TOWN OF WHEATFIELD
L-1269, P-587
PARALLEL WITH SOUTH LINE LOT-22
23' DEED
2418' DEED ADDITION = 2421.43' MEAS.
NORTH LINE NIAGARA FALLS POWER COMPANY (DEED)
TOWN OF WHEATFIELD
CITY OF NORTH TONAWANDA

REPUTED OWNER
NIAGARA MOHAWK POWER CORP.
SOUTH LINE LOT-22
NORTH LINE LOT-21

REPUTED OWNER
TOWN OF WHEATFIELD
L-1110, P-505
2ND DESCRIBED PARCEL
22.636±Ac.

150' D.
100' D.
4 RDS. 66' DEED
24" GAS PIPELINE
GAS MARKER
GAS MARKER
SEE 66' WIDE RIGHT OF WAY & EASEMENT TO IROQUOIS GAS CORPORATION L-1482, P-806
SEE DETAIL B
SEE RIGHT OF WAY TO BUCKEYE PIPE LINE COMPANY (INC.) L-1507, P-939, PARCEL NO. 1
89°-34'-33"
1018' DEED
120.00' D.
80.0' D. & M.
EAST LINE NIAGARA FALLS POWER COMPANY
EX. CONC. MON.
SEE EASEMENT TO NATIONAL FUEL GAS DISTRIBUTION CORPORATION L-2383, P-49
REPUTED OWNER
NIAGARA MOHAWK POWER CORP.
GUY WIRE 10.4' NORTH
498.16' DEED
SAT. DISH 0.4' NORTH
P.P. 1.1' SOUTH
10" BUCKEYE BRINE PIPELINE
24" GAS PIPELINE 522.15' DEED
596.00' DEED = 589.40' MEAS.
DUAL 12" BRINE PIPELINES
P.P. 2.4' SOUTH
FENCE 1.1' SOUTH
P.P. 1.1' SOUTH
FENCE 0.6' SOUTH
FENCE 0.1' SOUTH
P.P. 1.2' SOUTH
FENCE 0.7' NORTH
FENCE 0.1' SOUTH
P.P. NG 508 NYT 508 0.8' SOUTH
FENCE 1.8' SOUTH
SHED
SET IRON PIPE W/CAP
IROQUOI
FORBES TERRACE (60.0'
SEE 30' WIDE EASEMENT TO TEXAS BRINE CORPORATION L-2072, P-269
SEE NON-EXCLUSIVE RIGHT OF WAY & EASEMENT TO BUCKEYE PIPE LINE COMPANY (INC.) L-1507, P-176 (GRANTED OVER EASEMENT IN L-1482, P-806)
FORBES STREET

LEGEND
OE — OVERHEAD ELECTRIC
Ø P.P. — POWER POLE
O G.V. — GAS VALVE
SIGN

100 0 100

SCALE IN FEET

SURVEY PROVIDED BY:
McINTOSH & McINTOSH, P.C.
CONSULTING ENGINEERS, LAND SURVEYORS, PLANNERS
429 PINE STREET, LOCKPORT, NEW YORK 14094
PHONE 433-2535 PHONE 625-8360

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NO.	DATE	DESCRIPTION
		REVISIONS

Liro Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

DATE: SEPTEMBER 2021
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
SHEET OF

DRAWING TITLE:
NIAGARA SANITATION LANDFILL PROPERTY MAP

FIGURE NO. 2-1

J:\17-013-0289 NYSDEC Standby\CAD\Coll-Out 128321 - Niagara Sanitation\2019 RI REPORT\2-1 PROPERTY MAP.dwg 9/21/2021 1:38 PM

N

LEGEND

- US ARMY CORPS OF ENGINEERS FIELD DELINATED FRESHWATER FORESTED SHRUB WETLAND
- GRAVEL ROAD
- WELL ACCESS PATHWAY
- LANDFILL AREA OF INVESTIGATION

REPUTED OWNER
SOCIETY OF THE CATHOLIC APOSTOLATE
L–1263, P–201
L–1263, P–242

1602.0' DEED / 1602' MEAS.

SET IRON PIPE W/CAP

SET IRON PIPE W/CAP

EX. ANGLE IRON 1.3' WEST

EX. ANGLE IRON 0.5' WEST

EX. ANGLE IRON 1.1' WEST

EX. ANGLE IRON 0.4' EAST

EX. REBAR 0.13' EAST

EX. REBAR 11.95' SOUTH 16.15' WEST

REPUTED OWNER
THE TOWN OF WHEATFIELD
L–1269, P–587

ROS = 66' DEED

24" GAS PIPELINE

GAS MARKER

GAS MARKER

SEE 66' WIDE RIGHT OF WAY & EASEMENT TO IROQUOIS GAS CORPORATION L–1482, P–806

SET IRON PIPE W/CAP

PARALLEL WITH SOUTH LINE LOT–22

23' DEED

1018' DEED

2418' DEED ADDITION = 2421.43' MEAS.

10" BUCKEYE BRINE PIPELINE

DUAL 12" BRINE PIPELINES

NORTH LINE NIAGARA FALLS POWER COMPANY (DEED)

SOUTH LINE LOT–22

NORTH LINE LOT–21

EAST LINE NIAGARA FALLS POWER COMPANY

EX. CONC. MON.

REPUTED OWNER
NIAGARA MOHAWK POWER CORP.

SEE EASEMENT TO NATIONAL FUEL GAS DISTRIBUTION CORPORATION

GUY WIRE

DISH 0.4' NORTH

P.P. 1.1' SOUTH

681.46' DEED

REPUTED OWNER
IROQUOIS GAS CORPORATION
L–1496, P–986

BRINE MARKER

GAS MARKER

BRINE MARKER

24" GAS PIPELINE 622.15' DEED

P.P. 2.4' SOUTH

FENCE 1.1' SOUTH

P.P. 1.1' SOUTH

FENCE 0.6' SOUTH

FENCE 0.1' SOUTH

P.P. 1.2' SOUTH

FENCE 0.7' NORTH

FENCE 0.1' SOUTH

P.P. NG 50R NYT 50R 0.8' SOUTH

SHED

FENCE 1.8' SOUTH

P.P. NG 62R NYT 62

FORBES TERRACE (60.0' WIDE)

SEE 30' WIDE EASEMENT TO TEXAS BRINE CORPORATION L–2072, P–269

80 0 80
SCALE IN FEET

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NO.	DATE	DESCRIPTION
REVISIONS		

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY — Department of Environmental Conservation

DATE: SEPTEMBER 2021

SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17–013–0289

SHEET OF

DRAWING TITLE:
SITE BOUNDARY MAP SHOWING WETLANDS

FIGURE NO.
2-2

J:\17–013–0289 NYSDEC Standby\CAD\Coll–Out 128321 – Niagara Sanitation\2019 RI REPORT\2–2 SITE MAP WETLANDS.dwg 9/21/2021 1:38 PM

N

LEGEND

- FRESHWATER FORESTED/ SHRUB WETLAND
- GRAVEL ROAD
- LANDFILL AREA OF INVESTIGATION
- 2013 SURFACE SOIL SAMPLE LOCATION
- 2013 SOIL BORING SAMPLE LOCATION
- 2013 SURFACE WATER SAMPLING LOCATIONS
- 2013 MONITORING WELL SAMPLE LOCATION
- 2013 SEDIMENT SAMPLE LOCATION

SET IRON PIPE W/CAP
EX. ANGLE IRON 1.3' WEST
EX. ANGLE IRON 0.5' WEST
EX. ANGLE IRON 1.1' WEST
EX. ANGLE IRON
EX. REBAR 0.13' EAST
EX. REBAR 11.95' SOUTH 16.15' WEST
1602.0' DEED & MEAS.
SET IRON PIPE W/CAP
SW-6
SED-1
SW-2
OW-2
OW-1
OW-14B
SB-E
SW-5
SOIL-10
SW-4
SW-3
SOIL-9
OW-11
SB-J
SB-H
OW-21/SB-D
SB-M
SW-7
OW-13
SOIL-7
SB-B/OW-25
SOIL-6
SOIL-11
SB-I
SB-G
SOIL-5
OW-16
OW-23/SB-F
SB-L
OW-22/SB-C
SOIL-8
SB-K
SOIL-1
SB-A/OW-24
REPUTED OWNER
THE TOWN OF WHEATFIELD
L-1269, P-587
4 RODS = 66' DEED
24" GAS PIPELINE
GAS MARKER
GAS MARKER
SOIL-4
SET IRON PIPE W/CAP
SEE 66' WIDE RIGHT OF WAY & EASEMENT TO IROQUOIS GAS CORPORATION L-1482, P-806
PARALLEL WITH SOUTH LINE LOT-22
23' DEED
1018' DEED
GUY WIRE 10.4' NORTH
SAT. DISH 0.4' NORTH
P.P. 1.1' SOUTH
499.16' DEED
BRINE MARKER
GAS MARKER
BRINE MARKER
681.46' DEED
REPUTED OWNER
IROQUOIS GAS CORPORATION
L-1496, P-986
2418' DEED ADDITION = 2421.43' MEAS.
10" BUCKEYE BRINE PIPELINE
DUAL 12" BRINE PIPELINES
SOIL-3
SOIL-2
24" GAS PIPELINE 522.15' DEED
NORTH LINE NIAGARA FALLS POWER COMPANY (DEED)
SOUTH LINE LOT-22
NORTH LINE LOT-21
EAST LINE NIAGARA FALLS POWER COMPANY
EX. CONC. MON.
P.P. 2.4' SOUTH
FENCE 1.1' SOUTH
P.P. 1.1' SOUTH
FENCE 0.6' SOUTH
FENCE 0.1' SOUTH
P.P. 1.2' SOUTH
FENCE 0.7' NORTH
FENCE 0.1' SOUTH
P.P. NG 50R NYT 50R 0.8' SOUTH
SHED
FENCE 1.8' SOUTH
P.P. NG 62R NYT 62
EATFIELD
ONAWANDA
REPUTED OWNER
NIAGARA MOHAWK POWER CORP.
SEE EASEMENT TO NATIONAL FUEL GAS DISTRIBUTION CORPORATION
FORBES TERRACE (60.0' WIDE)
SEE 30' WIDE EASEMENT TO TEXAS BRINE CORPORATION L-2072, P-269

80 0 80
SCALE IN FEET

WARNING
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NO.	DATE	DESCRIPTION
REVISIONS		

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

DATE: SEPTEMBER 2021
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
SHEET OF

DRAWING TITLE:
2013 SITE CHARACTERIZATION SAMPLE LOCATION MAP

FIGURE NO. 2-3

J:\17-013-0289 NYSDEC Standby\CAD\Cell-Out 128321 - Niagara Sanitation\2019 RI REPORT\2-3 SAMPLE LOC MAP.dwg 9/21/2021 1:38 PM

N

LEGEND

- FRESHWATER FORESTED/ SHRUB WETLAND
- GRAVEL ROAD
- LIMITS OF 2014/2015 IRM EXCAVATION
- LANDFILL AREA OF INVESTIGATION
- MONITORING WELL AND PIEZOMETER LOCATIONS
- 2017 HAND DRILLED 1–INCH ID PIEZOMETER LOCATION
- 2017 STAFF GAUGE LOCATION
- (573.67) GROUNDWATER ELEVATION (FT. MSL)
- 573.00 GROUNDWATER CONTOUR (FT. MSL)
- INTERPRETED GROUNDWATER FLOW DIRECTION

LDP–04 (572.81)
OW–36 (574.02)
LPZ–12S (573.34)
OW–35 (573.91)
OW–37 (573.71)
LPZ–11S (573.53)
LPZ–01S (573.76)
OW–14BR (573.67)
SG–01 (DRY)
OW–1 (573.07)
OW–14B (574.24)
SG–02 (DRY)
OW–21 (572.77)
LPZ–09S (573.77)
OW–33 (573.29)
LPZ–02S (574.02)
OW–13 (573.34)
OW–16 (573.34)
OW–32 (573.67)
LPZ–08S (574.14)
OW–22 (572.99)
OW–23
LPZ–13S (573.02)
LPZ–10S (573.26)
OW–31 (572.49)
OW–34 (572.64)
LPZ–03S (572.36)
LPZ–04S (572.45)
LPZ–05S (572.82)
LPZ–06S (572.76)
LPZ–07S (572.37)
LDP–01 (DRY)
LDP–02R (572.64)
LDP–03 (572.60)

572.50 573.00 573.50 574.00

80 0 80
SCALE IN FEET

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Liro Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

DATE: SEPTEMBER 2021
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17–013–0289
SHEET OF

DRAWING TITLE:
GROUNDWATER ELEVATION CONTOUR MAP
FILL/UPPER SAND: SEPTEMBER 25, 2017

FIGURE NO. 2-4

J:\17-013-0289 NYSDEC Standby\CAD\Cell-Out 128321 - Niagara Sanitation\2019 RI REPORT\2-4 CONTOUR SEPT 25.dwg 9/21/2021 1:38 PM

N

LEGEND

- FRESHWATER FORESTED/ SHRUB WETLAND
- GRAVEL ROAD
- LIMITS OF 2014/2015 IRM EXCAVATION
- LANDFILL AREA OF INVESTIGATION
- MONITORING WELL AND PIEZOMETER LOCATIONS
- 2017 HAND DRILLED 1-INCH ID PIEZOMETER LOCATION
- 2017 STAFF GAUGE LOCATION
- (574.95) GROUNDWATER ELEVATION (FT. MSL)
- 573.00 GROUNDWATER CONTOUR (FT. MSL)
- INTERPRETED GROUNDWATER FLOW DIRECTION

LDP-04 (574.07)
OW-36 (574.27)
LPZ-12S (574.74)
OW-37 (574.37)
LPZ-11S (574.80)
LPZ-01S (574.92)
OW-14BR (574.95)
SG-01 (574.98)
OW-1 (574.32)
OW-14B (574.90)
OW-35 (574.29)
SG-02 (574.76)
OW-21 (573.97)
LPZ-09S (574.01)
OW-33 (574.03)
LPZ-02S (574.68)
OW-13 (575.14)
OW-16 (573.16)
LPZ-08S (574.75)
OW-22 (573.99)
OW-32 (574.13)
OW-23 (574.90)
LPZ-13S (573.92)
OW-5
LPZ-10S (574.40)
OW-31 (573.20)
OW-34 (574.64)
LPZ-03S (575.21)
LPZ-04S (574.89)
LPZ-05S (574.35)
LPZ-06S (574.91)
LPZ-07S (573.91)
LDP-01 (574.76)
LDP-02R (575.69)
LDP-03 (575.04)

574.50 574.00 575.00 573.00 574.50 574.00 573.50 574.50 575.00 575.50 575.00 575.50 575.00 575.50 574.50 575.00 575.50

80 0 80
SCALE IN FEET

WARNING
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NO.	DATE	DESCRIPTION
REVISIONS		

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

DATE: SEPTEMBER 2021
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
SHEET OF

DRAWING TITLE:
GROUNDWATER ELEVATION CONTOUR MAP
FILL/UPPER SAND: OCTOBER 17, 2017

FIGURE NO. 2-5

J:\17-013-0289 NYSDEC Standby\CAD\Coll-Out 128321 - Niagara Sanitation\2019 RI REPORT\2-5 CONTOUR OCT 17.dwg 9/21/2021 1:38 PM

N

LEGEND

- FRESHWATER FORESTED/ SHRUB WETLAND
- GRAVEL ROAD
- PERIMETER FENCE
- LIMIT OF MUNICIPAL WASTE
- LIMITS OF 2014/2015 IRM EXCAVATION
- MONITORING WELL AND PIEZOMETER LOCATIONS
- 2017 HAND DRILLED 1-INCH ID PIEZOMETER LOCATION
- 2017 STAFF GAUGE LOCATION
- HAND BORING, MONITORING WELL, TEST PIT, PIEZOMETER AND FENCE POST LOCATIONS WITH OBSERVED MUNICIPAL WASTE
- HAND BORING, MONITORING WELL, TEST PIT, PIEZOMETER AND FENCE POST LOCATIONS WITH NO OBSERVED MUNICIPAL WASTE
- HAND BORING LOCATION WITH ROAD/DRIVEWAY FILL

F-12, LDP-04, HB-38, HB-39, HB-40, HB-51, HB-52, HB-50, HB-49, HB-48, HB-47, HB-45, HB-44, HB-41, HB-46, F-11, HB-42, F-10, HB-43, F-9, F-8, HB-11, F-7, HB-12, F-6, HB-13, F-5, HB-06, F-4, F-3, F-2, F-1, HB-30, HB-01, HB-02, HB-03, HB-04, HB-05, LPZ-12S, TP-17, TP-16, F-26, OW-4, OW-15, LPZ-11S, LPZ-09S, LPZ-02S, OW-6, OW-16, OW-5, LPZ-13S, HB-25, HB-23, HB-21, HB-19, HB-17, HB-15, HB-24, HB-22, HB-20, HB-18, HB-16, HB-14, HB-09, HB-08, TP-18, HB-10, HB-07, HB-26, HB-27, HB-29, HB-28, LPZ-03S, TP-01, TP-02, TP-03, LPZ-04S, TP-04, TP-05, LPZ-05S, TP-06, HB-37, TP-07, HB-36, HB-35, TP-08, HB-34, LPZ-06S, TP-09, HB-31, TP-10, HB-32, HB-33, F-14, F-15, F-16, F-17, F-18, F-19, F-20

50 0 50
SCALE IN FEET

J:\17-013-0289 NYSDEC Standby\CAD\Coll-Out 128321 - Niagara Sanitation\2021 GW Report\3-1 DELINEATED EXTENTS WEST COLOR.dwg 6/27/2022 2:44 PM

WARNING

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NO.	DATE	DESCRIPTION

REVISIONS

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DATE: MAY 2022
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
SHEET OF

DRAWING TITLE:
DELINEATED EXTENTS OF MUNICIPAL LANDFILL WASTE - WESTERN PORTION OF SITE

FIGURE NO.: 3-1

N

LEGEND

- FRESHWATER FORESTED/ SHRUB WETLAND
- GRAVEL ROAD
- LIMITS OF 2014/2015 IRM EXCAVATION
- LANDFILL AREA OF INVESTIGATION
- MONITORING WELL AND PIEZOMETER LOCATIONS (NOT PART OF THE LONG-TERM MONITORING WELL NETWORK)
- 2017 HAND DRILLED 1-INCH ID PIEZOMETER LOCATION (NOT ANALYZED)
- GROUNDWATER SAMPLING LOCATIONS

SET IRON PIPE W/CAP
EX. ANGLE IRON 1.3' WEST
EX. ANGLE IRON 0.5' WEST
EX. ANGLE IRON 1.1' WEST
EX. ANGLE IRON
EX. REBAR 0.13' EAST
EX. REBAR 11.95' SOUTH 16.15' WEST
1602.0' DEED & MEAS.
SET IRON PIPE W/CAP
LDP-04
LPZ-12S
LPZ-11S
LPZ-01S
OW-14BR
OW-1
OW-36
OW-37
OW-14B
OW-35
LPZ-09S
OW-33
OW-21
OW-13
LPZ-02S
LPZ-08S
OW-16
OW-22
OW-32
LPZ-13S
LPZ-10S
REPUTED OWNER
THE TOWN OF WHEATFIELD
L-1269, P-587
4 RODS = 66' DEED
24" GAS PIPELINE
GAS MARKER
GAS MARKER
OW-34
OW-31
SET IRON PIPE W/CAP
LPZ-14S
SEE 66' WIDE RIGHT OF WAY & EASEMENT TO IROQUOIS GAS CORPORATION L-1462, P-806
ALLEL WITH SOUTH LINE LOT-22
LPZ-15S
23' DEED
LPZ-03S
LPZ-04S
1018' DEED
LPZ-05S
LPZ-06S
LPZ-07S
GUY WIRE 10.4' NORTH
499.16' DEED
681.46' DEED
2418' DEED ADDITION = 2421.43' MEAS.
10" BUCKEYE BRINE PIPELINE
DUAL 12" BRINE PIPELINES
BRINE MARKER
GAS MARKER
BRINE MARKER
24" GAS PIPELINE 522.15' DEED
LDP-02R (DESTROYED)
LDP-03
LDP-01
EATFIELD
NORTH LINE NIAGARA FALLS POWER COMPANY (DEED)
SOUTH LINE LOT-22
NORTH LINE LOT-21
EAST LINE NIAGARA FALLS POWER COMPANY
EX. CONC. MON.
SHED
REPUTED OWNER
IROQUOIS GAS CORPORATION
L-1496, P-986
ONAWANDA
REPUTED OWNER
NIAGARA MOHAWK POWER CORP.
SEE EASEMENT TO NATIONAL FUEL GAS DISTRIBUTION CORPORATION
FORBES TERRACE (60.0' WIDE)
SEE 30' WIDE EASEMENT TO TEXAS BRINE CORPORATION L-2072, P-269

80 0 80
SCALE IN FEET

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REVISIONS		

LiRo Engineers, Inc.
630 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

DATE: MAY 2022
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
SHEET OF

DRAWING TITLE:
2021 GROUNDWATER SAMPLE LOCATION MAP - FILL/UPPER SAND MONITORING WELLS

FIGURE NO.
3-2

J:\17-013-0289 NYSDEC Standby\CAD\Coll-Out 128321 - Niagara Sanitation\2021 GW Report\3-2 MW LOC.dwg 6/29/2022 6:12 AM

N

OW-35		11/3/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***
Benzene	1.0	2.4
Chlorobenzene	5.0	63.0
Metals (ug/L)	***NYSDEC AWQSGVs***	***ug/L***
Arsenic	25.0	40.0 J

OW-36		11/3/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***
Benzene	1.0	2.7 J
Chlorobenzene	5.0	9.4
Isopropylbenzene	5.0	5.7
Xylene (Total)	5.0	130.0
SVOCs	***NYSDEC AWQSGVs***	***ug/L***
Biphenyl	5.0	8.2
Phenol	1*	2.7 J
PCBs	***NYSDEC AWQSGVs***	***ug/L***
Total PCBs	0.09	0.32 J
Metals	***NYSDEC AWQSGVs***	***ug/L***
Antimony	3.0	27.0

OW-13		11/4/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***
4-Methylphenol (P-Cresol)	1.0	63.0
Phenol	1.0	3.0 J
Metals (ug/L)	***NYSDEC AWQSGVs***	***ug/L***
Arsenic	25.0	39.0

LPZ-02S		11/1/2021
Pesticides	***NYSDEC AWQSGVs***	***ug/L***
Mirex	0.03	0.034 J

OW-16		11/4/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***
Chlorobenzene	5.0	7.8
Toluene	5.0	12.0

LPZ-15S		11/8/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***
Chlorobenzene	5.0	6.5

