

**1888 Bathgate Avenue Redevelopment Site
Bronx, New York**

Remedial System Optimization Workplan

NYSDEC Site Number: C203088

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1.0 Executive Summary

The 1888 Bathgate Avenue Redevelopment Site is located at 4181 Third Avenue in the Bronx, New York (hereinafter referred to as the “Site”). The Site is located in the Borough of the Bronx, New York and is identified as Tax Block 2924, Lot 7 (former Lots 7, 10, 25, 30, and 34) on the New York City Tax Map. The Site is currently enrolled in the New York State (NYS) Brownfield Cleanup Program (BCP) (Site No. C203088), which is administered by the New York State Department of Environmental Conservation (NYSDEC). The Site was investigated and remediated in accordance with Brownfield Cleanup Agreement (BCA) Index No. C203088-03-17, which was executed in May 2017 by Wilfrid East Properties LLC, Wilfrid East LIHTC LLC, and Wilfrid West Properties LLC (collectively the “Original Applicants”). The BCA was amended on August 2, 2017 to add the Applicants Wilfrid Realty Corp., Wilfrid Properties LLC, Wilfrid LIHTC LLC, and ACMH Wilfrid Housing Development Fund Corporation (collectively, with the Original Applicants the “Applicants”).

A Site Management Plan (SMP) was developed in December 2018 as required under the NYSDEC’s DER-10 (Technical Guidance for Site Investigation and Remediation), dated May 2010, and the guidelines provided by the NYSDEC. The Site was remediated to Track 2 Restricted Residential Soil Cleanup Objectives (RRSCOs) in accordance with the NYSDEC-approved Remedial Action Work Plan (RAWP) and Decision Document (DD). The remedy included:

- Soil excavation and off-site disposal;
- Underground storage tank (UST) removal;
- Material import;
- Remedial design;
- In-situ Chemical Oxidation (ISCO) for groundwater treatment;
- Institutional control in the form of an Environmental Easement (EE);
- Completion of a Site Management Plan.

Quarterly groundwater sampling is performed and a monitoring report is submitted quarterly. Additionally, yearly Periodic Review Reports have been prepared and submitted.

This Remedial System Optimization Workplan is prepared to meet the NYSDEC request for system optimization. The ROS Workplan summarizes previous activities, provides an evaluation of the remedy, and proposes actions required in order to optimize the approved remedy.

The proposed actions include:

- Additional groundwater sampling and monitoring for three quarters;
- Data gap evaluation;
- Collection of additional geochemical parameters required for ISCO;
- Preparation of a RSO Report that includes a detailed remedy to address site conditions by June 31, 2023.

2.0 Site Overview

2.1 Site Description

The Site is located in the Bronx, Bronx County, New York and is identified as Section 2, Block 2924, Lot 7 (formerly Lots 7, 10, 25, 30, and 34) on the New York City Tax Map, as shown on **Figure 1**. The Site is an approximately 0.83-acre area and is bounded by: commercial uses and a public school facility to the north; Third Avenue, followed by Tremont Park to the east; residential and commercial uses to the south; and Bathgate Avenue, followed by institutional and industrial uses and a parking lot to the west. The surrounding area is primarily developed with commercial, institutional, and residential properties, with some industrial uses. A Site Location map and a Site Plan are provided as **Figure 1** and **Figure 2**.

2.2 Site and Remedial History

A full Site history, including historical Sanborn maps and a summary of previous investigations conducted at the Site, was provided in the RAWP. Historic records indicated that the Site was developed with private residences and stores as early as 1896, with industrial and manufacturing uses including a lumber yard, various warehouses, Decorative Plastics Co., a glass and glazing facility, a bed spring company, various clothing and accessory manufacturers, a woodworking facility, and a rebar manufacturing facility. ABCO Steel Door (ABCO), a steel door manufacturing facility, occupied the Site between approximately 1980 and 1993. Since approximately 1993, no manufacturing operations occurred at the Site; however, the Site buildings have been used for storage of equipment and supplies by ABCO. The initial environmental investigations at the Site include:

- A Phase I Environmental Site Assessment (ESA) was performed by ALC Environmental (ALC) during April 2016;
- A Phase II Work Plan was completed by ALC and discussed with the New York City Office of Environmental Remediation (OER) during May 2016;
- A Geotechnical Investigation Report was completed by SESI Consulting Engineers D.P.C during August 2016;
- A Remedial Investigation Report was completed by ALC during November 2016;
- A Supplement Remedial Investigation Report was completed by AKRF, Inc. during June 2017.