LPZ-07S		11/2/2021
Metals	***NYSDEC AWQSGVs***	***ug/L***
Cadmium	5.0	5.9

SET IRON PIPE W/CAP
EX. ANGLE IRON 1.3' WEST
EX. ANGLE IRON 0.5' WEST
EX. ANGLE IRON 1.1' WEST
EX. ANGLE IRON
EX. REBAR 0.13' EAST
EX. REBAR 11.95' SOUTH 16.15' WEST
1602.0' DEED & MEAS.
SET IRON PIPE W/CAP
LDP-04
OW-36
LPZ-12S
OW-35
OW-37
LPZ-11S
LPZ-01S
OW-14BR
OW-1
OW-14B
LPZ-09S
OW-33
LPZ-02S
OW-13
OW-21
LPZ-08S
OW-22
OW-16
OW-32
LPZ-13S
LPZ-10S
REPUTED OWNER
THE TOWN OF WHEATFIELD
L-1269, P-587
4' ROS = 66' DEED
24" GAS PIPELINE
GAS MARKER
GAS MARKER
OW-34
OW-31
LPZ-14S
SET IRON PIPE W/CAP
SEE 66' WIDE RIGHT OF WAY & EASEMENT TO IROQUOIS GAS CORPORATION L-1482, P-806
LPZ-15S
23' DEED
LPZ-03S
LPZ-04S
1018' DEED
LPZ-05S
LPZ-06S
LPZ-07S
GUY WIRE 10.4' NORTH
499.16' DEED
681.46' DEED
2418' DEED ADDITION = 2421.43' MEAS.
10" BUCKEYE BRINE PIPELINE
DUAL 12" BRINE PIPELINES
NORTH LINE NIAGARA FALLS POWER COMPANY (DEED)
SOUTH LINE LOT-22
NORTH LINE LOT-21
EAST LINE NIAGARA FALLS POWER COMPANY
EX. CONC. MON.
24" GAS PIPELINE 522.15' DEED
BRINE MARKER
GAS MARKER
BRINE MARKER
LDP-01
LDP-02R
LDP-03
SHED
REPUTED OWNER
IROQUOIS GAS CORPORATION
L-1496, P-986
REPUTED OWNER
NIAGARA MOHAWK POWER CORP.
SEE EASEMENT TO NATIONAL FUEL GAS DISTRIBUTION CORPORATION
FORBES TERRACE (60.0' WIDE)
SEE 30' WIDE EASEMENT TO TEXAS BRINE CORPORATION L-2072, P-269

LEGEND

- FRESHWATER FORESTED/ SHRUB WETLAND
- GRAVEL ROAD
- LIMITS OF 2014/2015 IRM EXCAVATION
- LANDFILL AREA OF INVESTIGATION
- MONITORING WELL AND PIEZOMETER LOCATIONS (NOT PART OF THE LONG-TERM MONITORING WELL NETWORK)
- 2017 HAND DRILLED 1-INCH ID PIEZOMETER LOCATION (NOT ANALYZED)
- GROUNDWATER SAMPLING LOCATIONS WITH ONE OR MORE COMPOUNDS REPORTED AT CONCENTRATIONS ABOVE APPLICABLE STANDARDS OR CRITERIA
- GROUNDWATER SAMPLING LOCATIONS WITH NO COMPOUNDS REPORTED AT CONCENTRATIONS ABOVE APPLICABLE STANDARDS OR CRITERIA

NOTE: ONLY EPA PRIORITY POLLUTANT METALS RESULTS EXCEEDING STANDARDS ARE REPORTED

80 0 80
SCALE IN FEET

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REVISIONS		

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

DATE: SEPTEMBER 2023
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
SHEET OF

DRAWING TITLE:
2021 GROUNDWATER SAMPLE EXCEEDANCE MAP
FULL/UPPER SAND WELLS

FIGURE NO. 3-3

J:\17-013-0289 NYSDEC Standby\CAD\Coll-Out 128321 - Niagara Sanitation\2021 GW Report\3-3 MW SAMPLE LOC.dwg 10/18/2023 3:19 PM

N

OW-35		05/19/14	08/30/17	10/24/19	11/03/21
VOCs	**NYSDEC AWQSGVs**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Benzene	1.0	3.8 J	4.9	4.4	2.4
Chlorobenzene	5.0	80	78	120	63

OW-36		5/19/2014	8/29/2017	10/24/2019	11/3/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***	***ug/L***
Benzene	1.0	3.1	4.0	ND	2.7
Chlorobenzene	5.0	19	16	ND	9.4
Ethylbenzene	5.0	200	28	24.0	3.7
Isopropylbenzene	5.0	13	9.6	ND	5.7
Xylene (Total)	5.0	1700	460	580	130
SVOCs					
4-Chloro-3-Methyphenol	1.6	7.5	ND	ND	ND
Biphenyl	5.0	17	39	ND	8.2
Bis[2-ethylhexyl]phthalate	5.0	5.4	4.2	ND	ND
Phenol	1*	2.8	4.6	ND	2.7

LPZ-12S		9/21/2017	10/25/2019	11/5/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***
Benzene	1.0	1.9	ND	ND

OW-14BR		8/28/2017	10/25/2019	11/1/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***
4-Methylphenol (P-Cresol)	1.0	4.4	ND	ND

OW-14B		2/17/1988	8/2/2013	10/23/2019	11/1/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***	***ug/L***
Bis[2-ethylhexyl]phthalate	5.0	720.0	ND	ND	ND

OW-13		8/2/2013	8/27/2017	2019	11/4/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***	***ug/L***
4-Methylphenol (P-Cresol)	1.0	3.2	NS	NS	63.0
Phenol	1.0	ND	ND	ND	3.0

LPZ-01S		8/29/2017	10/23/2019	11/1/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***
4-Methylphenol (P-Cresol)	1.0	15	ND	ND

LPZ-15S		11/8/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***
Chlorobenzene	5.0	6.5

OW-16		2/18/1988	8/2/2013	5/19/2014	8/30/2017	10/25/2019	11/4/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***	***ug/L***	***ug/L***	***ug/L***
1,4-Dichlorobenzene	3.0	ND	ND	3.4	4.4	ND	ND
Benzene	1.0	12	2.9	3.2	3.5	ND	ND
Chlorobenzene	5.0	25	15	16	18	3.8	7.8
Ethylbenzene	5.0	55	ND	ND	ND	ND	ND
Toluene	5.0	5.2	ND	ND	ND	ND	12
Xylene (Total)	5.0	30	ND	ND	ND	ND	ND
SVOCs							
4-Methylphenol (P-Cresol)	1.0	25	ND	ND	ND	ND	ND

LPZ-05S		8/21/2017	10/22/2019	11/2/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***
2-Methylphenol (O-Cresol)	1.0	1.2	ND	ND
4-Methylphenol (P-Cresol)	1.0	17	ND	ND
Phenol	1.0	2.3	ND	ND

LPZ-07S		8/21/2017	2019	11/2/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***
4-Methylphenol (P-Cresol)	1.0	4.6	NS	ND

LPZ-08S		8/29/2017	10/24/2019	11/2/2021
VOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***
Toluene	1.0	12	ND	ND
SVOCs		***ug/L***	***ug/L***	***ug/L***
2-Methylphenol (O-Cresol)	1.0	1.8	ND	ND
4-Methylphenol (P-Cresol)	1.0	13	ND	ND

OW-31		5/20/2014	8/22/2017	1/9/2020	11/2/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***	***ug/L***
Phenol	1.0	1.1	ND	ND	ND

OW-21		8/2/2013	8/28/2017	10/23/2019	10/29/2021
SVOCs	***NYSDEC AWQSGVs***	***ug/L***	***ug/L***	***ug/L***	***ug/L***
2-Methylphenol (O-Cresol)	1.0	ND	1.4	ND	ND
4-Methylphenol (P-Cresol)	1.0	ND	16.0	ND	ND
Phenol	1.0	2.5	1.0	ND	ND

LDP-04
LPZ-12S
OW-36
OW-35
OW-37
LPZ-11S
LPZ-01S
OW-14BR
OW-14B
OW-1
LPZ-09S
OW-33
LPZ-02S
OW-13
OW-21
OW-16
LPZ-08S
OW-22
OW-23
OW-32
OW-24
LPZ-13S
LPZ-10S
OW-31
OW-34
LPZ-14S
LPZ-15S
LPZ-03S
LPZ-04S
LPZ-05S
LPZ-06S
LPZ-07S
LDP-01
LDP-02R
LDP-03

SET IRON PIPE W/CAP
EX. ANGLE IRON 1.3' WEST
EX. ANGLE IRON 0.5' WEST
EX. ANGLE IRON 1.1' WEST
EX. ANGLE IRON
EX. REBAR 0.13' EAST
EX. REBAR 11.95' SOUTH 16.15' WEST
REPUTED OWNER
THE TOWN OF WHEATFIELD
L-1269, P-587
4' ROS = 66' DEED
24" GAS PIPELINE
GAS MARKER
SEE 66' WIDE RIGHT OF WAY & EASEMENT TO IROQUOIS GAS CORPORATION L-1482, P-806
23' DEED
1018' DEED
2418' DEED ADDITION = 2421.43' MEAS.
NORTH LINE NIAGARA FALLS POWER COMPANY (DEED)
10" BUCKEYE BRINE PIPELINE
DUAL 12" BRINE PIPELINES
SOUTH LINE LOT-22
NORTH LINE LOT-21
EAST LINE NIAGARA FALLS POWER COMPANY
EX. CONC. MON.
SEE EASEMENT TO NATIONAL FUEL GAS DISTRIBUTION CORPORATION
GUY WIRE 10.4' NORTH
499.16' DEED
SAT. DISH 0.4' NORTH
P.P. 1.1' SOUTH
BRINE MARKER
GAS MARKER
522.15' DEED
P.P. 2.4' SOUTH
FENCE 1.1' SOUTH
P.P. 1.1' SOUTH
FENCE 0.6' SOUTH
FENCE 0.1' SOUTH
P.P. 1.2' SOUTH
FENCE 0.7' NORTH
FENCE 0.1' SOUTH
P.P. NG 50R NYT 50R 0.8' SOUTH
SHED
FENCE 1.8' SOUTH
P.P. NG 62R NYT 62
REPUTED OWNER
IROQUOIS GAS CORPORATION
L-1496, P-986
FORBES TERRACE (60.0' WIDE)
SEE 30' WIDE EASEMENT TO TEXAS BRINE CORPORATION L-2072, P-269
REPUTED OWNER
NIAGARA MOHAWK POWER CORP.

LEGEND

- FRESHWATER FORESTED/ SHRUB WETLAND
- GRAVEL ROAD
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- NS NOT SAMPLED

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SCALE IN FEET

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NO.	DATE	DESCRIPTION
REVISIONS		

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

DATE: SEPTEMBER 2023
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
SHEET OF

DRAWING TITLE:
GROUNDWATER - UPPER SAND/FILL EXCEEDANCE MAP - VOCs AND SVOCs

FIGURE NO.
4-1

N

OW-35		5/19/2014	8/30/2017	10/24/2019	11/3/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	ND	0.0091	ND	ND
alpha-BHC	0.01	0.013	ND	ND	ND

OW-36		5/19/2014	8/29/2017	10/24/2019	11/3/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	ND	0.0088	ND	ND
alpha-BHC	0.01	0.022	ND	ND	ND
Delta-BHC	0.04	ND	ND	0.05	ND

LDP-04		8/25/2017	12/10/2019	11/5/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
alpha-BHC	0.01	0.038	ND	ND

LPZ-02S		8/29/2017	2019	11/1/2021
Pesticides	*NYSDEC AWQSGVs*	*ug/L*	*ug/L*	*ug/L*
alpha-BHC	0.01	0.012	NS	ND
Mirex	0.03	ND	NS	0.034

LPZ-37		5/20/2014	8/29/2017	10/25/2019	11/4/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Dieldrin	0.004	0.0094	ND	ND	ND
Endrin	ND	0.019	ND	ND	ND

OW-1		8/2/2013	8/28/2017	1/9/2020	10/29/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
gamma-BHC (Lindane)	0.05	0.095	ND	ND	ND

OW-21		8/2/2013	8/28/2017	10/23/2019	10/29/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
alpha-BHC	0.01	0.026	0.012	ND	ND

OW-13		8/2/2013	2019	11/4/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	0.018	NS	ND
alpha-BHC	0.01	0.019	NS	ND
gamma-Chlordane	0.05	0.072	NS	ND

OW-16		3/2/2013	5/19/2014	8/30/2017	10/25/2019	11/4/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	0.085	ND	ND	ND	ND
alpha-Chlordane	0.05	0.1	ND	ND	ND	ND
alpha-BHC	0.01	ND	ND	0.011	ND	ND
beta-BHC	0.04	0.084	ND	ND	ND	ND
delta-BHC	0.04	0.096	ND	ND	ND	ND
Dieldrin	0.004	0.089	ND	ND	ND	ND
gamma-BHC (Lindane)	0.05	0.058	ND	ND	ND	ND

OW-32		5/19/2014	8/30/2017	2019	2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	0.011	ND	NS	NS
delta-BHC	0.04	0.069	0.012	NS	NS
Dieldrin	0.004	0.027	ND	NS	NS
Endrin	ND	0.07	ND	NS	NS

OW-34		5/19/2014	8/22/2017	2019	11/3/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	0.033	ND	NS	ND

LPZ-06S		8/21/2017	10/23/2019	11/4/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	ND	0.0083	ND

LDP-01		8/24/2017	10/23/2019	11/3/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	0.019	ND	ND
alpha-BHC	0.01	0.054	ND	ND

LPZ-07S		8/21/2017	2019	11/2/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
alpha-BHC	0.01	0.021	NS	ND

LPZ-08S		8/29/2017	10/24/2019	11/2/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
beta-BHC	0.04	0.12	ND	ND

LDP-02/LDP-02R		8/24/2017	1/9/2020	2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	0.073	ND	NS
gamma-BHC (Lindane)	0.05	0.072	ND	NS

OW-22		8/2/2013	8/28/2017	2019	2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
alpha-BHC	0.01	0.033	ND	NS	NS

OW-31		5/20/2014	8/22/2017	1/9/2020	11/2/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Dieldrin	0.004	0.013	ND	ND	ND
Endrin	ND	0.015	ND	ND	ND

LDP-03		8/24/2017	2019	11/3/2021
Pesticides	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
Aldrin	ND	0.021	NA	ND

LDP-04 · OW-36 · OW-35 · LPZ-12S · OW-37 · LPZ-11S · LPZ-01S · OW-14BR · OW-1 · OW-14B · OW-21 · LPZ-09S · OW-33 · LPZ-02S · OW-13 · OW-22 · OW-16 · OW-32 · LPZ-08S · OW-23 · OW-24 · LPZ-13S · LPZ-10S · OW-34 · LPZ-14S · LPZ-04S · LPZ-03S · LPZ-05S · LPZ-06S · LPZ-15S · LPZ-07S · LDP-01 · LDP-02R · LDP-03 · OW-31

SET IRON PIPE W/CAP · EX. ANGLE IRON 1.3' WEST · EX. ANGLE IRON · EX. REBAR 0.13' EAST · EX. REBAR 11.95' SOUTH · SET IRON PIPE W/CAP

24" GAS PIPELINE · GAS MARKER · GAS MARKER · 4 RODS = 66' DEED · SEE 66' WIDE RIGHT-OF-WAY & EASEMENT TO IROQUOIS GAS CORPORATION L-1482, P-806

23' DEED · 1018' DEED · 2418' DEED ADDITION = 2421.43' MEAS. · 10" BUCKEYE BRINE PIPELINE · DUAL 12" BRINE PIPELINES · SOUTH LINE LOT-22 · NORTH LINE LOT-21 · PARALLEL WITH SOUTH LINE LOT-22 · NORTH LINE NIAGARA FALLS POWER COMPANY (DEED)

REPUTED OWNER NIAGARA MOHAWK POWER CORP.

GUY WIRE 10.4' NORTH · 492.16' DEED · SAT. DISH 0.4' NORTH · P.P. 1.1' SOUTH · BRINE MARKER · GAS MARKER · BRINE MARKER · 82.0' · 522.15' DEED · 24" GAS PIPELINE · EX. CONC. MON. · P.P. 2.4' SOUTH · FENCE 1.1' SOUTH · P.P. 1.1' SOUTH · FENCE 0.6' SOUTH · FENCE 0.1' SOUTH · P.P. 1.2' SOUTH · FENCE 0.7' NORTH · FENCE 0.1' SOUTH · P.P. NG 50R NYT 50R 0.8' SOUTH · SHED · FENCE 1.8' SOUTH · P.P. NG 62R NYT 62

REPUTED OWNER IROQUOIS GAS CORPORATION L-1496, P-986

FORBES TERRACE (60.0' WIDE)

SEE 30' WIDE EASEMENT TO TEXAS BRINE CORPORATION L-2072, P-269

LEGEND

- FRESHWATER FORESTED/ SHRUB WETLAND
- GRAVEL ROAD
- LIMITS OF 2014/2015 IRM EXCAVATION
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REVISIONS		

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:
DESIGNED BY:
CHECKED BY:
DRAWN BY:

CLIENT: NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

DATE: SEPTEMBER 2023
SCALE: AS SHOWN

JOB TITLE AND LOCATION:
NIAGARA SANITATION / NASH ROAD LANDFILL SITE
7415 NASH ROAD
TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK
NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
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DRAWING TITLE:
GROUNDWATER - UPPER SAND/FILL EXCEEDANCE MAP - PESTICIDES

FIGURE NO.
4-2

J:\17-013-0289 NYSDEC Standby\CAD\Coll-Out 128321 - Niagara Sanitation\2021 GW Report\4-2 Groundwater PCB.dwg 10/18/2023 3:19 PM

N

OW-36		5/19/2014	8/29/2017	10/24/2019	11/3/2021
Metals	*NYSDEC AWQSGVs*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Antimony	3.0	NA	ND	ND	27.0
Barium	1000	230	480	1000	480

LDP-04		8/25/2017	10/24/2019	11/5/2021
Metals	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
Lead	25	ND	52	3.0

OW-35		5/19/2014	8/30/2017	10/24/2019	11/3/2021
Metals	*NYSDEC AWQSGVs*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Arsenic	25	9.5	20	13	40.0 J
Barium	1000	540	1100	980	1100

OW-14B		2/17/1988	8/2/2013	10/23/2019	11/1/2021
Metals	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Lead	25	28.4	4	ND	3.2

OW-16		2/18/1988	8/2/2013	5/19/2014	8/30/2017	10/25/2019	11/4/2021
Metals	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Antimony	3	150	NA	NA	ND	ND	ND
Barium	1,000	740	250	220	230	1,200	260
Beryllium	3	4	NA	NA	ND	ND	ND
Chromium	50	90	3.5	1.3	1.5	2.7	ND
Lead	25	600	17	5.9	8.7	ND	7.3
Mercury	0.7	0.8	ND	ND	ND	ND	ND
Nickel	100	110	NA	NA	2.6	3.0	3.2

LPZ-03S		8/21/2017	10/22/2019	11/5/2021
Metals	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
Arsenic	25	55	47	7.2

LPZ-05S		8/21/2017	10/22/2019	11/2/2021
Metals	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*ug/L*
Arsenic	25	31	11	8.9

LPZ-07S		11/2/2021
Metals	*NYSDEC AWQSGVs*	*ug/L*
Cadmium	5.0	5.9

OW-13		1988	8/2/2013	2017	2019	11/4/2021
Metals	*NYSDEC AWQSGVs*	*ug/L*	*ug/L*	*ug/L*	*ug/L*	*ug/L*
Antimony	3.0	311.0	NA	NS	NS	ND
Arsenic	25	ND	12.0	NS	NS	39.0
Cadmium	5.0	7.0	0.6	NS	NS	1.2
Copper	200	2270	NA	NS	NS	13.0
Lead	25	81.6	22	NS	NS	15.0
Nickel	100	250	NA	NS	NS	12.0

OW-23		8/2/2013	8/28/2017	2019	2021
Metals	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*NS*	*ug/L*
Lead	25	30	ND	NS	NS

OW-22		8/2/2013	8/28/2017	2019	2021
Metals	NYSDEC AWQSGVs	*ug/L*	*ug/L*	*NS*	*ug/L*
Lead	25	39	ND	NS	NS

LEGEND

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- NS NOT SAMPLED
- NA NOT ANALYZED

NOTE: FIGURE DOES NOT INCLUDE RESULTS FOR PARAMETERS WITH GUIDANCES VALUES FOR PROTECTION FROM AESTHIC CONSIDERATION (I.E. IRON AND MANGANESE)

NOTE: FIGURE DOES NOT INCLUDE RESULTS FOR MAJOR CATIONS (I.E. MAGNESIUM AND SODIUM)

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NYSDEC SITE NUMBER 932054

LIRO JOB NO.: 17-013-0289
SHEET OF

DRAWING TITLE:
GROUNDWATER - UPPER SAND/FILL EXCEEDANCE MAP - METALS

FIGURE NO.
4-3

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TABLES

Table 3-1
Sampling Summary Key for the 2021 Sampling Event
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Investigation/ Report	Sample ID	Media	Depth Interval/ Aquifer	Sample Date	VOCs	SVOCs	Metals	Pesticides	PCBs
LiRo Engineers 2021 Sampling Event	LPZ-14S	Fill	2.0' - 5.0'	10/19/21	TCL	TCL	TAL	TCL	TCL
	LPZ-15S	Native Sand	5.0' - 7.0'	10/19/21	TCL	TCL	TAL	TCL	TCL
	OW-1	Groundwater	Upper Sand	10/29/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-13	Groundwater	Upper Sand	11/04/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-14B	Groundwater	Upper Sand	11/01/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-14BR	Groundwater	Upper Sand	11/01/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-16	Groundwater	Fill	11/04/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-21	Groundwater	Upper Sand	10/29/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-31	Groundwater	Upper Sand	11/02/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-34	Groundwater	Upper Sand	11/03/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-35	Groundwater	Upper Sand	11/03/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-36	Groundwater	Upper Sand	11/03/21	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-37	Groundwater	Upper Sand	11/04/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LDP-01	Groundwater	Upper Sand	11/03/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LDP-02R	Groundwater	Upper Sand	Not Sampled	Well Destroyed				
	LDP-03	Groundwater	Upper Sand	11/03/21	TCL	NS	NS	NS	NS
	LDP-04	Groundwater	Upper Sand	11/05/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-01S	Groundwater	Upper Sand	11/01/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-02S	Groundwater	Upper Sand	11/01/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-03S	Groundwater	Upper Sand	11/05/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-04S	Groundwater	Upper Sand	10/29/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-05S	Groundwater	Upper Sand	11/02/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-06S	Groundwater	Upper Sand	11/04/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-07S	Groundwater	Upper Sand	11/02/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-08S	Groundwater	Upper Sand	11/02/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-11S	Groundwater	Upper Sand	11/01/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-12S	Groundwater	Upper Sand	11/05/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-14S	Groundwater	Upper Sand	11/08/21	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-15S	Groundwater	Upper Sand	11/08/21	TCL	TCL	TAL	TCL + Mirex	TCL

Notes:

NA = Not Analyzed.
NS = Not Sampled due to insufficient water volume in the well.
TAL = Target Analyte List.
TCL = Target Compound List.
Yellow shaded wells were not sampled in 2019/2020. Wells LPZ-14S & LPZ-15S were installed in 2021.