After the initial investigations, a Remedial Action Work Plan (RAWP) was completed by AKRF, Inc. during September 2017. The RAWP outlined the remedial activities and cleanup objectives for the Site. AKRF conducted a Remedial Design Investigation (RDI) between September 12 and 26, 2017 and February 6 and 22, 2018 to aid with the groundwater remedy to be implemented under the RAWP and Decision Document (DD).

The objectives for the remedial program were established through the remedy selection process stated in 6 NYCRR Part 375. Remedial actions were performed at the Site in accordance with the NYSDEC-approved RAWP and DD and applicable federal, state, and local rules and regulations. Detailed descriptions of the completed remedial actions are included in the Final Engineering Report (FER). The following remedial actions were conducted at the Site. Detailed descriptions of the remedial actions listed below are included in the SMP:

- Soil excavation and off-site disposal
- Underground storage tank (UST) removal
- Material import
- Remedial design
- In-situ Chemical Oxidation (ISCO) for groundwater treatment
- Institutional control in the form of an Environmental Easement (EE)
- Completion of a SMP during December 2018.

The information provided below summarizes the baseline soil and groundwater quality after the implementation of the remedial actions (up to 2018).

2.3 Soil Impacts

Following excavation of soil and fill material across the Site, 26 post-excavation endpoint samples were collected in areas that were not excavated to bedrock. Track 2 RRSCOs were met at all endpoint sample locations, or excavation extended to 15 feet below grade. No soil contamination is remaining in place above 15 feet below grade. The endpoint sample analytical results and sample locations and comparison to the UUSCOs and RRSCOs are included in the SMP.

2.4 Groundwater Impacts

Four groundwater monitoring wells (MW-10, 11, 12, and 13) were installed at the site. During the May 14, 2018 baseline groundwater sampling event, Tetrachloroethylene (PCE) was detected

at concentrations of 102 µg/L, 10.7 µg/L, and 29.1 µg/L, in groundwater samples from wells MW-11, MW-12, and MW-13 respectively. The highest concentration was detected in the center of the groundwater treatment area, with decreasing concentrations detected downgradient of the treatment area. Breakdown products of PCE, including cis-1,2-dichloroethene and trichloroethylene (TCE), were detected above the TOGS of 5 µg/L in samples from MW-13 at respective concentrations of 22.4 µg/L and 24 µg/L. No chlorinated volatile organic compounds (CVOCs) were detected above the TOGS standards in well MW-10.

One round of groundwater samples was collected on September 6, 2018, approximately two months after the initial ISCO event. CVOCs were detected at concentrations above the NYSDEC TOGS in the majority of the groundwater samples, with the exception of MW-11. PCE was detected at concentrations of 12.5 µg/L, 19.5 µg/L, and 61.7 µg/L in samples from MW-10-MW-12, and MW-13, respectively, above the NYSDEC TOG of 5 µg/L. These concentrations slightly increased compared to the baseline sampling event in May 2018. Cis-1,2 dichloroethene and TCE were detected at respective concentrations of 28.8 µg/L and 34 µg/L in sample from MW-13. No other CVOCs were detected at concentrations above their respective NYSDEC TOGS. The groundwater data is summarized in **Table 1**.

2.5 Remedial System

An ISCO Groundwater Treatment Program was established as part of the Site remedy. Approximately 8,325 gallons of a 5% to 10% sodium permanganate/water solution were injected into 24 temporary injections points located in the southwestern portion of the Site (the groundwater treatment area). The injection points were spaced approximately 12 to 14 feet apart to achieve 6 to 7 feet overlapping radius of influence (ROI). Multiple intervals were targeted in the treatment area above the bedrock surface, up to approximately 28 feet below grade. Groundwater is monitored via the four post-remedial monitoring wells installed in the southwestern portion of the Site to evaluate the effectiveness of the in-situ groundwater treatment program.

2.6 Current Remedy Status

Following the implementation of the ISCO to treat groundwater, no active remediation is conducted. Monitoring is being implemented to evaluate the effectiveness of the remedy.

2.7 Remedial Goals and Site Closure Criteria

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved RAWP and DD. The remedial goals included the attainment of the RRSCOs.

3.0 Purpose and Objectives

Per the SMP Section 7.3, a Remedial Site Optimization (RSO) study is required any time that the NYSDEC or the remedial party requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- The management and operation of the remedy is exceeding the estimated costs;
- The remedy is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;
- Site conditions change due to development, change of use, change in groundwater use, etc.;
- There is an anticipated transfer of the Site management to another remedial party or agency; or
- A new and applicable remedial technology becomes available.

This RSO Workplan provides the road map for collecting data needed to provide an in-depth evaluation and optimization of the approved remedy. The objectives of the RSO will be:

- Enhance the existing remedy with possible newer ISCO technologies and material;
- Increase effectiveness and efficiency of the remedy;
- Shorten remedial timeframe;
- Reduce the site's total lifecycle cost; and
- Incorporate sustainability considerations into the remediation efforts.

4.0 Site Conceptual Model

Soil beneath the Site consisted of fill comprising sand and silt, with varying amounts of brick, asphalt, wood, and gravel up to approximately nine feet below grade, underlain by sand and silt, with varying amounts of clay followed by glacial till down to bedrock. The upper 15 feet of soil and fill were excavated from the Site during remedial activities.

During implementation of the remedy, bedrock was encountered across the Site between approximately 6 feet and 55 feet below grade. Shallow bedrock, between approximately 6 and 15 feet below grade, is generally located in the northwestern portion of the Site. From the approximate center line of the Site, the depth to bedrock ranged from approximately 20 to 50 feet below grade and then sloped upward toward Third Avenue to approximately 30 feet below grade. Based on the Bedrock and Engineering Maps of Bronx County and Parts of New York and Queens Counties, New York (U.S. Geological Survey, 1992), the eastern Site boundary may be located along Cameron's Fault Line, which has an eastward-dipping surface. Bedrock throughout the Site is described as Inwood Marble.

Depth to shallow groundwater beneath the Site ranged from approximately 12.3 to 15.5 feet below sidewalk grade. Based on the groundwater measurements and monitoring well surveys conducted during the remedy, shallow groundwater ranges from approximately 46 to 50 feet NAVD and flows in a generally southwesterly direction, and deep groundwater flows in a generally south-southeasterly direction.

Groundwater impact in the last few years has been manifesting in wells MW-10, MW-11 and MW-13 with groundwater elevation mounding at MW-11.

5.0 Summary of Remedial Performance

The remedial implementation of soil excavation effectively removed all on-site soils that exceeded the RRSCOs to a maximum depth of 15 feet below grade. Post-excavation soil endpoint samples were collected, except at locations excavated down to bedrock. Additional information regarding the soil excavation and cleanup activities is summarized in the SMP.

As for the groundwater, chlorinated volatile organic compounds exceeding pertinent standards are still persistent in the samples collected from the monitoring wells, specifically in MW-10, 11, and 13.

Well MW-10 has only PCE concentrations exceeding standards and ranging between 12.6 and 62.2 ug/L in the last two years. Well MW-11 had concentrations of PCE reduced to below standards and appear to be breaking down into the daughter compounds of cis-1,2 and trans-1,2 DCE and vinyl chloride. Well MW-12 had no concentrations of CVOCs exceeding standards in recent history but had an unusual exceedance in the last reported quarter (2nd quarter 2022) for PCE and cis-1,2 DCE. Well MW-13 has several exceedances for PCE, TCE and cis-1,2 DCE, generally in the same range at previous quarters with the exception of the last reported quarter (2nd quarter 2022). A summary of historical groundwater data is included as **Table 1**. The monitoring well locations are depicted on **Figure 2**.

Overall, it appears that the implementation of the ISCO to treat impacted groundwater at the site has made some improvements initially especially in MW-12. However, some exceedances are still present for several CVOCs in the other wells.

6.0 Data Gap Investigation

The data reported for the June 23, 2022 sampling event indicates that concentrations of cis-1,2-dichloroethylene, tetrachloroethylene, and trichloroethylene increased dramatically in MW-12 to concentrations never before seen in the fifteen previous sampling events. Further review indicates an equally dramatic decrease in the concentrations of these same contaminants in MW-13 to concentrations below NYSDEC Class GA TOGS ($\mu\text{g/L}$) for the first time – contrary to the fifteen (15) prior sampling events. While these results have been re-checked and verified with the laboratory, it is likely that they are either anomalous or were inadvertently interchanged during the sampling process. Regardless, the only reasonable way of verifying these findings is to conduct one or two additional rounds of sampling to confirm these results and prepare a competent RSO Plan.