Table 3-2
Summary of Soil/Fill Analytical Results from the 2021 Borings
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Sample Point Sample Type Depth (ft) Sample Date	NYSDEC Part 375 Unrestricted SCOs ●	NYSDEC Restricted Residential SCOs ●	NYSDEC Part 375 Commercial SCOs ●	Part 375 Groundwater Protection SCOs ●	LPZ-14S Fill (1) 2.0' - 5.0' 10/19/21	LPZ-15S Sand (2) 5.0' - 7.0' 10/19/21
Volatile Organic Compounds (µg/kg)						
1,1,1-Trichloroethane	680.0	100,000	500,000	680.0		
1,1,2-Trichloroethane	NS	NS	NS	NS		
1,1,2,2-Tetrachloroethane	NS	35,000 **	NS	600.0		
1,1-Dichloroethane	270.0	26,000	240,000	270.0		
1,1-Dichloroethene	330.0	100,000	500,000	330.0		
1,2-Dichloroethane	20.0	3,100	30,000	20.0		
cis-1,2-Dichloroethene	250.0	100,000	500,000	250.0		
trans-1,2-Dichloroethene	190.0	100,000	500,000	190.0		
1,4-Dichlorobenzene	1,800	13,000	130,000	1,800		0.85 JL
1,4-Dioxane	100.0	13,000	130,000	100.0		
2-Hexanone	NS	NS	NS	NS		
4-Methyl-2-Pentanone (MIBK)	NS	NS	NS	NS		
Acetone	50.0	100,000	500,000	50.0		13 JL
Benzene	60.0	4,800	44,000	60.0		
Carbon Disulfide	NS	100,000 **	NS	2,700		
Chlorobenzene	1,100	100,000	500,000	1,100		1.9 JL
Chloroethane	NS	NS	NS	NS		
Cyclohexane	NS	NS	NS	NS		
Ethylbenzene	1,000	41,000	390,000	1,000		
Isopropylbenzene	NS	100,000 **	NS	2,300		
Methyl Ethyl Ketone	120.0	100,000	500,000	120.0		
Methylcyclohexane	NS	NS	NS	NS		
Methylene Chloride	50.0	100,000	500,000	50.0		
n-Propylbenzene	3,900	100,000	500,000	3,900		
n-Butylbenzene	NS	NS	NS	NS		
p-Isopropyltoluene	NS	NS	NS	10,000		
sec-Butylbenzene	11,000	100,000	500,000	11,000		
Styrene	NS	NS	NS	NS		
Tetrachloroethene	1,300	19,000	150,000	1,300.0		
Toluene	700	100,000	500,000	700		
Trichloroethene	470.0	21,000	200,000	470.0		
1,2,4-Trimethylbenzene	3,600	52,000	190,000	3,600		
1,3,5-Trimethylbenzene	8,400	52,000	190,000	8,400		
Vinyl Chloride	20.0	900.0	13,000	20.0		
Xylene (Total)	260.0	100,000	500,000	1,600		
Semi-Volatile Organic Compounds (µg/kg)						
2-Chlorophenol	NS	100,000 **	NS	NS		
2-Methylnaphthalene (PAH)	NS	410 **	NS	36,400		
2-Methylphenol (O-Cresol)	330.0	100,000	500,000	330.0		
2,4-Dimethylphenol	NS	NS	NS	NS		
2,4-Dinitrotoluene	NS	NS	NS	NS		
4-Chloro-3-Methylphenol	NS	NS	NS	NS		
4-Chloroaniline	NS	100,000 **	NS	220.0		

Table 3-2
Summary of Soil/Fill Analytical Results from the 2021 Borings
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Sample Point Sample Type Depth (ft) Sample Date	NYSDEC Part 375 Unrestricted SCOs ●	NYSDEC Restricted Residential SCOs ●	NYSDEC Part 375 Commercial SCOs ●	Part 375 Groundwater Protection SCOs ●	LPZ-14S Fill (1) 2.0' - 5.0' 10/19/21	LPZ-15S Sand (2) 5.0' - 7.0' 10/19/21
Semi-Volatile Organic Compounds (continued)						
4-Methylphenol (P-Cresol)	330.0	100,000	500,000	330.0		
Acenaphthene (PAH)	20,000	100,000	500,000	98,000		
Acenapthylene (PAH)	100,000	100,000	500,000	107,000		
Anthracene (PAH)	100,000	100,000	500,000	1,000,000		
Benzaldehyde	NS	NS	NS	NS		
Benzo[a]anthracene (PAH)	1,000	1,000	5,600	1,000		
Benzo[a]pyrene (PAH)	1,000	1,000	1,000	22,000		
Benzo[b]fluoranthene (PAH)	1,000	1,000	5,600	1,700		
Benzo[g,h,i]perylene (PAH)	100,000	100,000	500,000	1,000,000		
Benzo[k]fluoranthene (PAH)	800.0	3,900	56,000	1,700		
Benzoic Acid	NS	100,000 **	NS	2,700		
Biphenyl	NS	NS	NS	NS		
Bis(2-ethylhexyl)phthalate	NS	50,000 **	NS	435,000	170.0	94.0
Butylbenzylphthalate	NS	100,000 **	NS	122,000	250.0	
Carbazole	NS	NS	NS	NS		
Chrysene (PAH)	1,000	3,900	56,000	1,000		
Dibenzo[a,h]anthracene (PAH)	330.0	330.0	560.0	1,000,000		
Dibenzofuran	7,000	59,000	350,000	210,000		
Diethylphthalate	NS	100,000 **	NS	7,100		
Di-n-butylphthalate	NS	NS	NS	NS		
Fluoranthene (PAH)	100,000	100,000	500,000	1,000,000		
Fluorene (PAH)	30,000	100,000	500,000	386,000		
Indeno[1,2,3-cd]pyrene (PAH)	500.0	500.0	5600.0	8,200		
Isophorone	NS	100,000 **	NS	4400.0		
Naphthalene (PAH)	12,000	100,000	500,000	12,000		
Nitrobenzene	NS	15,000	69,000	170.0		
N-Nitrosodiphenylamine	NS	NS	NS	NS		
N-Nitrosodi-n-Propylamine	NS	NS	NS	NS		
Phenanthrene (PAH)	100,000	100,000	500,000	1,000,000		
Phenol	330.0	100,000	500,000	330.0		
Pyrene (PAH)	100,000	100,000	500,000	1,000,000		
Pesticides & PCBs (µg/kg)						
Aldrin	5.0	97.0	680.0	190.0		
alpha-BHC	20.0	480.0	3,400	20.0		
alpha-Chlordane	94.0	4,200	24,000	2,900		
beta-BHC	36.0	360.0	3,000	90.0		
delta-BHC	40.0	100,000	500,000	250.0		
gamma-BHC (Lindane)	100.0	1,300	9,200	100.0		
gamma-Chlordane	NS	540 **	NS	14,000		
4,4'-DDD	3.3	13,000	92,000	14,000		
4,4'-DDE	3.3	8,900	62,000	17,000		
4,4'-DDT	3.3	7,900	47,000	136,000		
Dieldrin	5.0	200.0	1,400	100.0		

Table 3-2
Summary of Soil/Fill Analytical Results from the 2021 Borings
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Sample Point Sample Type Depth (ft) Sample Date	NYSDEC Part 375 Unrestricted SCOs ●	NYSDEC Restricted Residential SCOs ●	NYSDEC Part 375 Commercial SCOs ●	Part 375 Groundwater Protection SCOs ●	LPZ-14S Fill (1) 2.0' - 5.0' 10/19/21	LPZ-15S Sand (2) 5.0' - 7.0' 10/19/21
Pesticides & PCBs (continued)						
Endosulfan I	2,400	24,000	200,000	102,000		
Endosulfan II	2,400	24,000	200,000	102,000		
Endosulfan Sulfate	2,400	24,000	200,000	1,000,000		
Endrin	14.0	11,000	89,000	60.0		
Endrin Aldehyde	NS	NS	NS	NS	22.0	
Endrin Ketone	NS	NS	NS	NS	0.50 J	
Heptachlor	42.0	2,100	15,000	380.0		
Heptachlor Epoxide	NS	77 **	NS	20.0		
Methoxychlor	NS	100,000 **	NS	900,000		
PCBs (Total)	100.0	1,000	1,000	3,200		
Metals (mg/kg)						
Aluminum	NS	NS	NS	NS	15,100 JH	3,400 JH
Antimony ■	NS	NS	NS	NS	0.94 JH	
Arsenic ■	13.0	16.0	16.0	16.0	3.1 J	1.4 J
Barium	350.0	400.0	400.0	820.0	89.1 JH	18.6 JH
Beryllium ■	7.2	72.0	590.0	47.0	0.75 JH	0.19 JH
Cadmium ■	2.5	4.3	9.3	7.5	0.21 JH	0.25 JH
Calcium	NS	NS	NS	NS	17,500	35,100
Chromium ■	30.0	180.0	1,500	NS	17.6	6.4
Cobalt	NS	30 **	NS	NS	7.7	3.2
Copper ■	50.0	270.0	270.0	1,720	8.3	7.9
Iron	NS	2,000 **	NS	NS	**18,100 JH**	**7,180 JH**
Lead ■	63.0	400.0	1,000	450.0	10.5	6.3
Magnesium	NS	NS	NS	NS	5,670	15,800
Manganese	1,600	2,000	10,000	2,000	130 JH	158 JH
Mercury ■	0.18	0.81	2.8	0.73	0.017 J	0.012 J
Nickel	30.0	310.0	310.0	130.0	17.4 J	6.5 J
Potassium	NS	NS	NS	NS	1,220	767.0
Selenium ■	3.9	180.0	1,500	4.0		
Silver ■	2.0	180.0	1,500	8.3		
Sodium	NS	NS	NS	NS	164.0	158.0
Vanadium	NS	100 **	NS	NS	29.5	12.7
Zinc ■	109.0	10,000	10,000	2,480	43.6 JH	37.9 JH

Notes:

● = 6 NYCRR Part 375: Environmental Remediation Programs, Soil Cleanup Objectives, NYSDEC, 2006.

**** = Residential soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.**

µg/kg = micrograms per kilogram or parts per billion.

(1) = Silty sand with trash.

(2) = Fine sand with some silt.

J = Compound is positively identified and reported at an estimated concentration below the reporting limit.

JH = Compound is positively identified and reported at an estimated concentration that is probably high.

JL = Compound is positively identified and reported at an estimated concentration that is probably low.

NS = No standard given in 6 NYCRR Part 375 or Commissioner Policy CP-51.

Table 3-2
Summary of Soil/Fill Analytical Results from the 2021 Borings
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Notes (continued):

Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.

Blue shaded values exceed the 6 NYCRR Part 375 unrestricted soil cleanup objectives but not the restricted residential soil cleanup objectives.

Yellow shaded values exceed the 6 NYCRR Part 375 restricted residential soil cleanup objectives but not the commercial soil cleanup objectives.

Orange shaded values exceed the 6 NYCRR Part 375 commercial soil cleanup objectives.

Red shaded values exceed the CP-51 residential soil cleanup objectives.

Soil Cleanup Objectives (SCOs) were checked on April 4, 2022.

Concentrations were checked against the lab report on April 4, 2022.

This table was modified with the data validator's qualifiers on April 4, 2022.

Table 3-3A
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number	NYSDEC	OW-1	OW-13	OW-14B	OW-14BR	OW-16	OW-21	OW-31	OW-34	OW-35
Sample Date	Groundwater	10/29/21	11/04/21	11/01/21	11/01/21	11/04/21	10/29/21	11/02/21	11/03/21	11/03/21
Well Screen Interval (ft bgs)	Standard ●	4.0 - 9.0	3.0 - 5.0	3.0 - 7.0	5.0 - 7.0	5.0 - 10.0	3.0 - 8.0	1.0 - 6.0	7.0 - 12.0	4.0 - 9.0
Screened Unit		Sand/SC	Sand	Sand	Sand	Fill/SC	Sand/SC	Sand	Sand	Fill/Sand
Volatile Organic Compounds (ug/L)										
1,1,1-Trichloroethane	5.0		R							
1,4-Dichlorobenzene	3.0		"							
4-Methyl-2-Pentanone (MIBK)	NS		"							
Acetone	50 G		"							
Benzene	1.0		"							**2.4**
Carbon Disulfide	NS		"							
Chlorobenzene	5.0		"			**7.8**				**63.0**
Ethylbenzene	5.0		"							
2-Hexanone	50 G		"							
Isopropylbenzene	5.0		"							
Methyl Ethyl Ketone	50 G		"							
Methylene Chloride	5.0		"							
Toluene	5.0		"			**12.0**				
Xylene (Total)	5.0		"							
Semi-Volatile Organic Compounds (ug/L)										
2,4-Dimethylphenol	50 G									
2-Chlorophenol	1*									0.61 J
2-Methylnaphthalene	NS									
2-Methylphenol (O-Cresol)	1*									
4-Chloro-3-Methylphenol	1*									
4-Chloroaniline	5.0									
4-Methylphenol (P-Cresol)	1*		**63.0**							
Acetophenone	NS									
Anthracene (PAH)	50 G									
Benzaldehyde	NS									
Benzoic Acid	NS									
Biphenyl	5.0									
Bis[2-ethylhexyl]phthalate	5.0									
Diethylphthalate	50 G					0.37 J			0.32 J	0.30 J

Table 3-3A
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number	NYSDEC	OW-1	OW-13	OW-14B	OW-14BR	OW-16	OW-21	OW-31	OW-34	OW-35
Sample Date	Groundwater	10/29/21	11/04/21	11/01/21	11/01/21	11/04/21	10/29/21	11/02/21	11/03/21	11/03/21
Well Screen Interval (ft bgs)	Standard ●	4.0 - 9.0	3.0 - 5.0	3.0 - 7.0	5.0 - 7.0	5.0 - 10.0	3.0 - 8.0	1.0 - 6.0	7.0 - 12.0	4.0 - 9.0
Screened Unit		Sand/SC	Sand	Sand	Sand	Fill/SC	Sand/SC	Sand	Sand	Fill/Sand
Semi-Volatile Organic Compounds (continued)										
Di-n-butylphthalate	50.0									
Fluoranthene (PAH)	50 G									
Fluorene	50 G									
Isophorone	50 G									
Naphthalene (PAH)	10 G									
Nitrobenzene	0.4									
N-Nitrosodiphenylamine	50 G									
N-Nitrosodi-n-Propylamine	NS									
Phenanthrene (PAH)	50 G									
Phenol	1*		**3.0 J**							
Pyrene (PAH)	50 G									
Pesticides (ug/L)										
4,4'-DDD	0.3									
4,4'-DDE	0.2									
4,4'-DDT	0.2									
Aldrin	ND									
alpha-BHC	0.01									
alpha-Chlordane (cis-)	0.05									
beta-BHC	0.04									
delta-BHC	0.04									
Dieldrin	0.004									
Endosulfan I	NS									
Endosulfan II	NS	0.020 J					0.019 J			
Endosulfan Sulfate	NS									
Endrin	ND									
Endrin Aldehyde	5.0									
Endrin Ketone	5.0									
gamma-BHC (Lindane)	0.05									

Table 3-3A
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-1 10/29/21 4.0 - 9.0 Sand/SC	OW-13 11/04/21 3.0 - 5.0 Sand	OW-14B 11/01/21 3.0 - 7.0 Sand	OW-14BR 11/01/21 5.0 - 7.0 Sand	OW-16 11/04/21 5.0 - 10.0 Fill/SC	OW-21 10/29/21 3.0 - 8.0 Sand/SC	OW-31 11/02/21 1.0 - 6.0 Sand	OW-34 11/03/21 7.0 - 12.0 Sand	OW-35 11/03/21 4.0 - 9.0 Fill/Sand
Pesticides (continued)										
gamma-Chlordane (trans-)	0.05									
Heptachlor	0.04									
Heptachlor Epoxide	0.03									
Methoxychlor	35.0						0.016 JH			
Mirex	0.03						0.014 J			
Herbicides (ug/L)										
2,4,5-T	35.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	0.26	"	"	"	"	"	"	"	"	"
2,4-D	50.0	"	"	"	"	"	"	"	"	"
PCBs (ug/L)										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254										
Aroclor-1260										
Total PCBs	0.09									
Metals (ug/L)										
Aluminum	NS		120 J				270 JH	120 JH		430 JH
Antimony ■	3.0									
Arsenic ■	25.0		**39.0**						22.0 J	**40.0 J**
Barium	1,000	41.0	370.0	25.0	53.0	260.0	260.0	93.0	340.0	**1,100**
Beryllium ■	3 G									
Cadmium ■	5.0		1.2 JH			0.62 JH				0.55 J
Chromium ■	50.0		3.5 J				1.2 JH		1.1 J	2.0 J
Cobalt	NS	0.91 J	5.8	1.2 J	1.9 J	1.5 J	3.4 J		0.86 J	2.6 J
Copper ■	200.0		13.0	1.9 J		2.3 J				4.1 JH
Iron	300.0	**1,100 J**	**47,400**	**2,100**	260.0	**13,200**	**8,600 J**	230.0	**14,100**	**17,300**
Lead ■	25.0		15.0	3.2 J		7.3 J			3.1 J	7.5 J
Manganese	300.0	**490.0**	**2,400**	**1,100 JH**	**1,800 JH**	290.0	**920.0**	19.0	280.0	89.0
Mercury ■	0.7		0.067 J						0.067 J	0.083 J

Table 3-3A
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-1 10/29/21 4.0 - 9.0 Sand/SC	OW-13 11/04/21 3.0 - 5.0 Sand	OW-14B 11/01/21 3.0 - 7.0 Sand	OW-14BR 11/01/21 5.0 - 7.0 Sand	OW-16 11/04/21 5.0 - 10.0 Fill/SC	OW-21 10/29/21 3.0 - 8.0 Sand/SC	OW-31 11/02/21 1.0 - 6.0 Sand	OW-34 11/03/21 7.0 - 12.0 Sand	OW-35 11/03/21 4.0 - 9.0 Fill/Sand
Metals (continued)										
Nickel	100.0	2.0 J	12.0	1.8 J	3.1 J	3.2 J	5.3 J	3.1 J	1.9 J	7.0 J
Selenium ■	10.0									
Silver ■	50.0									
Vanadium	NS		4.0 J							3.5 J
Zinc ■	2,000 G		93.0 JH					4.2 J	4.5 J	11.0

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
R = Data validation recommends that this value be rejected.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on May 10, 2022 with the data validator's qualifiers.

Table 3-3B
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number	NYSDEC	OW-36	OW-37	LPZ-01S	LPZ-02S	LPZ-03S	LPZ-04S	LPZ-05S	LPZ-06S	LPZ-07S
Sample Date	Groundwater	11/03/21	11/04/21	11/01/21	11/01/21	11/05/21	10/29/21	11/02/21	11/04/21	11/02/21
Well Screen Interval (ft bgs)	Standard ●	3.0 - 8.0	1.0 - 6.0	5.0 - 7.0	3.0 - 6.0	3.0 - 8.0	3.0 - 6.0	3.0 - 6.0	3.0 - 8.0	3.0 - 7.0
Screened Unit		Fill/Sand	Fill/Sand	Sand/SC	Sand/SC	Sand/SC	Sand/SC	Sand/SC	Sand/SC	Sand/SC
Volatile Organic Compounds (ug/L)										
1,1,1-Trichloroethane	5.0									
1,4-Dichlorobenzene	3.0									
4-Methyl-2-Pentanone (MIBK)	NS									
Acetone	50 G									
Benzene	1.0	**2.7 J**								
Carbon Disulfide	NS									
Chlorobenzene	5.0	**9.4**								
Ethylbenzene	5.0	3.7 J								
2-Hexanone	50 G									
Isopropylbenzene	5.0	**5.7**								
Methyl Ethyl Ketone	50 G									
Methylene Chloride	5.0									
Toluene	5.0									
Xylene (Total)	5.0	**130.0**								
Semi-Volatile Organic Compounds (ug/L)										
2,4-Dimethylphenol	50 G	1.9 J								
2-Chlorophenol	1*									
2-Methylnaphthalene	NS	1.8 J								
2-Methylphenol (O-Cresol)	1*									
4-Chloro-3-Methylphenol	1*									
4-Chloroaniline	5.0									
4-Methylphenol (P-Cresol)	1*									
Acetophenone	NS									
Anthracene (PAH)	50 G									
Benzaldehyde	NS									
Benzoic Acid	NS									
Biphenyl	5.0	**8.2**								
Bis[2-ethylhexyl]phthalate	5.0									
Diethylphthalate	50 G	0.60 J				0.38 J		0.50 J		

Table 3-3B
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-36 11/03/21 3.0 - 8.0 Fill/Sand	OW-37 11/04/21 1.0 - 6.0 Fill/Sand	LPZ-01S 11/01/21 5.0 - 7.0 Sand/SC	LPZ-02S 11/01/21 3.0 - 6.0 Sand/SC	LPZ-03S 11/05/21 3.0 - 8.0 Sand/SC	LPZ-04S 10/29/21 3.0 - 6.0 Sand/SC	LPZ-05S 11/02/21 3.0 - 6.0 Sand/SC	LPZ-06S 11/04/21 3.0 - 8.0 Sand/SC	LPZ-07S 11/02/21 3.0 - 7.0 Sand/SC
Semi-Volatile Organic Compounds (continued)										
Di-n-butylphthalate	50.0	0.45 J								
Fluoranthene (PAH)	50 G									
Fluorene	50 G									
Isophorone	50 G									
Naphthalene (PAH)	10 G	7.7								
Nitrobenzene	0.4									
N-Nitrosodiphenylamine	50 G	1.1 J								
N-Nitrosodi-n-Propylamine	NS									
Phenanthrene (PAH)	50 G									
Phenol	1*	**2.7 J**								
Pyrene (PAH)	50 G									
Pesticides (ug/L)										
4,4'-DDD	0.3									
4,4'-DDE	0.2									
4,4'-DDT	0.2									
Aldrin	ND									
alpha-BHC	0.01									
alpha-Chlordane (cis-)	0.05									
beta-BHC	0.04									
delta-BHC	0.04									
Dieldrin	0.004									
Endosulfan I	NS									
Endosulfan II	NS									
Endosulfan Sulfate	NS				(0.020 J)					
Endrin	ND									
Endrin Aldehyde	5.0									
Endrin Ketone	5.0									
gamma-BHC (Lindane)	0.05									

Table 3-3B
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-36 11/03/21 3.0 - 8.0 Fill/Sand	OW-37 11/04/21 1.0 - 6.0 Fill/Sand	LPZ-01S 11/01/21 5.0 - 7.0 Sand/SC	LPZ-02S 11/01/21 3.0 - 6.0 Sand/SC	LPZ-03S 11/05/21 3.0 - 8.0 Sand/SC	LPZ-04S 10/29/21 3.0 - 6.0 Sand/SC	LPZ-05S 11/02/21 3.0 - 6.0 Sand/SC	LPZ-06S 11/04/21 3.0 - 8.0 Sand/SC	LPZ-07S 11/02/21 3.0 - 7.0 Sand/SC
Pesticides (continued)										
gamma-Chlordane (trans-)	0.05									
Heptachlor	0.04									
Heptachlor Epoxide	0.03									
Methoxychlor	35.0									
Mirex	0.03				**(0.034 J)**					
Herbicides (ug/L)										
2,4,5-T	35.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	0.26	"	"	"	"	"	"	"	"	"
2,4-D	50.0	"	"	"	"	"	"	"	"	"
PCBs (ug/L)										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254										
Aroclor-1260										
Total PCBs	0.09	**0.32 J**								
Metals (ug/L)										
Aluminum	NS	390 JH				160 J		73.0 JH		140 JH
Antimony ■	3.0	**27.0**								
Arsenic ■	25.0					7.2 J	9.9 J	8.9 J		6.2 J
Barium	1,000	480.0	180.0	38.0	17.0	110.0	45.0	200.0	41.0	19.0
Beryllium ■	3 G									
Cadmium ■	5.0		1.7 JH		(0.61 J)			0.62 J		**5.9**
Chromium ■	50.0	3.6 J								
Cobalt	NS	0.91 J	1.1 J	3.0 J	12.0 J	0.73 J	2.5 J	0.86 J		2.3 J
Copper ■	200.0	2.6 JH	6.4 J		4.5 J					47.0
Iron	300.0	**39,900**	**340.0**	**940.0**	**21,900**	**2,800**	**2,000 J**	**4,600**	55.0	**2,700**
Lead ■	25.0	7.9 J		3.1 J	(7.2 J)			4.4 J		13.0
Manganese	300.0	**340.0**	290.0	**860 JH**	**3,100 JH**	220.0	**1,200**	180.0	59.0	**650.0**
Mercury ■	0.7	0.083 J	0.050 J			0.050 J				

Table 3-3B
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-36 11/03/21 3.0 - 8.0 Fill/Sand	OW-37 11/04/21 1.0 - 6.0 Fill/Sand	LPZ-01S 11/01/21 5.0 - 7.0 Sand/SC	LPZ-02S 11/01/21 3.0 - 6.0 Sand/SC	LPZ-03S 11/05/21 3.0 - 8.0 Sand/SC	LPZ-04S 10/29/21 3.0 - 6.0 Sand/SC	LPZ-05S 11/02/21 3.0 - 6.0 Sand/SC	LPZ-06S 11/04/21 3.0 - 8.0 Sand/SC	LPZ-07S 11/02/21 3.0 - 7.0 Sand/SC
Metals (continued)										
Nickel	100.0	1.4 J	5.7 J	4.4 J	24.0		6.3 J	1.6 J		6.9 J
Selenium ■	10.0									
Silver ■	50.0									
Vanadium	NS									1.7 J
Zinc ■	2,000 G	12.0	78.0 JH					4.0 J		9.6 J

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
SC = Silty clay.
(0.065 J) = Result of a duplicate analysis. The higher of the 2 values is shown.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on May 10, 2022 with the data validator's qualifiers.

Table 3-3C
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-08S 11/02/21 2.5 - 4.0 Sand	LPZ-11S 11/01/21 4.0 - 7.0 Sand	LPZ-12S 11/05/21 4.0 - 7.0 Sand	LPZ-14S 11/08/21 4.0 - 9.0 Sand	LPZ-15S 11/08/21 3.0 - 8.0 Sand	LDP-01 11/03/21 4.3 - 5.3 Sand	LDP-02R ♦ 11/03/21 4.3 - 5.3 Sand/SC	LDP-03 11/03/21 4.1 - 5.1 Sand/SC	LDP-04 11/03/21 4.3 - 5.3 Sand
Volatile Organic Compounds (ug/L)										
1,1,1-Trichloroethane	5.0							NS*		
1,4-Dichlorobenzene	3.0							"		
4-Methyl-2-Pentanone (MIBK)	NS							"		
Acetone	50 G							"		
Benzene	1.0							"		
Carbon Disulfide	NS							"		
Chlorobenzene	5.0		1.2 J			**6.5**		"		
Ethylbenzene	5.0							"		
2-Hexanone	50 G							"		
Isopropylbenzene	5.0							"		
Methyl Ethyl Ketone	50 G							"		
Methylene Chloride	5.0							"		
Toluene	5.0							"		
Xylene (Total)	5.0							"		
Semi-Volatile Organic Compounds (ug/L)										
2,4-Dimethylphenol	50 G							NS*		
2-Chlorophenol	1*							"		
2-Methylnaphthalene	NS							"		
2-Methylphenol (O-Cresol)	1*							"		
4-Chloro-3-Methylphenol	1*							"		
4-Chloroaniline	5.0							"		
4-Methylphenol (P-Cresol)	1*							"		
Acetophenone	NS							"		
Acenaphthene	20.0					0.42 J				
Anthracene (PAH)	50 G							"		
Benzaldehyde	NS							"		
Benzoic Acid	NS							"		
Biphenyl	5.0							"		
Bis[2-ethylhexyl]phthalate	5.0							"		
Carbazole	NS					0.79 J		"		

Table 3-3C
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-08S 11/02/21 2.5 - 4.0 Sand	LPZ-11S 11/01/21 4.0 - 7.0 Sand	LPZ-12S 11/05/21 4.0 - 7.0 Sand	LPZ-14S 11/08/21 4.0 - 9.0 Sand	LPZ-15S 11/08/21 3.0 - 8.0 Sand	LDP-01 11/03/21 4.3 - 5.3 Sand	LDP-02R ♦ 11/03/21 4.3 - 5.3 Sand/SC	LDP-03 11/03/21 4.1 - 5.1 Sand/SC	LDP-04 11/03/21 4.3 - 5.3 Sand
Semi-Volatile Organic Compounds (continued)										
Diethylphthalate	50 G		0.62 J		1.2 J	0.23 J		NS*		
Di-n-butylphthalate	50.0							"		
Fluoranthene (PAH)	50 G							"		
Fluorene	50 G							"		
Isophorone	50 G							"		
Naphthalene (PAH)	10 G							"		
Nitrobenzene	0.4							"		
N-Nitrosodiphenylamine	50 G							"		
N-Nitrosodi-n-Propylamine	NS							"		
Phenanthrene (PAH)	50 G							"		
Phenol	1*							"		
Pyrene (PAH)	50 G							"		
Pesticides (ug/L)										
4,4'-DDD	0.3							NS*		
4,4'-DDE	0.2							"		
4,4'-DDT	0.2							"		
Aldrin	ND							"		
alpha-BHC	0.01							"		
alpha-Chlordane (cis-)	0.05							"		
beta-BHC	0.04	0.038 J						"		
delta-BHC	0.04							"		
Dieldrin	0.004							"		
Endosulfan I	NS							"		
Endosulfan II	NS			0.013 J				"		
Endosulfan Sulfate	NS							"		
Endrin	ND							"		
Endrin Aldehyde	5.0							"		
Endrin Ketone	5.0				0.031 J			"		
gamma-BHC (Lindane)	0.05							"		

Table 3-3C
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-08S 11/02/21 2.5 - 4.0 Sand	LPZ-11S 11/01/21 4.0 - 7.0 Sand	LPZ-12S 11/05/21 4.0 - 7.0 Sand	LPZ-14S 11/08/21 4.0 - 9.0 Sand	LPZ-15S 11/08/21 3.0 - 8.0 Sand	LDP-01 11/03/21 4.3 - 5.3 Sand	LDP-02R ♦ 11/03/21 4.3 - 5.3 Sand/SC	LDP-03 11/03/21 4.1 - 5.1 Sand/SC	LDP-04 11/03/21 4.3 - 5.3 Sand
Pesticides (continued)										
gamma-Chlordane (trans-)	0.05							NS*		
Heptachlor	0.04							"		
Heptachlor Epoxide	0.03							"		
Methoxychlor	35.0							"		
Mirex	0.03							"		
Herbicides (ug/L)										
2,4,5-T	35.0	NA	NA	NA	NA	NA	NA	NS*	NA	NA
Silvex (2,4,5-TP)	0.26	"	"	"	"	"	"	"	"	"
2,4-D	50.0	"	"	"	"	"	"	"	"	"
PCBs (ug/L)										
Aroclor-1242								NS*		
Aroclor-1248								"		
Aroclor-1254								"		
Aroclor-1260								"		
Total PCBs	0.09							"		
Metals (ug/L)										
Aluminum	NS	67 JH		140 J			210 JH	NS*	600 JH	1,400 JH
Antimony ■	3.0							"		
Arsenic ■	25.0			17.0 J				"		
Barium	1,000	95.0	110.0	180.0	370.0	350.0	39.0	"	43.0	86.0
Beryllium ■	3 G							"		
Cadmium ■	5.0	0.93 J	(0.76 J)	0.71 J				"		0.62 J
Chromium ■	50.0	9.6						"	1.1 J	2.2 J
Cobalt	NS	5.0 J	1.8 J		4.0	2.3 J		"		1.0 J
Copper ■	200.0	11.0 JH	1.8 J		2.0 J		1.9 JH	"	1.8 JH	5.1 JH
Iron	300.0	**33,500**	**870.0**	**3,900**	**12,600 JH**	**28,700 JH**	160.0	"	**650.0**	**2,300**
Lead ■	25.0	15.0 J		5.3 J				"		3.0 J
Manganese	300.0	**2,400**	**430 JH**	220.0	**450.0**	**440.0**	13.0	"	35.0	170.0
Mercury ■	0.7							"		0.050 J

Table 3-3C
Summary of 2021 Groundwater Analytical Results From Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-08S 11/02/21 2.5 - 4.0 Sand	LPZ-11S 11/01/21 4.0 - 7.0 Sand	LPZ-12S 11/05/21 4.0 - 7.0 Sand	LPZ-14S 11/08/21 4.0 - 9.0 Sand	LPZ-15S 11/08/21 3.0 - 8.0 Sand	LDP-01 11/03/21 4.3 - 5.3 Sand	LDP-02R ♦ 11/03/21 4.3 - 5.3 Sand/SC	LDP-03 11/03/21 4.1 - 5.1 Sand/SC	LDP-04 11/03/21 4.3 - 5.3 Sand
Metals (continued)										
Nickel	100.0	12.0	3.3 J		4.8 J	2.6 J		NS*		2.9 J
Selenium ■	10.0							"		
Silver ■	50.0							"		
Vanadium	NS	2.8 J		2.1 JH				"		1.8 J
Zinc ■	2,000 G	14.0		7.3 J	9.6 JH			"	7.0 J	28.0

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
♠ = Well was found to be damaged so it was replaced during the 2019/2020 sampling event.
♦ = Well was found damaged during the 2021 sampling event and was not replaced.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
NS* = Not sampled.
SC = Silty clay.
(0.065 J) = Result of a duplicate analysis. The higher of the 2 values is shown.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on May 10, 2022 with the data validator's qualifiers.

Table 4-1
Historic Groundwater and Surface Water Sampling Summary Key
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Investigation/ Report	Sample ID	Media	Depth Interval/ Aquifer	Sample Date	VOCs	SVOCs/ PAHs	Metals	Pesticides/ Herbicides	PCBs
Engineering Science & Dames and Moore July 1985 Phase II Report	OW-1	Groundwater	Upper Sand	07/02/84	Volatile/Base Organics & TOH	NA	NS	Pest/Herb	PCB
	SW-1	Surface Water	Surface	06/30/83	Volatile Organics & TOH	NA	NA	NA	NA
	SW-2	Surface Water	Surface	06/30/83	Volatile Organics & TOH	NA	NA	NA	NA
	SW-3	Surface Water	Surface	06/30/83	Volatile Organics & TOH	NA	NA	NA	NA
	SW-4	Surface Water	Surface	06/30/83	Volatile Organics & TOH	NA	NA	NA	NA
	SW-5	Surface Water	Surface	06/30/83	Volatile Organics & TOH	NA	NA	NA	NA
Supplemental ♦ Phase II Report	OW-14B	Groundwater	Upper Sand	02/17/88	HSL & TOH	HSL	HSL	NA	Dioxin
	OW-16	Groundwater	Fill	02/18/88	HSL & TOH	HSL	HSL	NA	Dioxin
GES November 2013 Site Characterization Report	OW-1	Groundwater	Upper Sand	08/02/13	TCL	TCL	RCRA 8	Pest/Herb	NA
	OW-14B	Groundwater	Upper Sand	08/02/13	TCL	TCL	RCRA 8	Pest/Herb	NA
	OW-16	Groundwater	Fill	08/02/13	TCL	TCL	RCRA 8	Pest/Herb	NA
	OW-21	Groundwater	Upper Sand	08/02/13	TCL	TCL	RCRA 8	Pest/Herb	NA
	SW-1	Surface Water	Surface	05/29/13	TCL	TCL	NA	Pest/Herb	NA
	SW-2	Surface Water	Surface	05/29/13	TCL	TCL	NA	Pest/Herb	NA
	SW-3	Surface Water	Surface	05/29/13	TCL	TCL	NA	Pest/Herb	NA
	SW-4	Surface Water	Surface	05/29/13	TCL	TCL	NA	Pest/Herb	NA
	SW-5	Surface Water	Surface	05/29/13	TCL	TCL	NA	Pest/Herb	NA
	SW-6	Surface Water	Surface	05/29/13	TCL	TCL	NA	Pest/Herb	NA
	SW-7	Surface Water	Surface	05/29/13	TCL	TCL	NA	Pest/Herb	NA
GES July 2014 Supplemental Site Characterization Report	OW-16	Groundwater	Fill	05/19/14	TCL	TCL	RCRA 8	Pest/Herb	NS
	OW-31	Groundwater	Upper Sand	05/20/14	TCL	TCL	RCRA 8	Pest/Herb	NS
	OW-35	Groundwater	Upper Sand	05/19/14	TCL	TCL	RCRA 8	Pest/Herb	NS
	OW-36	Groundwater	Upper Sand	05/19/14	TCL	TCL	RCRA 8	Pest/Herb	NS
	OW-37	Groundwater	Upper Sand	05/20/14	TCL	TCL	RCRA 8	Pest/Herb	NS
LiRo Engineers March 2017-November 2017 Remedial Investigation	OW-1	Groundwater	Upper Sand	08/28/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	OW-14BR	Groundwater	Upper Sand	08/28/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	OW-16	Groundwater	Fill	08/30/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	OW-21	Groundwater	Upper Sand	08/28/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	OW-31	Groundwater	Upper Sand	08/22/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	OW-35	Groundwater	Upper Sand	08/30/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	OW-36	Groundwater	Upper Sand	08/29/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	OW-37	Groundwater	Upper Sand	08/29/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LDP-01	Groundwater	Upper Sand	08/24/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LDP-02	Groundwater	Upper Sand	08/24/17	TCL	TCL	TAL	TCL Pest	TCL PCB

Table 4-1
Historic Groundwater and Surface Water Sampling Summary Key
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Investigation/ Report	Sample ID	Media	Depth Interval/ Aquifer	Sample Date	VOCs	SVOCs/ PAHs	Metals	Pesticides/ Herbicides	PCBs
LiRo Engineers March 2017-November 2017 Remedial Investigation (continued)	LDP-03	Groundwater	Upper Sand	08/24/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LDP-04	Groundwater	Upper Sand	08/25/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LPZ-01S	Groundwater	Upper Sand	08/29/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LPZ-03S	Groundwater	Upper Sand	08/21/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LPZ-04S	Groundwater	Upper Sand	08/21/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LPZ-05S	Groundwater	Upper Sand	08/21/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LPZ-06S	Groundwater	Upper Sand	08/21/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LPZ-08S	Groundwater	Upper Sand	08/29/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LPZ-11S	Groundwater	Upper Sand	09/21/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LPZ-12S	Groundwater	Upper Sand	09/21/17	TCL	TCL	TAL	TCL Pest	TCL PCB
	LSW-1	Surface Water	Surface	03/28/17	NA	TCL	TAL	Pest/Herb	TCL PCB
	LSW-2	Surface Water	Surface	03/28/17	NA	TCL	TAL	Pest/Herb	TCL PCB
	LSW-3	Surface Water	Surface	03/29/17	NA	TCL	TAL	Pest/Herb	TCL PCB
	LSW-4	Surface Water	Surface	03/28/17	NA	TCL	TAL	Pest/Herb	TCL PCB
LiRo Engineers 2019 Sampling Event	OW-1	Groundwater	Upper Sand	01/09/20	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-14B	Groundwater	Upper Sand	10/23/19	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-14BR	Groundwater	Upper Sand	10/25/19	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-16	Groundwater	Fill	10/24 & 25/2019	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-21	Groundwater	Upper Sand	10/23 & 24/2019	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-31	Groundwater	Upper Sand	01/09/20	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-35	Groundwater	Upper Sand	10/24/19	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-36	Groundwater	Upper Sand	10/24/19	TCL	TCL	TAL	TCL + Mirex	TCL
	OW-37	Groundwater	Upper Sand	10/25/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LDP-01	Groundwater	Upper Sand	10/23/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LDP-02R	Groundwater	Upper Sand	01/09/20	TCL	TCL	TAL	TCL + Mirex	TCL
	LDP-03	Groundwater	Upper Sand	10/24/19	TCL	NS	NS	NS	NS
	LDP-04	Groundwater	Upper Sand	12/10/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-01S	Groundwater	Upper Sand	10/23/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-03S	Groundwater	Upper Sand	10/22/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-04S	Groundwater	Upper Sand	10/22/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-05S	Groundwater	Upper Sand	10/22/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-06S	Groundwater	Upper Sand	10/23/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-08S	Groundwater	Upper Sand	10/24/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-11S	Groundwater	Upper Sand	10/24/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LPZ-12S	Groundwater	Upper Sand	10/25/19	TCL	TCL	TAL	TCL + Mirex	TCL

Table 4-1
Historic Groundwater and Surface Water Sampling Summary Key
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Investigation/ Report	Sample ID	Media	Depth Interval/ Aquifer	Sample Date	VOCs	SVOCs/ PAHs	Metals	Pesticides/ Herbicides	PCBs
LiRo Engineers 2019 Sampling Event (continued)	SG-1	Surface Water	Surface	12/10/19	TCL	TCL	TAL	TCL + Mirex	TCL
	SW-2	Surface Water	Surface	12/10/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LSW-2	Surface Water	Surface	12/10/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LSW-3	Surface Water	Surface	12/10/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LSW-5	Surface Water	Surface	12/10/19	TCL	TCL	TAL	TCL + Mirex	TCL
	LSW-6	Surface Water	Surface	12/10/19	TCL	TCL	TAL	TCL + Mirex	TCL

Notes:

♦ = Engineering Science September 1989 Supplemental Phase II Report.
HSL = Hazardous Substance List.
NA = Not Analyzed.
NS = Not Sampled.
RCRA = Resource Conservation and Recovery Act.
TAL = Target Analyte List.
TCL = Target Compound List.
TOH = Total Organic Halogens.

Table 4-2A

Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells

Niagara Sanitation Site, Site No. 932054

Wheatfield, New York

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-1 07/02/84 4.0 - 9.0 Sand/SC	OW-1 08/02/13 4.0 - 9.0 Sand/SC	OW-1 08/28/17 4.0 - 9.0 Sand/SC	OW-1 01/09/20 4.0 - 9.0 Sand/SC	OW-1 10/29/21 4.0 - 9.0 Sand/SC		
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS	NA						
Acetone	50 G	NA						
Benzene	1.0							
Carbon Disulfide	NS	NA						
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G	NA						
Isopropylbenzene	5.0	NA						
Methyl Ethyl Ketone	50 G	NA			3.1 J			
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0	NA						
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G	NA						
2-Chlorophenol	1*	NA						
2-Methylnaphthalene	NS	NA						
2-Methylphenol (O-Cresol)	1*	NA						
4-Chloro-3-Methylphenol	1*	NA						
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*	NA						
Acetophenone	NS	NA						
Anthracene (PAH)	50 G							
Benzaldehyde	NS	NA	4.8 J					
Benzoic Acid	NS	NA	NA	NA				
Biphenyl	5.0	NA						
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G							

Table 4-2A
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-1 07/02/84 4.0 - 9.0 Sand/SC	OW-1 08/02/13 4.0 - 9.0 Sand/SC	OW-1 08/28/17 4.0 - 9.0 Sand/SC	OW-1 01/09/20 4.0 - 9.0 Sand/SC	OW-1 10/29/21 4.0 - 9.0 Sand/SC		
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*	NA						
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	NA			0.077 J			
4,4'-DDE	0.2	"						
4,4'-DDT	0.2	"						
Aldrin	ND	"						
alpha-BHC	0.01	"						
alpha-Chlordane (cis-)	0.05	"						
beta-BHC	0.04	"						
delta-BHC	0.04	"						
Dieldrin	0.004	"						
Endosulfan I	NS	"						
Endosulfan II	NS	"				0.020 J		
Endosulfan Sulfate	NS	"						
Endrin	ND	"						
Endrin Aldehyde	5.0	"						
Endrin Ketone	5.0	"						
gamma-BHC (Lindane)	0.05	"	**0.095 JH**					

Table 4-2A
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-1 07/02/84 4.0 - 9.0 Sand/SC	OW-1 08/02/13 4.0 - 9.0 Sand/SC	OW-1 08/28/17 4.0 - 9.0 Sand/SC	OW-1 01/09/20 4.0 - 9.0 Sand/SC	OW-1 10/29/21 4.0 - 9.0 Sand/SC		
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	NA						
Heptachlor	0.04	"						
Heptachlor Epoxide	0.03	"						
Methoxychlor	35.0	"						
Mirex	0.03	"	NA	NA				
Herbicides (ug/L)								
2,4,5-T	35.0	NA		NA	NA	NA		
Silvex (2,4,5-TP)	0.26	"		"	"	"		
2,4-D	50.0	"		"	"	"		
PCBs (ug/L)								
Aroclor-1242		NA	NA					
Aroclor-1248		"	"					
Aroclor-1254		"	"					
Aroclor-1260		"	"					
Total PCBs	0.09	"	"					
Metals (ug/L)								
Aluminum	NS	NA	NA					
Antimony ■	3.0	"	NA					
Arsenic ■	25.0	"	5.9 J					
Barium	1,000	"	65.0	31.0	31.0	41.0		
Beryllium ■	3 G	"	NA					
Cadmium ■	5.0	"	1.1		0.59 J			
Chromium ■	50.0	"	5.9					
Cobalt	NS	"	NA	2.3 J	1.5 J	0.91 J		
Copper ■	200.0	"	NA		2.6 J			
Iron	300.0	"	NA	**2,900 J**	**3,200 J**	**1,100 J**		
Lead ■	25.0	"						
Manganese	300.0	"	NA	**1,600 JH**	**1,100**	**490.0**		
Mercury ■	0.7	"						