7.0 Collection of Additional Geochemical Parameters

The following geochemical parameters will be assessed in the next 3 quarters during the monitoring events to establish and track trends in water geochemistry that will assist in developing a comprehensive and effective ROS plan. These geochemical parameters include:

- nitrate;
- manganese
- dissolved manganese (Mn^{2+});
- total iron
- dissolved ferrous iron (Fe^{2+});
- sodium;
- sulfate;
- alkalinity; and
- methane.

The following parameters will be measured in the field during sampling using commercially available, hand-held field equipment:

- dissolved oxygen;
- oxidation-reduction potential (ORP);
- pH;
- temperature; and
- conductivity.

8.0 Schedule

Three quarters are proposed for the collection of the additional geochemical parameters data. This will include the 4th quarter 2022, and the first two quarters in 2023. This data will be included in the quarterly progress reports.

A RSO Plan will be submitted based on the additional data by July 31, 2022.

9.0 Conclusions and Recommendations

The remedy for the Site involved excavation and removal of impacted soil, implementation of an in-situ groundwater treatment program, and followed by the implementation of institutional and engineering controls. The Site is currently in the site management phase of the overall remedial process. Site management activities involve routine inspections, as outlined in the SMP, to confirm that all institutional and engineering controls implemented for the Site remain in place and are effective.

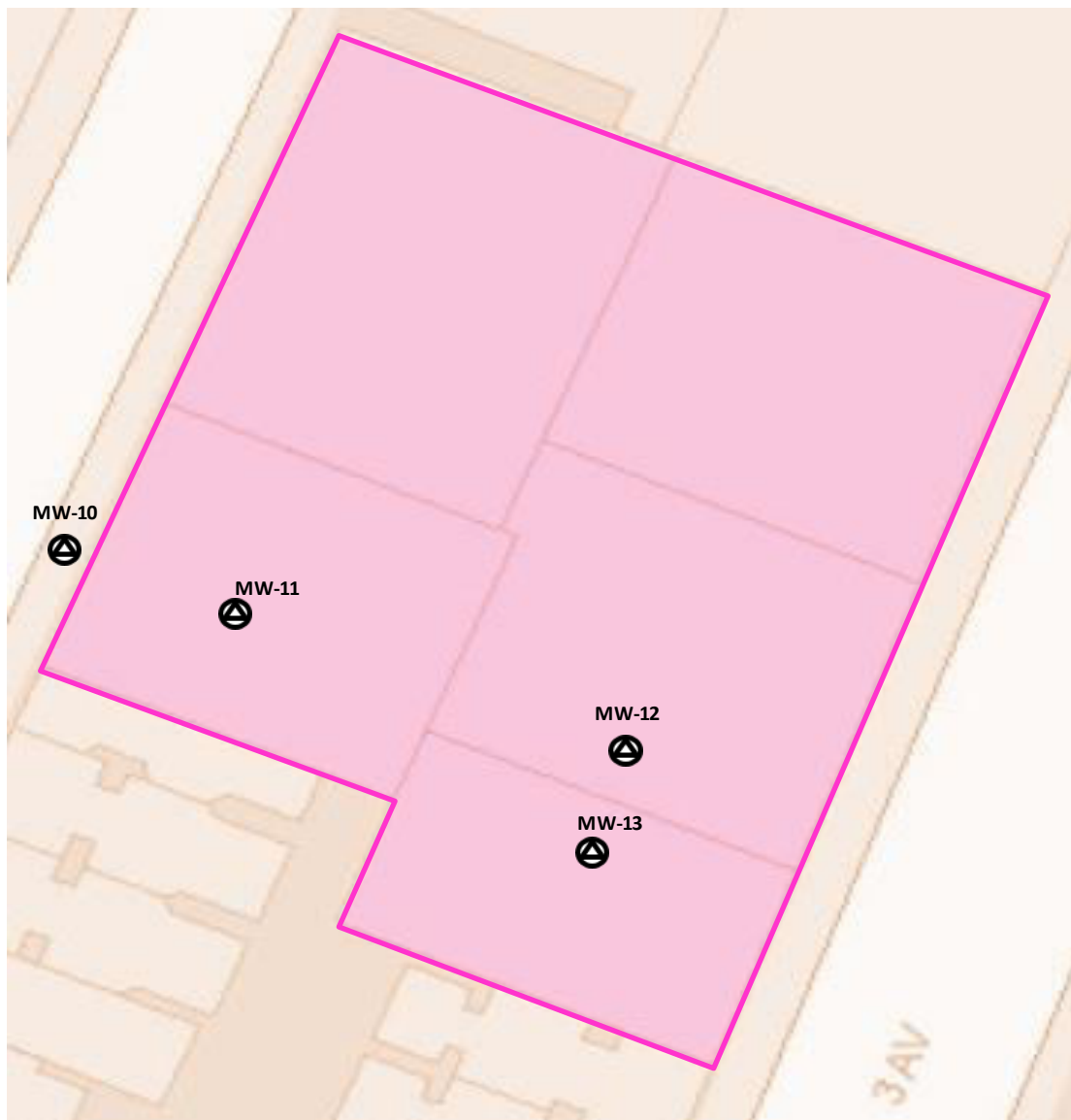
Based on the evaluation of the performance of the implemented remedies, the ISCO to treat impacted groundwater at the site has made some improvements in the groundwater quality but exceedances are still present for several CVOCs in onsite wells.