Table 4-2A
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-1 07/02/84 4.0 - 9.0 Sand/SC	OW-1 08/02/13 4.0 - 9.0 Sand/SC	OW-1 08/28/17 4.0 - 9.0 Sand/SC	OW-1 01/09/20 4.0 - 9.0 Sand/SC	OW-1 10/29/21 4.0 - 9.0 Sand/SC		
Metals (continued)								
Nickel	100.0	NA	NA	5.6 J	4.7 J	2.0 J		
Selenium ■	10.0	"						
Silver ■	50.0	"						
Vanadium	NS	"	NA					
Zinc ■	2,000 G	"	NA	2.0 J	2.7 J			

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 1984 & 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2020 results.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2013 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2B
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-13 08/02/13 3.0 - 5.0 Sand	OW-13 08/22/17 3.0 - 5.0 Sand	OW-13 10/24/19 3.0 - 5.0 Sand	OW-13 11/04/21 3.0 - 5.0 Sand			
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0		NS*	NS*	R			
1,4-Dichlorobenzene	3.0		"	"	"			
4-Methyl-2-Pentanone (MIBK)	NS		"	"	"			
Acetone	50 G		"	"	"			
Benzene	1.0		"	"	"			
Carbon Disulfide	NS		"	"	"			
Chlorobenzene	5.0		"	"	"			
Ethylbenzene	5.0		"	"	"			
2-Hexanone	50 G		"	"	"			
Isopropylbenzene	5.0		"	"	"			
Methyl Ethyl Ketone	50 G		"	"	"			
Methylene Chloride	5.0		"	"	"			
Toluene	5.0		"	"	"			
Xylene (Total)	5.0		"	"	"			
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G		NS*	NS*				
2-Chlorophenol	1*		"	"				
2-Methylnaphthalene	NS		"	"				
2-Methylphenol (O-Cresol)	1*		"	"				
4-Chloro-3-Methylphenol	1*		"	"				
4-Chloroaniline	5.0		"	"				
4-Methylphenol (P-Cresol)	1*	**3.2 J**	"	"	**63.0**			
Acetophenone	NS		"	"				
Anthracene (PAH)	50 G	0.82 J	"	"				
Benzaldehyde	NS	4.8 J	"	"				
Benzoic Acid	NS	NA	"	"				
Biphenyl	5.0		"	"				
Bis[2-ethylhexyl]phthalate	5.0		"	"				
Diethylphthalate	50 G		"	"				

Table 4-2B
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-13 08/02/13 3.0 - 5.0 Sand	OW-13 08/22/17 3.0 - 5.0 Sand	OW-13 10/24/19 3.0 - 5.0 Sand	OW-13 11/04/21 3.0 - 5.0 Sand			
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0		NS*	NS*				
Fluoranthene (PAH)	50 G		"	"				
Fluorene	50 G		"	"				
Isophorone	50 G		"	"				
Naphthalene (PAH)	10 G		"	"				
Nitrobenzene	0.4		"	"				
N-Nitrosodiphenylamine	50 G		"	"				
N-Nitrosodi-n-Propylamine	NS		"	"				
Phenanthrene (PAH)	50 G		"	"				
Phenol	1*		"	"	**3.0 J**			
Pyrene (PAH)	50 G	0.36 J	"	"				
Pesticides (ug/L)								
4,4'-DDD	0.3		NS*	NS*				
4,4'-DDE	0.2		"	"				
4,4'-DDT	0.2	0.039 J	"	"				
Aldrin	ND	**0.018 J**	"	"				
alpha-BHC	0.01	**0.019 J**	"	"				
alpha-Chlordane (cis-)	0.05		"	"				
beta-BHC	0.04		"	"				
delta-BHC	0.04		"	"				
Dieldrin	0.004		"	"				
Endosulfan I	NS		"	"				
Endosulfan II	NS		"	"				
Endosulfan Sulfate	NS		"	"				
Endrin	ND		"	"				
Endrin Aldehyde	5.0	0.038 J	"	"				
Endrin Ketone	5.0	0.019 J	"	"				
gamma-BHC (Lindane)	0.05	0.010 J	"	"				

Table 4-2B
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-13 08/02/13 3.0 - 5.0 Sand	OW-13 08/22/17 3.0 - 5.0 Sand	OW-13 10/24/19 3.0 - 5.0 Sand	OW-13 11/04/21 3.0 - 5.0 Sand			
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	**0.072 J**	NS*	NS*				
Heptachlor	0.04		"	"				
Heptachlor Epoxide	0.03		"	"				
Methoxychlor	35.0	0.050 J	"	"				
Mirex	0.03	NA	"	"				
Herbicides (ug/L)								
2,4,5-T	35.0		NS*	NS*	NA			
Silvex (2,4,5-TP)	0.26		"	"	"			
2,4-D	50.0		"	"	"			
PCBs (ug/L)								
Aroclor-1242		NA	NS*	NS*				
Aroclor-1248		"	"	"				
Aroclor-1254		"	"	"				
Aroclor-1260		"	"	"				
Total PCBs	0.09	"	"	"				
Metals (ug/L)								
Aluminum	NS	NA	NS*	NS*	120 J			
Antimony ■	3.0	NA	"	"				
Arsenic ■	25.0	12.0	"	"	**39.0**			
Barium	1,000	44.0	"	"	370.0			
Beryllium ■	3 G	NA	"	"				
Cadmium ■	5.0	0.57 J	"	"	1.2 JH			
Chromium ■	50.0	9.4	"	"	3.5 J			
Cobalt	NS	NA	"	"	5.8			
Copper ■	200.0	NA	"	"	13.0			
Iron	300.0	NA	"	"	**47,400**			
Lead ■	25.0	22.0	"	"	15.0			
Manganese	300.0	NA	"	"	**2,400**			
Mercury ■	0.7		"	"	0.067 J			

Table 4-2B
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-13 08/02/13 3.0 - 5.0 Sand	OW-13 08/22/17 3.0 - 5.0 Sand	OW-13 10/24/19 3.0 - 5.0 Sand	OW-13 11/04/21 3.0 - 5.0 Sand			
Metals (continued)								
Nickel	100.0	NA	NS*	NS*	12.0			
Selenium ■	10.0		"	"				
Silver ■	50.0		"	"				
Vanadium	NS	NA	"	"	4.0 J			
Zinc ■	2,000 G	NA	"	"	93.0 JH			

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
NS* = Not sampled.
R = Data validation recommends that this value be rejected.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2013 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2C
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-14B 02/17/88 3.0 - 7.0 Sand	OW-14B 08/02/13 3.0 - 7.0 Sand	OW-14B 10/23/19 3.0 - 7.0 Sand	OW-14B 11/01/21 3.0 - 7.0 Sand			
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G							
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0	NA						
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0	R						
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS	NA						
Anthracene (PAH)	50 G							
Benzaldehyde	NS	NA						
Benzoic Acid	NS		NA					
Biphenyl	5.0	NA						
Bis[2-ethylhexyl]phthalate	5.0	**720 BX**						
Diethylphthalate	50 G							

Table 4-2C
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-14B 02/17/88 3.0 - 7.0 Sand	OW-14B 08/02/13 3.0 - 7.0 Sand	OW-14B 10/23/19 3.0 - 7.0 Sand	OW-14B 11/01/21 3.0 - 7.0 Sand			
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	NA						
4,4'-DDE	0.2	"						
4,4'-DDT	0.2	"		0.019 JH				
Aldrin	ND	"						
alpha-BHC	0.01	"	0.0075 J					
alpha-Chlordane (cis-)	0.05	"						
beta-BHC	0.04	"						
delta-BHC	0.04	"						
Dieldrin	0.004	"						
Endosulfan I	NS	"						
Endosulfan II	NS	"						
Endosulfan Sulfate	NS	"						
Endrin	ND	"						
Endrin Aldehyde	5.0	"						
Endrin Ketone	5.0	"						
gamma-BHC (Lindane)	0.05	"						

Table 4-2C
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-14B 02/17/88 3.0 - 7.0 Sand	OW-14B 08/02/13 3.0 - 7.0 Sand	OW-14B 10/23/19 3.0 - 7.0 Sand	OW-14B 11/01/21 3.0 - 7.0 Sand			
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	NA						
Heptachlor	0.04	"						
Heptachlor Epoxide	0.03	"						
Methoxychlor	35.0	"						
Mirex	0.03	"	NA					
Herbicides (ug/L)								
2,4,5-T	35.0	NA		NA	NA			
Silvex (2,4,5-TP)	0.26	"		"	"			
2,4-D	50.0	"		"	"			
PCBs (ug/L)								
Aroclor-1242		NA	NA					
Aroclor-1248		"	"					
Aroclor-1254		"	"					
Aroclor-1260		"	"					
Total PCBs	0.09	"	"					
Metals (ug/L)								
Aluminum	NS	4,900 X	NA					
Antimony ■	3.0		NA					
Arsenic ■	25.0	6.3	5.9 J					
Barium	1,000	76.0	70.0	21.0	25.0			
Beryllium ■	3 G		NA					
Cadmium ■	5.0							
Chromium ■	50.0		8.3					
Cobalt	NS		NA	1.3 J	1.2 J			
Copper ■	200.0	24.0 X	NA		1.9 J			
Iron	300.0	**9,800 X**	NA	**3,200 JH**	**2,100**			
Lead ■	25.0	**28.4**	4.0 J		3.2 J			
Manganese	300.0	**1,200 X**	NA	**1,600 JH**	**1,100 JH**			
Mercury ■	0.7							

Table 4-2C
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-14B 02/17/88 3.0 - 7.0 Sand	OW-14B 08/02/13 3.0 - 7.0 Sand	OW-14B 10/23/19 3.0 - 7.0 Sand	OW-14B 11/01/21 3.0 - 7.0 Sand			
Metals (continued)								
Nickel	100.0		NA	4.5 J	1.8 J			
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS		NA					
Zinc ■	2,000 G	140.0 X	NA					

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
R = Data validation recommends that this value be rejected.
X = Data validation recommends that this value be considered an estimate.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 1988 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2013 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2D
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-14BR 08/28/17 5.0 - 7.0 Sand	OW-14BR 10/25/19 5.0 - 7.0 Sand	OW-14BR 11/01/21 5.0 - 7.0 Sand				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	5.6 J						
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*	**4.4 J**						
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G							

Table 4-2D
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-14BR 08/28/17 5.0 - 7.0 Sand	OW-14BR 10/25/19 5.0 - 7.0 Sand	OW-14BR 11/01/21 5.0 - 7.0 Sand				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3							
4,4'-DDE	0.2							
4,4'-DDT	0.2		0.012 J					
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-2D
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-14BR 08/28/17 5.0 - 7.0 Sand	OW-14BR 10/25/19 5.0 - 7.0 Sand	OW-14BR 11/01/21 5.0 - 7.0 Sand				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05							
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS							
Antimony ■	3.0							
Arsenic ■	25.0							
Barium	1,000	57.0	68.0	53.0				
Beryllium ■	3 G							
Cadmium ■	5.0							
Chromium ■	50.0							
Cobalt	NS	2.6 J	1.6 J	1.9 J				
Copper ■	200.0							
Iron	300.0	**770 J**	**630.0**	260.0				
Lead ■	25.0		4.9 JH					
Manganese	300.0	**1,600 JH**	**1,100**	**1,800 JH**				
Mercury ■	0.7							

Table 4-2D
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-14BR 08/28/17 5.0 - 7.0 Sand	OW-14BR 10/25/19 5.0 - 7.0 Sand	OW-14BR 11/01/21 5.0 - 7.0 Sand				
Metals (continued)								
Nickel	100.0	4.0 J	3.7 J	3.1 J				
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS							
Zinc ■	2,000 G	2.9 J						

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2E
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-16 02/18/88 5.0 - 10.0 Fill/SC	OW-16 08/02/13 5.0 - 10.0 Fill/SC	OW-16 05/19/14 5.0 - 10.0 Fill/SC	OW-16 08/30/17 5.0 - 10.0 Fill/SC	OW-16 10/25/19 5.0 - 10.0 Fill/SC	OW-16 11/04/21 5.0 - 10.0 Fill/SC	
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0	R						
1,4-Dichlorobenzene	3.0			**3.4 J**	**4.4**			
4-Methyl-2-Pentanone (MIBK)	NS	R						
Acetone	50 G	24.0						
Benzene	1.0	**12.0**	**2.9 J**	**3.2 J**	**3.5 J**			
Carbon Disulfide	NS							
Chlorobenzene	5.0	**25.0**	**15.0**	**16.0**	**18.0**	3.8 J	**7.8**	
Ethylbenzene	5.0	**55.0**						
2-Hexanone	50 G							
Isopropylbenzene	5.0	NA						
Methyl Ethyl Ketone	50 G	9.8 JX						
Methylene Chloride	5.0	R						
Toluene	5.0	**5.2**					**12.0**	
Xylene (Total)	5.0	**30.0**						
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G	19.0						
2-Chlorophenol	1*							
2-Methylnaphthalene	NS			0.92 J				
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*	**25.0**						
Acetophenone	NS	NA	1.5 J	1.5 J		0.63 J		
Anthracene (PAH)	50 G							
Benzaldehyde	NS	NA	4.6 J					
Benzoic Acid	NS	26.0 J	NA	NA	NA			
Biphenyl	5.0	NA						
Bis[2-ethylhexyl]phthalate	5.0	R		3.6 J				
Diethylphthalate	50 G		0.49 J				0.37 J	

Table 4-2E
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-16 02/18/88 5.0 - 10.0 Fill/SC	OW-16 08/02/13 5.0 - 10.0 Fill/SC	OW-16 05/19/14 5.0 - 10.0 Fill/SC	OW-16 08/30/17 5.0 - 10.0 Fill/SC	OW-16 10/25/19 5.0 - 10.0 Fill/SC	OW-16 11/04/21 5.0 - 10.0 Fill/SC	
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G		0.43 J					
Naphthalene (PAH)	10 G	8.3 J		0.82 J				
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G			0.45 J				
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	NA	0.087 J					
4,4'-DDE	0.2	"						
4,4'-DDT	0.2	"	0.16 J					
Aldrin	ND	"	**0.085 J**					
alpha-BHC	0.01	"			**0.011 J**			
alpha-Chlordane (cis-)	0.05	"	**0.10 J**					
beta-BHC	0.04	"	**0.084 J**					
delta-BHC	0.04	"	**0.096 J**					
Dieldrin	0.004	"	**0.089 J**					
Endosulfan I	NS	"	0.10 J					
Endosulfan II	NS	"	0.18 J					
Endosulfan Sulfate	NS	"	0.050 J					
Endrin	ND	"						
Endrin Aldehyde	5.0	"	0.13 J					
Endrin Ketone	5.0	"						
gamma-BHC (Lindane)	0.05	"	**0.058 J**					

Table 4-2E
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-16 02/18/88 5.0 - 10.0 Fill/SC	OW-16 08/02/13 5.0 - 10.0 Fill/SC	OW-16 05/19/14 5.0 - 10.0 Fill/SC	OW-16 08/30/17 5.0 - 10.0 Fill/SC	OW-16 10/25/19 5.0 - 10.0 Fill/SC	OW-16 11/04/21 5.0 - 10.0 Fill/SC	
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	NA	0.011 JH					
Heptachlor	0.04	"						
Heptachlor Epoxide	0.03	"						
Methoxychlor	35.0	"	0.027 J					
Mirex	0.03	"	NA	NA	NA			
Herbicides (ug/L)								
2,4,5-T	35.0	NA			NA	NA	NA	
Silvex (2,4,5-TP)	0.26	"			"	"	"	
2,4-D	50.0	"			"	"	"	
PCBs (ug/L)								
Aroclor-1242		NA	NA	NA				
Aroclor-1248		"	"	"				
Aroclor-1254		"	"	"				
Aroclor-1260		"	"	"				
Total PCBs	0.09	"	"	"				
Metals (ug/L)								
Aluminum	NS	37,300 X	NA	NA				
Antimony ■	3.0	**150.0**	NA	NA				
Arsenic ■	25.0	11.4						
Barium	1,000	740.0	250.0	220 JH	230 JH	**1,200 JH**	260.0	
Beryllium ■	3 G	**4.0**	NA	NA				
Cadmium ■	5.0					0.65 J	0.62 JH	
Chromium ■	50.0	**90.0**	3.5 J	1.3 JH	1.5 JH	2.7 JH		
Cobalt	NS	50.0	NA	NA	3.0 J	1.9 J	1.5 J	
Copper ■	200.0	160.0 X	NA	NA	1.9 J		2.3 J	
Iron	300.0	**131,000 X**	NA	NA	**14,800 J**	**9,700**	**13,200**	
Lead ■	25.0	**600.0**	17.0	5.9 J	8.7 J		7.3 J	
Manganese	300.0	**1,600 X**	NA	NA	180 JH	220.0	290.0	
Mercury ■	0.7	**0.8**						

Table 4-2E
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-16 02/18/88 5.0 - 10.0 Fill/SC	OW-16 08/02/13 5.0 - 10.0 Fill/SC	OW-16 05/19/14 5.0 - 10.0 Fill/SC	OW-16 08/30/17 5.0 - 10.0 Fill/SC	OW-16 10/25/19 5.0 - 10.0 Fill/SC	OW-16 11/04/21 5.0 - 10.0 Fill/SC	
Metals (continued)								
Nickel	100.0	**110.0**	NA	NA	2.6 J	3.0 J	3.2 J	
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	66.0	NA	NA		2.2 J		
Zinc ■	2,000 G	1,800 X	NA	NA	9.2 JH			

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
R = Data validation recommends that this value be rejected.
SC = Silty clay.
X = Data validation recommends that this value be considered an estimate.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 1988 & 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2013 & 2014 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2F
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-21 08/02/13 3.0 - 8.0 Sand/SC	OW-21 08/28/17 3.0 - 8.0 Sand/SC	OW-21 10/23/19 3.0 - 8.0 Sand/SC	OW-21 10/29/21 3.0 - 8.0 Sand/SC			
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G							
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*		**1.4 J**	0.44 J				
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*		**16.0**					
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA	NA					
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0	2.8 J						
Diethylphthalate	50 G							

Table 4-2F
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-21 08/02/13 3.0 - 8.0 Sand/SC	OW-21 08/28/17 3.0 - 8.0 Sand/SC	OW-21 10/23/19 3.0 - 8.0 Sand/SC	OW-21 10/29/21 3.0 - 8.0 Sand/SC			
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*	**2.5 J**	1.0 J					
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3		0.0096 J					
4,4'-DDE	0.2							
4,4'-DDT	0.2		0.019 J	0.026 J				
Aldrin	ND							
alpha-BHC	0.01	**0.026 J**	**0.012 J**					
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS				0.019 J			
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-2F
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-21 08/02/13 3.0 - 8.0 Sand/SC	OW-21 08/28/17 3.0 - 8.0 Sand/SC	OW-21 10/23/19 3.0 - 8.0 Sand/SC	OW-21 10/29/21 3.0 - 8.0 Sand/SC			
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05							
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0				0.016 JH			
Mirex	0.03	NA	NA		0.014 J			
Herbicides (ug/L)								
2,4,5-T	35.0		NA	NA	NA			
Silvex (2,4,5-TP)	0.26		"	"	"			
2,4-D	50.0		"	"	"			
PCBs (ug/L)								
Aroclor-1242		NA						
Aroclor-1248		"						
Aroclor-1254		"						
Aroclor-1260		"						
Total PCBs	0.09	"						
Metals (ug/L)								
Aluminum	NS	NA	79.0 J		270 JH			
Antimony ■	3.0	NA						
Arsenic ■	25.0	11.0	8.6 J	11.0 JH				
Barium	1,000	150.0	260.0	450 JH	260.0			
Beryllium ■	3 G	NA						
Cadmium ■	5.0	0.73 J						
Chromium ■	50.0	23.0			1.2 JH			
Cobalt	NS	NA	6.0 J	2.7 J	3.4 J			
Copper ■	200.0	NA						
Iron	300.0	NA	**16,300 J**	**10,100 JH**	**8,600 J**			
Lead ■	25.0	5.1						
Manganese	300.0	NA	**1,600 JH**	**430.0**	**920.0**			
Mercury ■	0.7							

Table 4-2F
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-21 08/02/13 3.0 - 8.0 Sand/SC	OW-21 08/28/17 3.0 - 8.0 Sand/SC	OW-21 10/23/19 3.0 - 8.0 Sand/SC	OW-21 10/29/21 3.0 - 8.0 Sand/SC			
Metals (continued)								
Nickel	100.0	NA	5.5 J	11.0	5.3 J			
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	NA						
Zinc ■	2,000 G	NA	3.4 J					

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2013 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2G
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-31 05/20/14 1.0 - 6.0 Sand	OW-31 08/22/17 1.0 - 6.0 Sand	OW-31 01/09/20 1.0 - 6.0 Sand	OW-31 11/02/21 1.0 - 6.0 Sand			
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	6.6 J						
Benzene	1.0							
Carbon Disulfide	NS	1.7						
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G	2.0 J						
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*	0.47 J	0.49 J					
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*		0.80 J					
Acetophenone	NS	1.4 J						
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA	NA					
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G							

Table 4-2G
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-31 05/20/14 1.0 - 6.0 Sand	OW-31 08/22/17 1.0 - 6.0 Sand	OW-31 01/09/20 1.0 - 6.0 Sand	OW-31 11/02/21 1.0 - 6.0 Sand			
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G	0.78 J						
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G	0.75 J						
Phenol	1*	**1.1 J**						
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3							
4,4'-DDE	0.2	0.033 J						
4,4'-DDT	0.2	0.056		0.020 J				
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05	0.030 J						
beta-BHC	0.04							
delta-BHC	0.04	0.015 J	0.012 J	0.016 J				
Dieldrin	0.004	**0.013 J**						
Endosulfan I	NS	0.024 J						
Endosulfan II	NS	0.014 J						
Endosulfan Sulfate	NS							
Endrin	ND	**0.015 J**						
Endrin Aldehyde	5.0							
Endrin Ketone	5.0	0.016 J						
gamma-BHC (Lindane)	0.05	0.014 J	0.014 J					

Table 4-2G
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-31 05/20/14 1.0 - 6.0 Sand	OW-31 08/22/17 1.0 - 6.0 Sand	OW-31 01/09/20 1.0 - 6.0 Sand	OW-31 11/02/21 1.0 - 6.0 Sand			
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	0.045 J						
Heptachlor	0.04	0.014 J						
Heptachlor Epoxide	0.03							
Methoxychlor	35.0	0.044 J						
Mirex	0.03	NA	NA					
Herbicides (ug/L)								
2,4,5-T	35.0		NA	NA	NA			
Silvex (2,4,5-TP)	0.26		"	"	"			
2,4-D	50.0		"	"	"			
PCBs (ug/L)								
Aroclor-1242		NA						
Aroclor-1248		"						
Aroclor-1254		"						
Aroclor-1260		"						
Total PCBs	0.09	"						
Metals (ug/L)								
Aluminum	NS	NA			120 JH			
Antimony ■	3.0	NA						
Arsenic ■	25.0	7.9 J						
Barium	1,000	42 JH	36.0	110.0	93.0			
Beryllium ■	3 G	NA						
Cadmium ■	5.0			0.59 J				
Chromium ■	50.0							
Cobalt	NS	NA	1.9 J	7.0				
Copper ■	200.0	NA						
Iron	300.0	NA	**780.0**	**3,200 J**	230.0			
Lead ■	25.0		16.0 J					
Manganese	300.0	NA	**750 B**	**300.0**	19.0			
Mercury ■	0.7							

Table 4-2G
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-31 05/20/14 1.0 - 6.0 Sand	OW-31 08/22/17 1.0 - 6.0 Sand	OW-31 01/09/20 1.0 - 6.0 Sand	OW-31 11/02/21 1.0 - 6.0 Sand			
Metals (continued)								
Nickel	100.0	NA	3.3 J	2.3 J	3.1 J			
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	NA						
Zinc ■	2,000 G	NA	7.7 J	2.0 J	4.2 J			

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2020 results.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2014 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2H
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-34 05/19/14 7.0 - 12.0 Sand	OW-34 08/22/17 7.0 - 12.0 Sand	OW-34 10/24/19 7.0 - 12.0 Sand	OW-34 11/03/21 7.0 - 12.0 Sand			
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0			NS*				
1,4-Dichlorobenzene	3.0			"				
4-Methyl-2-Pentanone (MIBK)	NS			"				
Acetone	50 G		3.2 J	"				
Benzene	1.0			"				
Carbon Disulfide	NS			"				
Chlorobenzene	5.0			"				
Ethylbenzene	5.0			"				
2-Hexanone	50 G			"				
Isopropylbenzene	5.0			"				
Methyl Ethyl Ketone	50 G			"				
Methylene Chloride	5.0			"				
Toluene	5.0			"				
Xylene (Total)	5.0			"				
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G			NS*				
2-Chlorophenol	1*			"				
2-Methylnaphthalene	NS			"				
2-Methylphenol (O-Cresol)	1*			"				
4-Chloro-3-Methylphenol	1*			"				
4-Chloroaniline	5.0			"				
4-Methylphenol (P-Cresol)	1*			"				
Acetophenone	NS			"				
Anthracene (PAH)	50 G			"				
Benzaldehyde	NS			"				
Benzoic Acid	NS	NA		"				
Biphenyl	5.0			"				
Bis[2-ethylhexyl]phthalate	5.0			"				
Diethylphthalate	50 G			"	0.32 J			

Table 4-2H
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-34 05/19/14 7.0 - 12.0 Sand	OW-34 08/22/17 7.0 - 12.0 Sand	OW-34 10/24/19 7.0 - 12.0 Sand	OW-34 11/03/21 7.0 - 12.0 Sand			
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0			NS*				
Fluoranthene (PAH)	50 G			"				
Fluorene	50 G			"				
Isophorone	50 G			"				
Naphthalene (PAH)	10 G			"				
Nitrobenzene	0.4			"				
N-Nitrosodiphenylamine	50 G			"				
N-Nitrosodi-n-Propylamine	NS			"				
Phenanthrene (PAH)	50 G	0.46 J		"				
Phenol	1*			"				
Pyrene (PAH)	50 G			"				
Pesticides (ug/L)								
4,4'-DDD	0.3	0.012 J		NS*				
4,4'-DDE	0.2			"				
4,4'-DDT	0.2		0.013 J	"				
Aldrin	ND	**0.033 J**		"				
alpha-BHC	0.01			"				
alpha-Chlordane (cis-)	0.05			"				
beta-BHC	0.04			"				
delta-BHC	0.04			"				
Dieldrin	0.004			"				
Endosulfan I	NS			"				
Endosulfan II	NS			"				
Endosulfan Sulfate	NS			"				
Endrin	ND			"				
Endrin Aldehyde	5.0			"				
Endrin Ketone	5.0			"				
gamma-BHC (Lindane)	0.05	0.016 J	0.012 J	"				

Table 4-2H
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-34 05/19/14 7.0 - 12.0 Sand	OW-34 08/22/17 7.0 - 12.0 Sand	OW-34 10/24/19 7.0 - 12.0 Sand	OW-34 11/03/21 7.0 - 12.0 Sand			
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05			NS*				
Heptachlor	0.04			"				
Heptachlor Epoxide	0.03			"				
Methoxychlor	35.0	0.051 J		"				
Mirex	0.03	NA		"				
Herbicides (ug/L)								
2,4,5-T	35.0			NS*	NA			
Silvex (2,4,5-TP)	0.26			"	"			
2,4-D	50.0			"	"			
PCBs (ug/L)								
Aroclor-1242		NA		NS*				
Aroclor-1248		"		"				
Aroclor-1254		"		"				
Aroclor-1260		"		"				
Total PCBs	0.09	"		"				
Metals (ug/L)								
Aluminum	NS	NA		NS*				
Antimony ■	3.0	NA		"				
Arsenic ■	25.0	6.9 J	7.7 J	"	22.0 J			
Barium	1,000	89.0	150.0	"	340.0			
Beryllium ■	3 G	NA		"				
Cadmium ■	5.0			"				
Chromium ■	50.0			"	1.1 J			
Cobalt	NS	NA	0.72 J	"	0.86 J			
Copper ■	200.0	NA		"				
Iron	300.0	NA	**3,900**	"	**14,100**			
Lead ■	25.0			"	3.1 J			
Manganese	300.0	NA	**490 B**	"	280.0			
Mercury ■	0.7			"	0.067 J			

Table 4-2H
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-34 05/19/14 7.0 - 12.0 Sand	OW-34 08/22/17 7.0 - 12.0 Sand	OW-34 10/24/19 7.0 - 12.0 Sand	OW-34 11/03/21 7.0 - 12.0 Sand			
Metals (continued)								
Nickel	100.0	NA		NS*	1.9 J			
Selenium ■	10.0			"				
Silver ■	50.0			"				
Vanadium	NS	NA		"				
Zinc ■	2,000 G	NA	9.0 J	"	4.5 J			

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
NS* = Not sampled.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2014 results.
This table was modified on March 11, 2022 with the data validator's qualifiers for the 2017 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2I
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-35 05/19/14 4.0 - 9.0 Fill/Sand	OW-35 08/30/17 4.0 - 9.0 Fill/Sand	OW-35 10/24/19 4.0 - 9.0 Fill/Sand	OW-35 11/03/21 4.0 - 9.0 Fill/Sand			
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G							
Benzene	1.0	**3.8 J**	**4.9**	**4.4**	**2.4**			
Carbon Disulfide	NS							
Chlorobenzene	5.0	**80.0**	**78.0**	**120.0**	**63.0**			
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*	0.68 J		0.90 J	0.61 J			
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0			0.73 J				
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS		0.36 J					
Benzoic Acid	NS	NA	NA					
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G				0.30 J			

Table 4-2I
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-35 05/19/14 4.0 - 9.0 Fill/Sand	OW-35 08/30/17 4.0 - 9.0 Fill/Sand	OW-35 10/24/19 4.0 - 9.0 Fill/Sand	OW-35 11/03/21 4.0 - 9.0 Fill/Sand			
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G	0.62 J						
Phenol	1*			0.52 J				
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	0.016 J						
4,4'-DDE	0.2	0.019 J						
4,4'-DDT	0.2	0.025 J						
Aldrin	ND		**0.0091 J**					
alpha-BHC	0.01	**0.013 J**						
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05	0.026 J						

Table 4-2I
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-35 05/19/14 4.0 - 9.0 Fill/Sand	OW-35 08/30/17 4.0 - 9.0 Fill/Sand	OW-35 10/24/19 4.0 - 9.0 Fill/Sand	OW-35 11/03/21 4.0 - 9.0 Fill/Sand			
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	0.011 J						
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA	NA					
Herbicides (ug/L)								
2,4,5-T	35.0		NA	NA	NA			
Silvex (2,4,5-TP)	0.26		"	"	"			
2,4-D	50.0		"	"	"			
PCBs (ug/L)								
Aroclor-1242		NA						
Aroclor-1248		"						
Aroclor-1254		"						
Aroclor-1260		"						
Total PCBs	0.09	"						
Metals (ug/L)								
Aluminum	NS	NA	87.0 J		430 JH			
Antimony ■	3.0	NA						
Arsenic ■	25.0	9.5 J	20.0	13.0 J	**40.0 J**			
Barium	1,000	540.0	**1,100 JH**	980 JH	**1,100**			
Beryllium ■	3 G	NA						
Cadmium ■	5.0			0.55 J	0.55 J			
Chromium ■	50.0		1.1 JH		2.0 J			
Cobalt	NS	NA	5.2	2.6 J	2.6 J			
Copper ■	200.0	NA	3.2 J		4.1 JH			
Iron	300.0	NA	**10,200 J**	**1,900 JH**	**17,300**			
Lead ■	25.0		4.8 J		7.5 J			
Manganese	300.0	NA	200 JH	42.0	89.0			
Mercury ■	0.7				0.083 J			

Table 4-2I
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-35 05/19/14 4.0 - 9.0 Fill/Sand	OW-35 08/30/17 4.0 - 9.0 Fill/Sand	OW-35 10/24/19 4.0 - 9.0 Fill/Sand	OW-35 11/03/21 4.0 - 9.0 Fill/Sand			
Metals (continued)								
Nickel	100.0	NA	17.0	9.0 J	7.0 J			
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	NA	1.7 JH	8.0	3.5 J			
Zinc ■	2,000 G	NA			11.0			

Notes:

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G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
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This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2J
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-36 05/19/14 3.0 - 8.0 Fill/Sand	OW-36 08/29/17 3.0 - 8.0 Fill/Sand	OW-36 10/24/19 3.0 - 8.0 Fill/Sand	OW-36 11/03/21 3.0 - 8.0 Fill/Sand			
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0		2.8					
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G							
Benzene	1.0	**3.1 J**	**4.0**		**2.7 J**			
Carbon Disulfide	NS							
Chlorobenzene	5.0	**19.0**	**16.0**		**9.4**			
Ethylbenzene	5.0	**200.0**	**28.0**	**24.0**	3.7 J			
2-Hexanone	50 G							
Isopropylbenzene	5.0	**13.0**	**9.6**		**5.7**			
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0		0.73 J					
Xylene (Total)	5.0	**1,700**	**460.0**	**580.0**	**130.0**			
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G	18.0	5.1	3.4 J	1.9 J			
2-Chlorophenol	1*							
2-Methylnaphthalene	NS	1.2 J	2.3 J		1.8 J			
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*	**7.5**						
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS			3.6 J				
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA	NA					
Biphenyl	5.0	**17.0**	**39.0**		**8.2**			
Bis[2-ethylhexyl]phthalate	5.0	**5.4**	4.2 J					
Diethylphthalate	50 G		0.62 J		0.60 J			

Table 4-2J
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-36 05/19/14 3.0 - 8.0 Fill/Sand	OW-36 08/29/17 3.0 - 8.0 Fill/Sand	OW-36 10/24/19 3.0 - 8.0 Fill/Sand	OW-36 11/03/21 3.0 - 8.0 Fill/Sand			
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0				0.45 J			
Fluoranthene (PAH)	50 G							
Fluorene	50 G		0.38 J					
Isophorone	50 G							
Naphthalene (PAH)	10 G	7.1	10.0	9.5 J	7.7			
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G	0.50 J	1.4 J		1.1 J			
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G	0.60 J						
Phenol	1*	**2.8 J**	**4.6 J**		**2.7 J**			
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	0.022 J	0.11					
4,4'-DDE	0.2	0.019 J						
4,4'-DDT	0.2	0.032 J	0.018 J					
Aldrin	ND		**0.0088 J**					
alpha-BHC	0.01	**0.022 J**						
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04			**0.050**				
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0	0.022 J		0.021 J				
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05	0.022 J						

Table 4-2J
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-36 05/19/14 3.0 - 8.0 Fill/Sand	OW-36 08/29/17 3.0 - 8.0 Fill/Sand	OW-36 10/24/19 3.0 - 8.0 Fill/Sand	OW-36 11/03/21 3.0 - 8.0 Fill/Sand			
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05							
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA	NA					
Herbicides (ug/L)								
2,4,5-T	35.0		NA	NA	NA			
Silvex (2,4,5-TP)	0.26		"	"	"			
2,4-D	50.0		"	"	"			
PCBs (ug/L)								
Aroclor-1242		NA						
Aroclor-1248		"						
Aroclor-1254		"						
Aroclor-1260		"						
Total PCBs	0.09	"			**0.32 J**			
Metals (ug/L)								
Aluminum	NS	NA			390 JH			
Antimony ■	3.0	NA			**27.0**			
Arsenic ■	25.0	7.5 J						
Barium	1,000	230.0	480.0	**1,000 JH**	480.0			
Beryllium ■	3 G	NA						
Cadmium ■	5.0							
Chromium ■	50.0	1.1 J	2.3 J	1.5 J	3.6 J			
Cobalt	NS	NA			0.91 J			
Copper ■	200.0	NA			2.6 JH			
Iron	300.0	NA	**41,200**	**38,400 J**	**39,900**			
Lead ■	25.0	3.4 J	3.8 J	3.8 J	7.9 J			
Manganese	300.0	NA	280 JH	**350 JH**	**340.0**			
Mercury ■	0.7				0.083 J			

Table 4-2J
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-36 05/19/14 3.0 - 8.0 Fill/Sand	OW-36 08/29/17 3.0 - 8.0 Fill/Sand	OW-36 10/24/19 3.0 - 8.0 Fill/Sand	OW-36 11/03/21 3.0 - 8.0 Fill/Sand			
Metals (continued)								
Nickel	100.0	NA	2.0 J		1.4 J			
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	NA						
Zinc ■	2,000 G	NA	10.0		12.0			

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2014 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-2K
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-37 05/20/14 1.0 - 6.0 Fill/Sand	OW-37 08/29/17 1.0 - 6.0 Fill/Sand	OW-37 10/25/19 1.0 - 6.0 Fill/Sand	OW-37 11/04/21 1.0 - 6.0 Fill/Sand			
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	4.6 J	3.1 J					
Benzene	1.0							
Carbon Disulfide	NS	1.0						
Chlorobenzene	5.0		0.96 J	3.1 J				
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA	NA					
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G			0.67 J				

Table 4-2K
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-37 05/20/14 1.0 - 6.0 Fill/Sand	OW-37 08/29/17 1.0 - 6.0 Fill/Sand	OW-37 10/25/19 1.0 - 6.0 Fill/Sand	OW-37 11/04/21 1.0 - 6.0 Fill/Sand			
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G	2.0 J						
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G	0.85 J						
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3							
4,4'-DDE	0.2	0.015 J						
4,4'-DDT	0.2	0.051	0.019 J					
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004	**0.0094 J**						
Endosulfan I	NS							
Endosulfan II	NS	0.011 J						
Endosulfan Sulfate	NS							
Endrin	ND	**0.019 J**						
Endrin Aldehyde	5.0	0.042 J						
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-2K
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-37 05/20/14 1.0 - 6.0 Fill/Sand	OW-37 08/29/17 1.0 - 6.0 Fill/Sand	OW-37 10/25/19 1.0 - 6.0 Fill/Sand	OW-37 11/04/21 1.0 - 6.0 Fill/Sand			
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	0.020 J						
Heptachlor	0.04							
Heptachlor Epoxide	0.03	0.018 J						
Methoxychlor	35.0	0.053						
Mirex	0.03	NA	NA					
Herbicides (ug/L)								
2,4,5-T	35.0		NA	NA	NA			
Silvex (2,4,5-TP)	0.26		"	"	"			
2,4-D	50.0		"	"	"			
PCBs (ug/L)								
Aroclor-1242		NA						
Aroclor-1248		"						
Aroclor-1254		"						
Aroclor-1260		"						
Total PCBs	0.09	"						
Metals (ug/L)								
Aluminum	NS	NA	89.0 J					
Antimony ■	3.0	NA						
Arsenic ■	25.0	6.8 J		5.9 J				
Barium	1,000	270 JH	80.0	100 JH	180.0			
Beryllium ■	3 G	NA						
Cadmium ■	5.0			0.66 J	1.7 JH			
Chromium ■	50.0							
Cobalt	NS	NA	5.5	3.5 J	1.1 J			
Copper ■	200.0	NA	2.8 J		6.4 J			
Iron	300.0	NA	**10,400**	**4,100**	**340.0**			
Lead ■	25.0	4.9 J		3.2 JH				
Manganese	300.0	NA	**2,200 JH**	**710.0**	290.0			
Mercury ■	0.7				0.050 J			

Table 4-2K
Summary of Historic Groundwater Analytical Results From OW Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	OW-37 05/20/14 1.0 - 6.0 Fill/Sand	OW-37 08/29/17 1.0 - 6.0 Fill/Sand	OW-37 10/25/19 1.0 - 6.0 Fill/Sand	OW-37 11/04/21 1.0 - 6.0 Fill/Sand			
Metals (continued)								
Nickel	100.0	NA	8.2 J	4.7 J	5.7 J			
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	NA						
Zinc ■	2,000 G	NA	18.0	25.0 JH	78.0 JH			

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
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B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on February 18, 2022 with the data validator's qualifiers for the 2014 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3A
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-01S 08/29/17 5.0 - 7.0 Sand/SC	LPZ-01S 10/23/19 5.0 - 7.0 Sand/SC	LPZ-01S 11/01/21 5.0 - 7.0 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	6.7 J						
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*	**15.0**						
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G							

Table 4-3A
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-01S 08/29/17 5.0 - 7.0 Sand/SC	LPZ-01S 10/23/19 5.0 - 7.0 Sand/SC	LPZ-01S 11/01/21 5.0 - 7.0 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G	0.58 J						
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	0.017 J	0.010 J					
4,4'-DDE	0.2							
4,4'-DDT	0.2		0.020 JH					
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04	0.012 J						
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-3A
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-01S 08/29/17 5.0 - 7.0 Sand/SC	LPZ-01S 10/23/19 5.0 - 7.0 Sand/SC	LPZ-01S 11/01/21 5.0 - 7.0 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05		0.038 J					
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS							
Antimony ■	3.0							
Arsenic ■	25.0							
Barium	1,000	38.0	43.0	38.0				
Beryllium ■	3 G							
Cadmium ■	5.0							
Chromium ■	50.0							
Cobalt	NS	3.7 J	2.7 J	3.0 J				
Copper ■	200.0							
Iron	300.0	**2,200**	**2,000 JH**	**940.0**				
Lead ■	25.0			3.1 J				
Manganese	300.0	**1,000 JH**	**770 JH**	**860 JH**				
Mercury ■	0.7							

Table 4-3A
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-01S 08/29/17 5.0 - 7.0 Sand/SC	LPZ-01S 10/23/19 5.0 - 7.0 Sand/SC	LPZ-01S 11/01/21 5.0 - 7.0 Sand/SC				
Metals (continued)								
Nickel	100.0	6.5 J	4.1 J	4.4 J				
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS							
Zinc ■	2,000 G	5.9 J						

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3B
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-02S 08/29/17 3.0 - 6.0 Sand/SC	LPZ-02S 10/23/19 3.0 - 6.0 Sand/SC	LPZ-02S 11/01/21 3.0 - 6.0 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0		NS*					
1,4-Dichlorobenzene	3.0		"					
4-Methyl-2-Pentanone (MIBK)	NS		"					
Acetone	50 G		"					
Benzene	1.0		"					
Carbon Disulfide	NS		"					
Chlorobenzene	5.0		"					
Ethylbenzene	5.0		"					
2-Hexanone	50 G		"					
Isopropylbenzene	5.0		"					
Methyl Ethyl Ketone	50 G		"					
Methylene Chloride	5.0		"					
Toluene	5.0		"					
Xylene (Total)	5.0		"					
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G		NS*					
2-Chlorophenol	1*		"					
2-Methylnaphthalene	NS		"					
2-Methylphenol (O-Cresol)	1*		"					
4-Chloro-3-Methylphenol	1*		"					
4-Chloroaniline	5.0		"					
4-Methylphenol (P-Cresol)	1*		"					
Acetophenone	NS		"					
Anthracene (PAH)	50 G		"					
Benzaldehyde	NS		"					
Benzoic Acid	NS		"					
Biphenyl	5.0		"					
Bis[2-ethylhexyl]phthalate	5.0		"					
Diethylphthalate	50 G		"					

Table 4-3B
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-02S 08/29/17 3.0 - 6.0 Sand/SC	LPZ-02S 10/23/19 3.0 - 6.0 Sand/SC	LPZ-02S 11/01/21 3.0 - 6.0 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0		NS*					
Fluoranthene (PAH)	50 G		"					
Fluorene	50 G		"					
Isophorone	50 G		"					
Naphthalene (PAH)	10 G		"					
Nitrobenzene	0.4		"					
N-Nitrosodiphenylamine	50 G		"					
N-Nitrosodi-n-Propylamine	NS		"					
Phenanthrene (PAH)	50 G		"					
Phenol	1*		"					
Pyrene (PAH)	50 G		"					
Pesticides (ug/L)								
4,4'-DDD	0.3		NS*					
4,4'-DDE	0.2		"					
4,4'-DDT	0.2		"					
Aldrin	ND		"					
alpha-BHC	0.01	**0.012 J**	"					
alpha-Chlordane (cis-)	0.05		"					
beta-BHC	0.04		"					
delta-BHC	0.04	0.013 J	"					
Dieldrin	0.004		"					
Endosulfan I	NS		"					
Endosulfan II	NS		"					
Endosulfan Sulfate	NS		"	(0.020 J)				
Endrin	ND		"					
Endrin Aldehyde	5.0		"					
Endrin Ketone	5.0		"					
gamma-BHC (Lindane)	0.05		"					

Table 4-3B
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-02S 08/29/17 3.0 - 6.0 Sand/SC	LPZ-02S 10/23/19 3.0 - 6.0 Sand/SC	LPZ-02S 11/01/21 3.0 - 6.0 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05		NS*					
Heptachlor	0.04		"					
Heptachlor Epoxide	0.03		"					
Methoxychlor	35.0		"					
Mirex	0.03		"	**(0.034 J)**				
Herbicides (ug/L)								
2,4,5-T	35.0		NS*	NA				
Silvex (2,4,5-TP)	0.26		"	"				
2,4-D	50.0		"	"				
PCBs (ug/L)								
Aroclor-1242			NS*					
Aroclor-1248			"					
Aroclor-1254			"					
Aroclor-1260			"					
Total PCBs	0.09		"					
Metals (ug/L)								
Aluminum	NS		NS*					
Antimony ■	3.0		"					
Arsenic ■	25.0		"					
Barium	1,000	23.0	"	17.0				
Beryllium ■	3 G		"					
Cadmium ■	5.0	0.90 J	"	(0.61 J)				
Chromium ■	50.0		"					
Cobalt	NS	3.2 J	"	12.0 J				
Copper ■	200.0	3.3 J	"	4.5 J				
Iron	300.0	67.0	"	**21,900**				
Lead ■	25.0		"	(7.2 J)				
Manganese	300.0	**1,300 JH**	"	**3,100 JH**				
Mercury ■	0.7		"					