Additional information will be required to complete RSO. This information includes the collection of additional geochemical parameters during the next three quarters and evaluation of the data gap in the groundwater sampling results between MW-12 and MW-13.

A RSO Report will be submitted by July 2023.

FIGURES





-  Project Site Location
-  Groundwater Monitoring Wells



TABLES

Table 1
Summary of Historical Groundwater Data
1888 Bathgate Avenue
Bronx, NY 10457

MW-10													
COMPOUND	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethylene	1,2-Dichlorobenzene	1,2-Dichloroethane	Carbon tetrachloride	Chloroform	cis-1,2-Dichloroethylene	Methylene chloride	Tetrachloroethylene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl Chloride
NYSDEC Class GA TOGS (ug/L)	5	5	5	3	0.6	5	7	5	5	5	5	5	2
Sampling Date	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)	Result (ug/L)
5/14/2018	0.25 U	0.21 UJ	0.47 U	0.5 U	0.2 U	0.34 U	0.39 U	0.5 U	1 U	3.7	0.4 U	0.27 U	0.62 U
9/6/2018	0.54 U	0.57 U	0.59 U	0.53 U	0.6 U	0.55 U	1.4 U	0.51 U	1 U	12.5	0.54 U	0.66 U	0.79 U
2/1/2019	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
6/13/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.52	0.43	1 U	22.10	0.2 U	2.14	0.2 U
8/20/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.63	0.57	2 U	31.00	0.2 U	2.32	0.2 U
10/15/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.43 J	0.45 J	1 U	27.20	0.2 U	1.39	0.2 U
1/14/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.76	1.00	1 U	30.10	0.2 U	2.39	0.2 U
6/25/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4.07	0.62	1 U	33.60	0.2 U	1.88	0.2 U
9/23/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.51	0.59	1 U	12.60	0.2 U	1.34	0.2 U
12/18/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.89	0.54	1 U	32.30	0.200	0.20	0.20
3/17/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.93	0.83	1 U	35.20	0.200	2.57	0.20
6/2/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.32	0.86	1 U	36.00	0.200	2.38	0.20
8/12/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.06	0.51	1 U	23.80	0.200	1.60	0.20
10/28/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.00	1.10	1 U	44.00	0.200	3.00	0.20
3/22/2022	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.05	1.48	1 U	62.20	0.2 U	3.88	0.2 U
6/23/2022	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.06	0.840	1 U	39.40	0.2 U	2.90	0.2 U
MW-11													
5/14/2018	0.25 U	0.21 U	0.47 U	0.5 U	0.2 U	0.34 U	0.29 U	2	1 U	102	0.4 U	3	0.62 U
9/6/2018	0.54 U	0.57 U	0.59 U	0.53 U	0.6 U	0.55 U	0.5 U	5	1 U	0.9 U	0.54 U	0.53 U	0.79 U
2/1/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.38 J	7.50	1 U	100	0.37 J	16	0.2 U
6/13/2019	0.2 U	0.2 U	0.64	0.2 U	0.2 U	0.2 U	0.38 J	68.20	1 U	37	1.42	11.10	2.96
8/20/2019	0.2 U	0.2 U	0.27 J	0.2 U	0.2 U	0.2 U	0.2 U	28.20	1 U	3	1.57	1.42	50.20
10/15/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	9.88	1 U	2.75	2.09	1.64	80.40
1/15/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12.50	1 U	4.17	1.70	2.06	60.90
6/25/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.42 J	1 U	0.2 U	3.38	0.2 U	115
9/23/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.62	1 U	0.26	3.70	0.31	62
12/18/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	11.50	1 U	11.60	3.86	0.2 U	55.50
3/17/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	9.25	1 U	7.81	3.57	3.05	49.70
6/2/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	10.50	1 U	3.13	3.96	2.05	43.70
8/13/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	10.40	1 U	3.82	5.39	1.99	74.30
10/28/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	7.90	1 U	0.75	6.80	1.10	59.00
3/22/2022	0.2 U	1.21	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.74	1 U	1.50	4.64	0.29	30.70
6/23/2022	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	5.44	1 U	1.90	6.21	1.020	44.20
MW-12													
5/14/2018	0.25 U	0.21 U	0.47 U	0.5 U	0.2 U	0.34 U	0.29 U	3.6	1 U	10.7	0.4 U	3.5	0.62 U
9/6/2018	0.54 U	0.57 U	0.59 U	0.53 U	0.6 U	0.55 U	0.5 U	4.5	1 U	19.5	0.54 U	4.4	0.62 U
1/31/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.40	1 U	5.10	0.2 U	1.30	0.2 U
6/13/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.89	1 U	3.20	0.2 U	1.19	0.2 U
8/20/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 J	1.37	1 U	4.86	0.2 U	1.79	0.2 U
10/15/2019	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.52	1.83	1 U	7.18	0.2 U	2.69	0.2 U
1/15/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.64	1.32	1 U	6.23	0.2 U	2.41	0.2 U
6/25/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.79	1.62	1 U	7.52	0.2 U	2.59	0.2 U
9/23/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.01	1.62	1 U	10.70	0.2 U	3.65	0.2 U
12/18/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.09	1.47	1 U	9.73	0.2 U	0.20	0.200
3/17/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.54	1.09	1 U	3.68	0.2 U	2.05	0.200
6/2/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.46	1.39	1 U	3.53	0.2 U	2.12	0.2 U
8/13/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.39	1.31	1 U	4.39	0.2 U	2.53	0.2 U
10/28/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.20	1.31	1 U	3.90	0.2 U	2.30	0.2 U
3/22/2022	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.47	0.96	1 U	4.23	0.2 U	2.12	0.2 U
6/23/2022	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	13.30	1 U	18.60	0.380	24.60	0.2 U
MW-13													
5/14/2018	0.25 U	0.64 U	0.47 U	0.5 U	0.2 U	0.34 U	0.29 U	22.4	1 U	29.1	0.4 U	24	0.62 U
9/6/2018	0.54 U	0.77 U	0.59 U	0.53 U	0.6 U	0.55 U	0.5 U	28.8	1 U	61.7	0.54 U	34	0.79 U
1/31/2019	0.2 U	0.33 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	15	1 U	14	0.2 U	11	0.2 U
6/13/2019	0.2 U	0.57	0.2 U	0.2 U	0.2 U	0.2 U	0.35	16.50	1 U	50.90	0.26	27.90	0.2 U
8/20/2019	0.2 U	0.57	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	15.30	1 U	46.90	0.29 J	23.20	0.2 U
10/15/2019	0.2 U	0.52	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	14.60	1 U	43.90	0.29 J	21.50	0.2 U
1/15/2020	0.2 U	0.49 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	13.80	1 U	43.70	0.27 J	24.70	0.2 U
6/25/2020	0.2 U	0.55	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	14.20	1 U	22.30	0.42 J	15.70	0.2 U
9/23/2020	0.2 U	0.39 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12.90	1 U	31.30	0.46	20.50	0.2 U
12/18/2020	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.23	13.50	1 U	23.00	0.51	17.90	0.2 U
3/17/2021	0.2 U	0.2 U	0.390	0.2 U	0.2 U	0.2 U	0.23	11.50	1 U	11.80	0.37	14.50	0.2 U
6/2/2021	0.2 U	0.340	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	10.60	0.2 U	11.40	0.2 U	14.20	0.2 U
8/13/2021	0.2 U	0.360	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12.00	0.2 U	14.60	0.2 U	17.10	0.2 U
10/28/2021	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12.00	0.2 U	14.00	0.2 U	21.00	0.2 U
3/23/2022	0.2 U	0.390	0.2 U	0.2 U	0.2 U	0.2 U	0.22	11.40	1 U	9.04	0.38	15.40	0.2 U
6/23/2022	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.47	0.83	1 U	1.84	0.2 U	1.17	0.2 U

NOTES:
NYSDEC - New York State Department of Environmental Conservation
TOGS - Technical Operational Guida
ug/L - micrograms per liter
NS - Sample was not collected for an