Table 4-3B
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-02S 08/29/17 3.0 - 6.0 Sand/SC	LPZ-02S 10/23/19 3.0 - 6.0 Sand/SC	LPZ-02S 11/01/21 3.0 - 6.0 Sand/SC				
Metals (continued)								
Nickel	100.0	28.0	NS*	24.0				
Selenium ■	10.0		"					
Silver ■	50.0		"					
Vanadium	NS		"					
Zinc ■	2,000 G	16.0	"					

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
NS* = Not sampled.
SC = Silty clay.
(0.065 J) = Result of a duplicate analysis. The higher of the 2 values is shown.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on March 11, 2022 with the data validator's qualifiers for the 2017 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3C
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-03S 08/21/17 3.0 - 8.0 Sand/SC	LPZ-03S 10/22/19 3.0 - 8.0 Sand/SC	LPZ-03S 11/05/21 3.0 - 8.0 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G							
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*	0.97 J						
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G	1.6 J	(1.0 J)	0.38 J				

Table 4-3C
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-03S 08/21/17 3.0 - 8.0 Sand/SC	LPZ-03S 10/22/19 3.0 - 8.0 Sand/SC	LPZ-03S 11/05/21 3.0 - 8.0 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3		(0.013 J)					
4,4'-DDE	0.2							
4,4'-DDT	0.2		(0.028 JH)					
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04		(0.033 J)					
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-3C
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-03S 08/21/17 3.0 - 8.0 Sand/SC	LPZ-03S 10/22/19 3.0 - 8.0 Sand/SC	LPZ-03S 11/05/21 3.0 - 8.0 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05		0.024 J					
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS			160 J				
Antimony ■	3.0							
Arsenic ■	25.0	**55.0 J**	**47.0 JH**	7.2 J				
Barium	1,000	83.0	100 JH	110.0				
Beryllium ■	3 G							
Cadmium ■	5.0							
Chromium ■	50.0							
Cobalt	NS			0.73 J				
Copper ■	200.0							
Iron	300.0	**7,200**	**7,100**	**2,800**				
Lead ■	25.0		(5.5 JH)					
Manganese	300.0	**470 JH**	**370.0**	220.0				
Mercury ■	0.7			0.050 J				

Table 4-3C
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-03S 08/21/17 3.0 - 8.0 Sand/SC	LPZ-03S 10/22/19 3.0 - 8.0 Sand/SC	LPZ-03S 11/05/21 3.0 - 8.0 Sand/SC				
Metals (continued)								
Nickel	100.0		4.9 J					
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS							
Zinc ■	2,000 G	6.2 J						

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
SC = Silty clay.
(0.065 J) = Result of a duplicate analysis. The higher of the 2 values is shown.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3D
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-04S 08/21/17 3.0 - 6.0 Sand/SC	LPZ-04S 10/22/19 3.0 - 6.0 Sand/SC	LPZ-04S 10/29/21 3.0 - 6.0 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G							
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*	0.65 J						
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G							

Table 4-3D
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-04S 08/21/17 3.0 - 6.0 Sand/SC	LPZ-04S 10/22/19 3.0 - 6.0 Sand/SC	LPZ-04S 10/29/21 3.0 - 6.0 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3							
4,4'-DDE	0.2							
4,4'-DDT	0.2							
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-3D
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-04S 08/21/17 3.0 - 6.0 Sand/SC	LPZ-04S 10/22/19 3.0 - 6.0 Sand/SC	LPZ-04S 10/29/21 3.0 - 6.0 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05		0.021 J					
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS							
Antimony ■	3.0							
Arsenic ■	25.0			9.9 J				
Barium	1,000	46.0	52.0 JH	45.0				
Beryllium ■	3 G							
Cadmium ■	5.0	0.64 J						
Chromium ■	50.0							
Cobalt	NS	3.4 J	3.0 J	2.5 J				
Copper ■	200.0	3.5 J						
Iron	300.0	**600.0**	**830.0**	**2,000 J**				
Lead ■	25.0							
Manganese	300.0	**740 JH**	**540.0**	**1,200**				
Mercury ■	0.7							

Table 4-3D
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-04S 08/21/17 3.0 - 6.0 Sand/SC	LPZ-04S 10/22/19 3.0 - 6.0 Sand/SC	LPZ-04S 10/29/21 3.0 - 6.0 Sand/SC				
Metals (continued)								
Nickel	100.0	14.0	10.0	6.3 J				
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS							
Zinc ■	2,000 G	12.0						

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3E
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-05S 08/21/17 3.0 - 6.0 Sand/SC	LPZ-05S 10/22/19 3.0 - 6.0 Sand/SC	LPZ-05S 11/02/21 3.0 - 6.0 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G							
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*	**1.2 J**						
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*	**17.0**						
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G	1.6 J	0.90 J	0.50 J				

Table 4-3E
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-05S 08/21/17 3.0 - 6.0 Sand/SC	LPZ-05S 10/22/19 3.0 - 6.0 Sand/SC	LPZ-05S 11/02/21 3.0 - 6.0 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*	**2.3 J**						
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3		0.014 J					
4,4'-DDE	0.2							
4,4'-DDT	0.2		0.017 JH					
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-3E
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-05S 08/21/17 3.0 - 6.0 Sand/SC	LPZ-05S 10/22/19 3.0 - 6.0 Sand/SC	LPZ-05S 11/02/21 3.0 - 6.0 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05		0.018 J					
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS			73 JH				
Antimony ■	3.0							
Arsenic ■	25.0	**31.0 J**	11.0 JH	8.9 J				
Barium	1,000	150.0	82.0 JH	200.0				
Beryllium ■	3 G							
Cadmium ■	5.0			0.62 J				
Chromium ■	50.0							
Cobalt	NS	2.2 J	1.3 J	0.86 J				
Copper ■	200.0							
Iron	300.0	**8,200**	**4,000**	**4,600**				
Lead ■	25.0		3.6 JH	4.4 J				
Manganese	300.0	**500 JH**	230.0	180.0				
Mercury ■	0.7							

Table 4-3E
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-05S 08/21/17 3.0 - 6.0 Sand/SC	LPZ-05S 10/22/19 3.0 - 6.0 Sand/SC	LPZ-05S 11/02/21 3.0 - 6.0 Sand/SC				
Metals (continued)								
Nickel	100.0	5.0 J	5.0 J	1.6 J				
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	1.5 J	1.7 J					
Zinc ■	2,000 G	4.5 J		4.0 J				

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
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Table 4-3F
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-06S 08/21/17 3.0 - 8.0 Sand/SC	LPZ-06S 10/23/19 3.0 - 8.0 Sand/SC	LPZ-06S 11/04/21 3.0 - 8.0 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0		NA*					
1,4-Dichlorobenzene	3.0		"					
4-Methyl-2-Pentanone (MIBK)	NS		"					
Acetone	50 G		"					
Benzene	1.0		"					
Carbon Disulfide	NS		"					
Chlorobenzene	5.0		"					
Ethylbenzene	5.0		"					
2-Hexanone	50 G		"					
Isopropylbenzene	5.0		"					
Methyl Ethyl Ketone	50 G		"					
Methylene Chloride	5.0		"					
Toluene	5.0		"					
Xylene (Total)	5.0		"					
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G							

Table 4-3F
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-06S 08/21/17 3.0 - 8.0 Sand/SC	LPZ-06S 10/23/19 3.0 - 8.0 Sand/SC	LPZ-06S 11/04/21 3.0 - 8.0 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	0.029 J	0.018 J					
4,4'-DDE	0.2		0.023 J					
4,4'-DDT	0.2		0.029 JH					
Aldrin	ND		**0.0083 J**					
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS		0.035 JH					
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0		0.067 JH					
gamma-BHC (Lindane)	0.05							

Table 4-3F
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-06S 08/21/17 3.0 - 8.0 Sand/SC	LPZ-06S 10/23/19 3.0 - 8.0 Sand/SC	LPZ-06S 11/04/21 3.0 - 8.0 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05							
Heptachlor	0.04							
Heptachlor Epoxide	0.03		0.0083 J					
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS							
Antimony ■	3.0							
Arsenic ■	25.0		13.0 J					
Barium	1,000	30.0	44.0	41.0				
Beryllium ■	3 G							
Cadmium ■	5.0							
Chromium ■	50.0		7.7					
Cobalt	NS		7.2					
Copper ■	200.0		2.1 J					
Iron	300.0	**320.0**	**35,900 JH**	55.0				
Lead ■	25.0							
Manganese	300.0	260 JH	**2,800 JH**	59.0				
Mercury ■	0.7							

Table 4-3F
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-06S 08/21/17 3.0 - 8.0 Sand/SC	LPZ-06S 10/23/19 3.0 - 8.0 Sand/SC	LPZ-06S 11/04/21 3.0 - 8.0 Sand/SC				
Metals (continued)								
Nickel	100.0	1.5 J	30.0					
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS		1.9 J					
Zinc ■	2,000 G	6.2 J	150 JH					

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
NA* = Not analyzed as the VOC bottles were empty when the samples were delivered to the lab.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3G
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-07S 08/21/17 3.0 - 7.0 Sand/SC	LPZ-07S 10/23/19 3.0 - 7.0 Sand/SC	LPZ-07S 11/02/21 3.0 - 7.0 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0		NS*					
1,4-Dichlorobenzene	3.0		"					
4-Methyl-2-Pentanone (MIBK)	NS		"					
Acetone	50 G		"					
Benzene	1.0		"					
Carbon Disulfide	NS		"					
Chlorobenzene	5.0		"					
Ethylbenzene	5.0		"					
2-Hexanone	50 G		"					
Isopropylbenzene	5.0		"					
Methyl Ethyl Ketone	50 G		"					
Methylene Chloride	5.0		"					
Toluene	5.0		"					
Xylene (Total)	5.0		"					
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G		NS*					
2-Chlorophenol	1*		"					
2-Methylnaphthalene	NS		"					
2-Methylphenol (O-Cresol)	1*		"					
4-Chloro-3-Methylphenol	1*		"					
4-Chloroaniline	5.0		"					
4-Methylphenol (P-Cresol)	1*	**4.6 J**	"					
Acetophenone	NS		"					
Anthracene (PAH)	50 G		"					
Benzaldehyde	NS		"					
Benzoic Acid	NS		"					
Biphenyl	5.0		"					
Bis[2-ethylhexyl]phthalate	5.0		"					
Diethylphthalate	50 G		"					

Table 4-3G
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-07S 08/21/17 3.0 - 7.0 Sand/SC	LPZ-07S 10/23/19 3.0 - 7.0 Sand/SC	LPZ-07S 11/02/21 3.0 - 7.0 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0		NS*					
Fluoranthene (PAH)	50 G		"					
Fluorene	50 G		"					
Isophorone	50 G		"					
Naphthalene (PAH)	10 G		"					
Nitrobenzene	0.4		"					
N-Nitrosodiphenylamine	50 G		"					
N-Nitrosodi-n-Propylamine	NS		"					
Phenanthrene (PAH)	50 G		"					
Phenol	1*		"					
Pyrene (PAH)	50 G		"					
Pesticides (ug/L)								
4,4'-DDD	0.3		NS*					
4,4'-DDE	0.2		"					
4,4'-DDT	0.2		"					
Aldrin	ND		"					
alpha-BHC	0.01	**0.021 J**	"					
alpha-Chlordane (cis-)	0.05		"					
beta-BHC	0.04		"					
delta-BHC	0.04	0.014 J	"					
Dieldrin	0.004		"					
Endosulfan I	NS		"					
Endosulfan II	NS		"					
Endosulfan Sulfate	NS		"					
Endrin	ND		"					
Endrin Aldehyde	5.0		"					
Endrin Ketone	5.0		"					
gamma-BHC (Lindane)	0.05		"					

Table 4-3G
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-07S 08/21/17 3.0 - 7.0 Sand/SC	LPZ-07S 10/23/19 3.0 - 7.0 Sand/SC	LPZ-07S 11/02/21 3.0 - 7.0 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05		NS*					
Heptachlor	0.04		"					
Heptachlor Epoxide	0.03		"					
Methoxychlor	35.0		"					
Mirex	0.03		"					
Herbicides (ug/L)								
2,4,5-T	35.0		NS*	NA				
Silvex (2,4,5-TP)	0.26		"	"				
2,4-D	50.0		"	"				
PCBs (ug/L)								
Aroclor-1242			NS*					
Aroclor-1248			"					
Aroclor-1254			"					
Aroclor-1260			"					
Total PCBs	0.09		"					
Metals (ug/L)								
Aluminum	NS		NS*	140 JH				
Antimony ■	3.0		"					
Arsenic ■	25.0		"	6.2 J				
Barium	1,000	33.0	"	19.0				
Beryllium ■	3 G		"					
Cadmium ■	5.0		"	**5.9**				
Chromium ■	50.0		"					
Cobalt	NS	2.6 J	"	2.3 J				
Copper ■	200.0	1.8 J	"	47.0				
Iron	300.0	**3,500**	"	**2,700**				
Lead ■	25.0		"	13.0				
Manganese	300.0	**1,300 JH**	"	**650.0**				
Mercury ■	0.7		"					

Table 4-3G
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-07S 08/21/17 3.0 - 7.0 Sand/SC	LPZ-07S 10/23/19 3.0 - 7.0 Sand/SC	LPZ-07S 11/02/21 3.0 - 7.0 Sand/SC				
Metals (continued)								
Nickel	100.0	5.5 J	NS*	6.9 J				
Selenium ■	10.0		"					
Silver ■	50.0		"					
Vanadium	NS		"	1.7 J				
Zinc ■	2,000 G	9.2 J	"	9.6 J				

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
NS* = Not sampled.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on March 11, 2022 with the data validator's qualifiers for the 2017 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3H
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-08S 08/29/17 2.5 - 4.0 Sand	LPZ-08S 10/24/19 2.5 - 4.0 Sand	LPZ-08S 11/02/21 2.5 - 4.0 Sand				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	5.6 J						
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0	**12.0**						
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*	**1.8 J**						
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*	**13.0**						
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS	0.62 J						
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G							

Table 4-3H
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-08S 08/29/17 2.5 - 4.0 Sand	LPZ-08S 10/24/19 2.5 - 4.0 Sand	LPZ-08S 11/02/21 2.5 - 4.0 Sand				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*	1.0 J						
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3							
4,4'-DDE	0.2							
4,4'-DDT	0.2							
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04	**0.12 J**		0.038 J				
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-3H
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-08S 08/29/17 2.5 - 4.0 Sand	LPZ-08S 10/24/19 2.5 - 4.0 Sand	LPZ-08S 11/02/21 2.5 - 4.0 Sand				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05							
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS	150 J	67 J	67 JH				
Antimony ■	3.0							
Arsenic ■	25.0		9.5 J					
Barium	1,000	230.0	43.0 JH	95.0				
Beryllium ■	3 G							
Cadmium ■	5.0			0.93 J				
Chromium ■	50.0	12.0	8.5	9.6				
Cobalt	NS	7.3	5.4	5.0 J				
Copper ■	200.0		1.7 J	11.0 JH				
Iron	300.0	**21,400**	**37,000 JH**	**33,500**				
Lead ■	25.0	4.1 J		15.0 J				
Manganese	300.0	**3,800 JH**	**2,600**	**2,400**				
Mercury ■	0.7							

Table 4-3H
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-08S 08/29/17 2.5 - 4.0 Sand	LPZ-08S 10/24/19 2.5 - 4.0 Sand	LPZ-08S 11/02/21 2.5 - 4.0 Sand				
Metals (continued)								
Nickel	100.0	13.0	23.0	12.0				
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	3.2 J	2.5 J	2.8 J				
Zinc ■	2,000 G	7.7 J	26.0 JH	14.0				

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3I
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-11S 09/21/17 4.0 - 7.0 Sand	LPZ-11S 10/24/19 4.0 - 7.0 Sand	LPZ-11S 11/01/21 4.0 - 7.0 Sand				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G							
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0	4.4		1.2 J				
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*		(0.65 J)					
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G	1.3 J	0.75 J	0.62 J				

Table 4-3I
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-11S 09/21/17 4.0 - 7.0 Sand	LPZ-11S 10/24/19 4.0 - 7.0 Sand	LPZ-11S 11/01/21 4.0 - 7.0 Sand				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*	0.56 J						
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3							
4,4'-DDE	0.2							
4,4'-DDT	0.2							
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-3I
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-11S 09/21/17 4.0 - 7.0 Sand	LPZ-11S 10/24/19 4.0 - 7.0 Sand	LPZ-11S 11/01/21 4.0 - 7.0 Sand				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	0.015 J						
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS	60.0 JH						
Antimony ■	3.0							
Arsenic ■	25.0	20.0	(6.8 J)					
Barium	1,000	130 JH	100 JH	110.0				
Beryllium ■	3 G							
Cadmium ■	5.0	0.60 J	(0.64 J)	(0.76 J)				
Chromium ■	50.0	1.3 JH						
Cobalt	NS	2.3 J	(1.7 J)	1.8 J				
Copper ■	200.0			1.8 J				
Iron	300.0	**1,200 JH**	**990 JH**	**870.0**				
Lead ■	25.0							
Manganese	300.0	**370 JH**	**(570.0)**	**430 JH**				
Mercury ■	0.7							

Table 4-3I
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-11S 09/21/17 4.0 - 7.0 Sand	LPZ-11S 10/24/19 4.0 - 7.0 Sand	LPZ-11S 11/01/21 4.0 - 7.0 Sand				
Metals (continued)								
Nickel	100.0	6.9 J	2.6 J	3.3 J				
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS							
Zinc ■	2,000 G	3.4 JH						

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
(0.065 J) = Result of a duplicate analysis. The higher of the 2 values is shown.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3J
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-12S 09/21/17 4.0 - 7.0 Sand	LPZ-12S 10/25/19 4.0 - 7.0 Sand	LPZ-12S 11/05/21 4.0 - 7.0 Sand				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	9.5 J						
Benzene	1.0	**1.9 J**						
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G	0.48 J	0.35 J					

Table 4-3J
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-12S 09/21/17 4.0 - 7.0 Sand	LPZ-12S 10/25/19 4.0 - 7.0 Sand	LPZ-12S 11/05/21 4.0 - 7.0 Sand				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	0.017 J						
4,4'-DDE	0.2							
4,4'-DDT	0.2	0.022 J						
Aldrin	ND							
alpha-BHC	0.01							
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS			0.013 J				
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-3J
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-12S 09/21/17 4.0 - 7.0 Sand	LPZ-12S 10/25/19 4.0 - 7.0 Sand	LPZ-12S 11/05/21 4.0 - 7.0 Sand				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05							
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS	210 JH		140 J				
Antimony ■	3.0							
Arsenic ■	25.0	6.8 JH	24.0	17.0 J				
Barium	1,000	330 JH	330 JH	180.0				
Beryllium ■	3 G							
Cadmium ■	5.0	0.65 J		0.71 J				
Chromium ■	50.0	1.5 JH						
Cobalt	NS	1.9 J						
Copper ■	200.0							
Iron	300.0	**8,600 JH**	**(13,600)**	**3,900**				
Lead ■	25.0	5.8 J	3.7 JH	5.3 J				
Manganese	300.0	**340 JH**	260.0	220.0				
Mercury ■	0.7							

Table 4-3J
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-12S 09/21/17 4.0 - 7.0 Sand	LPZ-12S 10/25/19 4.0 - 7.0 Sand	LPZ-12S 11/05/21 4.0 - 7.0 Sand				
Metals (continued)								
Nickel	100.0	6.9 J	(2.3 J)					
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS		1.5 J	2.1 JH				
Zinc ■	2,000 G	15.0 JH		7.3 J				

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
(0.065 J) = Result of a duplicate analysis. The higher of the 2 values is shown.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3K
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-14S 08/21/17 4.0 - 9.0 Sand	LPZ-14S 10/23/19 4.0 - 9.0 Sand	LPZ-14S 11/08/21 4.0 - 9.0 Sand				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0	NI	NI					
1,4-Dichlorobenzene	3.0	"	"					
4-Methyl-2-Pentanone (MIBK)	NS	"	"					
Acetone	50 G	"	"					
Benzene	1.0	"	"					
Carbon Disulfide	NS	"	"					
Chlorobenzene	5.0	"	"					
Ethylbenzene	5.0	"	"					
2-Hexanone	50 G	"	"					
Isopropylbenzene	5.0	"	"					
Methyl Ethyl Ketone	50 G	"	"					
Methylene Chloride	5.0	"	"					
Toluene	5.0	"	"					
Xylene (Total)	5.0	"	"					
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G	NI	NI					
2-Chlorophenol	1*	"	"					
2-Methylnaphthalene	NS	"	"					
2-Methylphenol (O-Cresol)	1*	"	"					
4-Chloro-3-Methylphenol	1*	"	"					
4-Chloroaniline	5.0	"	"					
4-Methylphenol (P-Cresol)	1*	"	"					
Acetophenone	NS	"	"					
Anthracene (PAH)	50 G	"	"					
Benzaldehyde	NS	"	"					
Benzoic Acid	NS	"	"					
Biphenyl	5.0	"	"					
Bis[2-ethylhexyl]phthalate	5.0	"	"					
Diethylphthalate	50 G	"	"	1.2 J				

Table 4-3K
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-14S 08/21/17 4.0 - 9.0 Sand	LPZ-14S 10/23/19 4.0 - 9.0 Sand	LPZ-14S 11/08/21 4.0 - 9.0 Sand				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0	NI	NI					
Fluoranthene (PAH)	50 G	"	"					
Fluorene	50 G	"	"					
Isophorone	50 G	"	"					
Naphthalene (PAH)	10 G	"	"					
Nitrobenzene	0.4	"	"					
N-Nitrosodiphenylamine	50 G	"	"					
N-Nitrosodi-n-Propylamine	NS	"	"					
Phenanthrene (PAH)	50 G	"	"					
Phenol	1*	"	"					
Pyrene (PAH)	50 G	"	"					
Pesticides (ug/L)								
4,4'-DDD	0.3	NI	NI					
4,4'-DDE	0.2	"	"					
4,4'-DDT	0.2	"	"					
Aldrin	ND	"	"					
alpha-BHC	0.01	"	"					
alpha-Chlordane (cis-)	0.05	"	"					
beta-BHC	0.04	"	"					
delta-BHC	0.04	"	"					
Dieldrin	0.004	"	"					
Endosulfan I	NS	"	"					
Endosulfan II	NS	"	"					
Endosulfan Sulfate	NS	"	"					
Endrin	ND	"	"					
Endrin Aldehyde	5.0	"	"					
Endrin Ketone	5.0	"	"	0.031 J				
gamma-BHC (Lindane)	0.05	"	"					

Table 4-3K
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-14S 08/21/17 4.0 - 9.0 Sand	LPZ-14S 10/23/19 4.0 - 9.0 Sand	LPZ-14S 11/08/21 4.0 - 9.0 Sand				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	NI	NI					
Heptachlor	0.04	"	"					
Heptachlor Epoxide	0.03	"	"					
Methoxychlor	35.0	"	"					
Mirex	0.03	"	"					
Herbicides (ug/L)								
2,4,5-T	35.0	NI	NI	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242		NI	NI					
Aroclor-1248		"	"					
Aroclor-1254		"	"					
Aroclor-1260		"	"					
Total PCBs	0.09	"	"					
Metals (ug/L)								
Aluminum	NS	NI	NI					
Antimony ■	3.0	"	"					
Arsenic ■	25.0	"	"					
Barium	1,000	"	"	370.0				
Beryllium ■	3 G	"	"					
Cadmium ■	5.0	"	"					
Chromium ■	50.0	"	"					
Cobalt	NS	"	"	4.0				
Copper ■	200.0	"	"	2.0 J				
Iron	300.0	"	"	**12,600 JH**				
Lead ■	25.0	"	"					
Manganese	300.0	"	"	**450.0**				
Mercury ■	0.7	"	"					

Table 4-3K
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-14S 08/21/17 4.0 - 9.0 Sand	LPZ-14S 10/23/19 4.0 - 9.0 Sand	LPZ-14S 11/08/21 4.0 - 9.0 Sand				
Metals (continued)								
Nickel	100.0	NI	NI	4.8 J				
Selenium ■	10.0	"	"					
Silver ■	50.0	"	"					
Vanadium	NS	"	"					
Zinc ■	2,000 G	"	"	9.6 JH				

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NI = Not installed. This well was not installed at the time of the specified sampling event.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-3L
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-15S 08/21/17 3.0 - 8.0 Sand	LPZ-15S 10/23/19 3.0 - 8.0 Sand	LPZ-15S 11/08/21 3.0 - 8.0 Sand				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0	NI	NI					
1,4-Dichlorobenzene	3.0	"	"					
4-Methyl-2-Pentanone (MIBK)	NS	"	"					
Acetone	50 G	"	"					
Benzene	1.0	"	"					
Carbon Disulfide	NS	"	"					
Chlorobenzene	5.0	"	"	**6.5**				
Ethylbenzene	5.0	"	"					
2-Hexanone	50 G	"	"					
Isopropylbenzene	5.0	"	"					
Methyl Ethyl Ketone	50 G	"	"					
Methylene Chloride	5.0	"	"					
Toluene	5.0	"	"					
Xylene (Total)	5.0	"	"					
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G	NI	NI					
2-Chlorophenol	1*	"	"					
2-Methylnaphthalene	NS	"	"					
2-Methylphenol (O-Cresol)	1*	"	"					
4-Chloro-3-Methylphenol	1*	"	"					
4-Chloroaniline	5.0	"	"					
4-Methylphenol (P-Cresol)	1*	"	"					
Acetophenone	NS	"	"					
Acenaphthene (PAH)	20.0	"	"	0.42 J				
Anthracene (PAH)	50 G	"	"					
Benzaldehyde	NS	"	"					
Benzoic Acid	NS	"	"					
Biphenyl	5.0	"	"					
Bis[2-ethylhexyl]phthalate	5.0	"	"					
Carbazole	NS	"	"	0.79 J				

Table 4-3L
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-15S 08/21/17 3.0 - 8.0 Sand	LPZ-15S 10/23/19 3.0 - 8.0 Sand	LPZ-15S 11/08/21 3.0 - 8.0 Sand				
Semi-Volatile Organic Compounds (continued)								
Diethylphthalate	50 G	NI	NI	0.23 J				
Di-n-butylphthalate	50.0	"	"					
Fluoranthene (PAH)	50 G	"	"					
Fluorene	50 G	"	"					
Isophorone	50 G	"	"					
Naphthalene (PAH)	10 G	"	"					
Nitrobenzene	0.4	"	"					
N-Nitrosodiphenylamine	50 G	"	"					
N-Nitrosodi-n-Propylamine	NS	"	"					
Phenanthrene (PAH)	50 G	"	"					
Phenol	1*	"	"					
Pyrene (PAH)	50 G	"	"					
Pesticides (ug/L)								
4,4'-DDD	0.3	NI	NI					
4,4'-DDE	0.2	"	"					
4,4'-DDT	0.2	"	"					
Aldrin	ND	"	"					
alpha-BHC	0.01	"	"					
alpha-Chlordane (cis-)	0.05	"	"					
beta-BHC	0.04	"	"					
delta-BHC	0.04	"	"					
Dieldrin	0.004	"	"					
Endosulfan I	NS	"	"					
Endosulfan II	NS	"	"					
Endosulfan Sulfate	NS	"	"					
Endrin	ND	"	"					
Endrin Aldehyde	5.0	"	"					
Endrin Ketone	5.0	"	"					
gamma-BHC (Lindane)	0.05	"	"					

Table 4-3L
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-15S 08/21/17 3.0 - 8.0 Sand	LPZ-15S 10/23/19 3.0 - 8.0 Sand	LPZ-15S 11/08/21 3.0 - 8.0 Sand				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05	NI	NI					
Heptachlor	0.04	"	"					
Heptachlor Epoxide	0.03	"	"					
Methoxychlor	35.0	"	"					
Mirex	0.03	"	"					
Herbicides (ug/L)								
2,4,5-T	35.0	NI	NI	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242		NI	NI					
Aroclor-1248		"	"					
Aroclor-1254		"	"					
Aroclor-1260		"	"					
Total PCBs	0.09	"	"					
Metals (ug/L)								
Aluminum	NS	NI	NI					
Antimony ■	3.0	"	"					
Arsenic ■	25.0	"	"					
Barium	1,000	"	"	350.0				
Beryllium ■	3 G	"	"					
Cadmium ■	5.0	"	"					
Chromium ■	50.0	"	"					
Cobalt	NS	"	"	2.3 J				
Copper ■	200.0	"	"					
Iron	300.0	"	"	**28,700 JH**				
Lead ■	25.0	"	"					
Manganese	300.0	"	"	**440.0**				
Mercury ■	0.7	"	"					

Table 4-3L
Summary of Historic Groundwater Analytical Results From LPZ Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LPZ-15S 08/21/17 3.0 - 8.0 Sand	LPZ-15S 10/23/19 3.0 - 8.0 Sand	LPZ-15S 11/08/21 3.0 - 8.0 Sand				
Metals (continued)								
Nickel	100.0	NI	NI	2.6 J				
Selenium ■	10.0	"	"					
Silver ■	50.0	"	"					
Vanadium	NS	"	"					
Zinc ■	2,000 G	"	"					

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NI = Not installed. This well was not installed at the time of the specified sampling event.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-4A
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-01 08/24/17 4.3 - 5.3 Sand	LDP-01 10/23/19 4.3 - 5.3 Sand	LDP-01 11/03/21 4.3 - 5.3 Sand				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	9.8 J						
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G							

Table 4-4A
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-01 08/24/17 4.3 - 5.3 Sand	LDP-01 10/23/19 4.3 - 5.3 Sand	LDP-01 11/03/21 4.3 - 5.3 Sand				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G	0.71 J						
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	0.042 J	0.011 J					
4,4'-DDE	0.2							
4,4'-DDT	0.2		0.016 JH					
Aldrin	ND	**0.019 J**						
alpha-BHC	0.01	**0.054 JH**						
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-4A
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-01 08/24/17 4.3 - 5.3 Sand	LDP-01 10/23/19 4.3 - 5.3 Sand	LDP-01 11/03/21 4.3 - 5.3 Sand				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05							
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS	2,800		210 JH				
Antimony ■	3.0							
Arsenic ■	25.0							
Barium	1,000	57.0	47.0	39.0				
Beryllium ■	3 G							
Cadmium ■	5.0							
Chromium ■	50.0	4.0						
Cobalt	NS	1.2 J						
Copper ■	200.0	3.4 J		1.9 JH				
Iron	300.0	**2,600**		160.0				
Lead ■	25.0							
Manganese	300.0	66.0 JH	22.0 JH	13.0				
Mercury ■	0.7							

Table 4-4A
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-01 08/24/17 4.3 - 5.3 Sand	LDP-01 10/23/19 4.3 - 5.3 Sand	LDP-01 11/03/21 4.3 - 5.3 Sand				
Metals (continued)								
Nickel	100.0	5.5 J						
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS	6.6						
Zinc ■	2,000 G	11.0 JH						

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-4B
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-02 08/24/17 4.3 - 5.3 Sand/SC	LDP-02R ♠ 01/09/20 4.3 - 5.3 Sand/SC	LDP-02R ♦ 11/03/21 4.3 - 5.3 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0			NS*				
1,4-Dichlorobenzene	3.0			"				
4-Methyl-2-Pentanone (MIBK)	NS			"				
Acetone	50 G	17.0	3.5 J	"				
Benzene	1.0			"				
Carbon Disulfide	NS			"				
Chlorobenzene	5.0			"				
Ethylbenzene	5.0			"				
2-Hexanone	50 G	1.5 J		"				
Isopropylbenzene	5.0			"				
Methyl Ethyl Ketone	50 G			"				
Methylene Chloride	5.0			"				
Toluene	5.0			"				
Xylene (Total)	5.0			"				
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G			NS*				
2-Chlorophenol	1*			"				
2-Methylnaphthalene	NS			"				
2-Methylphenol (O-Cresol)	1*			"				
4-Chloro-3-Methylphenol	1*			"				
4-Chloroaniline	5.0			"				
4-Methylphenol (P-Cresol)	1*			"				
Acetophenone	NS			"				
Anthracene (PAH)	50 G			"				
Benzaldehyde	NS			"				
Benzoic Acid	NS	NA		"				
Biphenyl	5.0			"				
Bis[2-ethylhexyl]phthalate	5.0			"				
Diethylphthalate	50 G			"				

Table 4-4B
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-02 08/24/17 4.3 - 5.3 Sand/SC	LDP-02R ♠ 01/09/20 4.3 - 5.3 Sand/SC	LDP-02R ♦ 11/03/21 4.3 - 5.3 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0			NS*				
Fluoranthene (PAH)	50 G			"				
Fluorene	50 G			"				
Isophorone	50 G			"				
Naphthalene (PAH)	10 G			"				
Nitrobenzene	0.4			"				
N-Nitrosodiphenylamine	50 G			"				
N-Nitrosodi-n-Propylamine	NS			"				
Phenanthrene (PAH)	50 G	0.47 J		"				
Phenol	1*			"				
Pyrene (PAH)	50 G			"				
Pesticides (ug/L)								
4,4'-DDD	0.3			NS*				
4,4'-DDE	0.2			"				
4,4'-DDT	0.2	0.086 J		"				
Aldrin	ND	**0.073 J**		"				
alpha-BHC	0.01			"				
alpha-Chlordane (cis-)	0.05			"				
beta-BHC	0.04			"				
delta-BHC	0.04			"				
Dieldrin	0.004			"				
Endosulfan I	NS			"				
Endosulfan II	NS			"				
Endosulfan Sulfate	NS			"				
Endrin	ND			"				
Endrin Aldehyde	5.0			"				
Endrin Ketone	5.0		0.016 J	"				
gamma-BHC (Lindane)	0.05	**0.072 J**		"				

Table 4-4B
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-02 08/24/17 4.3 - 5.3 Sand/SC	LDP-02R ♠ 01/09/20 4.3 - 5.3 Sand/SC	LDP-02R ♦ 11/03/21 4.3 - 5.3 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05			NS*				
Heptachlor	0.04			"				
Heptachlor Epoxide	0.03			"				
Methoxychlor	35.0			"				
Mirex	0.03	NA		"				
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NS*				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242				NS*				
Aroclor-1248				"				
Aroclor-1254				"				
Aroclor-1260				"				
Total PCBs	0.09			"				
Metals (ug/L)								
Aluminum	NS	1,100		NS*				
Antimony ■	3.0			"				
Arsenic ■	25.0			"				
Barium	1,000	76.0	59.0	"				
Beryllium ■	3 G			"				
Cadmium ■	5.0			"				
Chromium ■	50.0	1.7 JH	1.5 J	"				
Cobalt	NS			"				
Copper ■	200.0	3.0 J	3.1 J	"				
Iron	300.0	**1,300**	25 J	"				
Lead ■	25.0			"				
Manganese	300.0	44.0 JH	2.0 J	"				
Mercury ■	0.7			"				

Table 4-4B
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-02 08/24/17 4.3 - 5.3 Sand/SC	LDP-02R ♠ 01/09/20 4.3 - 5.3 Sand/SC	LDP-02R ♦ 11/03/21 4.3 - 5.3 Sand/SC				
Metals (continued)								
Nickel	100.0	2.4 J		NS*				
Selenium ■	10.0			"				
Silver ■	50.0			"				
Vanadium	NS	2.9 J		"				
Zinc ■	2,000 G	7.8 JH	3.7 J	"				

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
♠ = Well was found to be damaged so it was replaced during the 2019/2020 sampling event.
♦ = Well was found damaged during the 2021 sampling event and was not replaced.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
NS* = Not sampled.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2020 results.

Table 4-4C
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-03 08/24/17 4.1 - 5.1 Sand/SC	LDP-03 10/24/19 4.1 - 5.1 Sand/SC	LDP-03 11/03/21 4.1 - 5.1 Sand/SC				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	22.0						
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0		3.3					
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G		NA					
2-Chlorophenol	1*		"					
2-Methylnaphthalene	NS		"					
2-Methylphenol (O-Cresol)	1*		"					
4-Chloro-3-Methylphenol	1*		"					
4-Chloroaniline	5.0		"					
4-Methylphenol (P-Cresol)	1*		"					
Acetophenone	NS	0.61 J	"					
Anthracene (PAH)	50 G		"					
Benzaldehyde	NS		"					
Benzoic Acid	NS	NA	"					
Biphenyl	5.0		"					
Bis[2-ethylhexyl]phthalate	5.0		"					
Diethylphthalate	50 G		"					

Table 4-4C
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-03 08/24/17 4.1 - 5.1 Sand/SC	LDP-03 10/24/19 4.1 - 5.1 Sand/SC	LDP-03 11/03/21 4.1 - 5.1 Sand/SC				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0	0.34 J	NA					
Fluoranthene (PAH)	50 G		"					
Fluorene	50 G		"					
Isophorone	50 G		"					
Naphthalene (PAH)	10 G		"					
Nitrobenzene	0.4		"					
N-Nitrosodiphenylamine	50 G		"					
N-Nitrosodi-n-Propylamine	NS		"					
Phenanthrene (PAH)	50 G	0.49 J	"					
Phenol	1*		"					
Pyrene (PAH)	50 G		"					
Pesticides (ug/L)								
4,4'-DDD	0.3	0.044 J	NA					
4,4'-DDE	0.2		"					
4,4'-DDT	0.2	0.043 J	"					
Aldrin	ND	**0.021 J**	"					
alpha-BHC	0.01		"					
alpha-Chlordane (cis-)	0.05		"					
beta-BHC	0.04		"					
delta-BHC	0.04		"					
Dieldrin	0.004		"					
Endosulfan I	NS	0.029 J	"					
Endosulfan II	NS		"					
Endosulfan Sulfate	NS		"					
Endrin	ND		"					
Endrin Aldehyde	5.0		"					
Endrin Ketone	5.0		"					
gamma-BHC (Lindane)	0.05		"					

Table 4-4C
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-03 08/24/17 4.1 - 5.1 Sand/SC	LDP-03 10/24/19 4.1 - 5.1 Sand/SC	LDP-03 11/03/21 4.1 - 5.1 Sand/SC				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05		NA					
Heptachlor	0.04		"					
Heptachlor Epoxide	0.03		"					
Methoxychlor	35.0		"					
Mirex	0.03	NA	"					
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242			NA					
Aroclor-1248			"					
Aroclor-1254			"					
Aroclor-1260			"					
Total PCBs	0.09		"					
Metals (ug/L)								
Aluminum	NS	1,500	NA	600 JH				
Antimony ■	3.0		"					
Arsenic ■	25.0		"					
Barium	1,000	52.0	"	43.0				
Beryllium ■	3 G		"					
Cadmium ■	5.0		"					
Chromium ■	50.0	2.1 JH	"	1.1 J				
Cobalt	NS		"					
Copper ■	200.0	2.7 J	"	1.8 JH				
Iron	300.0	**1,500**	"	**650.0**				
Lead ■	25.0	3.1 J	"					
Manganese	300.0	49.0 JH	"	35.0				
Mercury ■	0.7		"					

Table 4-4C
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-03 08/24/17 4.1 - 5.1 Sand/SC	LDP-03 10/24/19 4.1 - 5.1 Sand/SC	LDP-03 11/03/21 4.1 - 5.1 Sand/SC				
Metals (continued)								
Nickel	100.0	2.4 J	NA					
Selenium ■	10.0		"					
Silver ■	50.0		"					
Vanadium	NS	3.5 J	"					
Zinc ■	2,000 G	7.3 JH	"	7.0 J				

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
♠ = Well was found to be damaged so it was replaced during the 2019 sampling event.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
SC = Silty clay.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.

Table 4-4D
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-04 08/25/17 4.3 - 5.3 Sand	LDP-04 12/10/19 4.3 - 5.3 Sand	LDP-04 11/03/21 4.3 - 5.3 Sand				
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	5.0							
1,4-Dichlorobenzene	3.0							
4-Methyl-2-Pentanone (MIBK)	NS							
Acetone	50 G	13.0	3.1 J					
Benzene	1.0							
Carbon Disulfide	NS							
Chlorobenzene	5.0							
Ethylbenzene	5.0							
2-Hexanone	50 G							
Isopropylbenzene	5.0							
Methyl Ethyl Ketone	50 G							
Methylene Chloride	5.0							
Toluene	5.0							
Xylene (Total)	5.0							
Semi-Volatile Organic Compounds (ug/L)								
2,4-Dimethylphenol	50 G							
2-Chlorophenol	1*							
2-Methylnaphthalene	NS							
2-Methylphenol (O-Cresol)	1*							
4-Chloro-3-Methylphenol	1*							
4-Chloroaniline	5.0							
4-Methylphenol (P-Cresol)	1*							
Acetophenone	NS							
Anthracene (PAH)	50 G							
Benzaldehyde	NS							
Benzoic Acid	NS	NA						
Biphenyl	5.0							
Bis[2-ethylhexyl]phthalate	5.0							
Diethylphthalate	50 G		4.6 J					

Table 4-4D
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-04 08/25/17 4.3 - 5.3 Sand	LDP-04 12/10/19 4.3 - 5.3 Sand	LDP-04 11/03/21 4.3 - 5.3 Sand				
Semi-Volatile Organic Compounds (continued)								
Di-n-butylphthalate	50.0							
Fluoranthene (PAH)	50 G							
Fluorene	50 G							
Isophorone	50 G							
Naphthalene (PAH)	10 G							
Nitrobenzene	0.4							
N-Nitrosodiphenylamine	50 G							
N-Nitrosodi-n-Propylamine	NS							
Phenanthrene (PAH)	50 G							
Phenol	1*							
Pyrene (PAH)	50 G							
Pesticides (ug/L)								
4,4'-DDD	0.3	0.031 J						
4,4'-DDE	0.2							
4,4'-DDT	0.2	0.056 J						
Aldrin	ND							
alpha-BHC	0.01	**0.038 J**						
alpha-Chlordane (cis-)	0.05							
beta-BHC	0.04							
delta-BHC	0.04							
Dieldrin	0.004							
Endosulfan I	NS							
Endosulfan II	NS							
Endosulfan Sulfate	NS							
Endrin	ND							
Endrin Aldehyde	5.0							
Endrin Ketone	5.0							
gamma-BHC (Lindane)	0.05							

Table 4-4D
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-04 08/25/17 4.3 - 5.3 Sand	LDP-04 12/10/19 4.3 - 5.3 Sand	LDP-04 11/03/21 4.3 - 5.3 Sand				
Pesticides (continued)								
gamma-Chlordane (trans-)	0.05							
Heptachlor	0.04							
Heptachlor Epoxide	0.03							
Methoxychlor	35.0							
Mirex	0.03	NA						
Herbicides (ug/L)								
2,4,5-T	35.0	NA	NA	NA				
Silvex (2,4,5-TP)	0.26	"	"	"				
2,4-D	50.0	"	"	"				
PCBs (ug/L)								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.09							
Metals (ug/L)								
Aluminum	NS	300 J	31,100 JH	1,400 JH				
Antimony ■	3.0							
Arsenic ■	25.0		21.0 JH					
Barium	1,000	76.0	250.0	86.0				
Beryllium ■	3 G		1.5 J					
Cadmium ■	5.0		1.7 J	0.62 J				
Chromium ■	50.0		48.0	2.2 J				
Cobalt	NS	1.3 J	27.0	1.0 J				
Copper ■	200.0	1.7 J	67.0 J	5.1 JH				
Iron	300.0	210 J	**59,800**	**2,300**				
Lead ■	25.0		**52.0**	3.0 J				
Manganese	300.0	240 JH	**2,900 JH**	170.0				
Mercury ■	0.7			0.050 J				

Table 4-4D
Summary of Historic Groundwater Analytical Results From LDP Series Fill/Upper Sand Wells
Niagara Sanitation Site, Site No. 932054
Wheatfield, New York

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Well Number Sample Date Well Screen Interval (ft bgs) Screened Unit	NYSDEC Groundwater Standard ●	LDP-04 08/25/17 4.3 - 5.3 Sand	LDP-04 12/10/19 4.3 - 5.3 Sand	LDP-04 11/03/21 4.3 - 5.3 Sand				
Metals (continued)								
Nickel	100.0	6.6 J	60.0	2.9 J				
Selenium ■	10.0							
Silver ■	50.0							
Vanadium	NS		80.0	1.8 J				
Zinc ■	2,000 G	5.2 J	330 JH	28.0				

Notes:

● = NYSDEC Ambient Water Quality Standards and Guidance Values, June 1998, with addenda through 2004.
♠ = Well was found to be damaged so it was replaced during the 2019 sampling event.
*** = Standard applies to total chlorinated phenols.**
■ = Environmental Protection Agency priority pollutant metal.
B = Analyte detected in the associated blank, as well as in the sample (organics); value is greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
G = Guidance value.
J = Compound reported at an estimated concentration below the reporting limit.
JH = Compound is positively identified and reported at an estimated concentration that is probably high.
NA = Not analyzed.
NS = No standard or guidance value available.
ug/L = micrograms per liter or parts per billion.
Blanks = Contaminant analyzed for but not detected at or above the laboratory detection limit.
Yellow shaded values exceed NYSDEC groundwater standards or guidance values.
This table was modified on August 14, 2019 with the data validator's qualifiers for the 2017 results.
This table was modified on August 11, 2021 with the data validator's qualifiers for the 2019 results.
This table was modified on May 10, 2022 with the data validator's qualifiers for the 2021 results.