B&B Engineers & Geologists
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an affiliate of Geosyntec Consultants

Revised 2023 Site Management Periodic Review Report – Durez Inlet

NYSDEC Site No. 932018
Durez Inlet
560 River Road
North Tonawanda, New York

Prepared for

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EXECUTIVE SUMMARY

Effective July 1, 1998, Site responsibilities for the former Occidental Chemical Corporation (OxyChem) Durez Inlet (Inlet/Site) in North Tonawanda, New York were assigned by OxyChem to Glenn Springs Holdings, Inc. (GSH), an affiliate of OxyChem. Pursuant to Section 11.0 of the Approved Inlet Remedial Plan (AIRP), GSH is conducting a post-remediation monitoring program at the Inlet.

During the calendar year 2023, hydraulic monitoring and chemical monitoring were conducted on a semiannual basis. Historically, hydraulic monitoring data has shown that the overall direction of groundwater flow at the Site is from east to west, across the upland area of the Inlet toward the Little Niagara River (River) with seasonal variations in groundwater flow at times producing west to east flow from the River into the upland area. The 2023 hydraulic monitoring data indicated an inward gradient from the River towards the upland area along the western edge of the Site while groundwater elevation data for wells located along the eastern edge indicated an east to west flow direction.

Per comment No. 6 on the New York State Department of Environmental Conservation (NYSDEC) conditional approval/response letter for the 2022 Periodic Review Report (PRR) for Durez NT/Inlet Site, GSH pumped dense non-aqueous phase liquid (DNAPL) from the extraction wells (EW-1 through EW-5) during both semiannual monitoring events. The total volume of DNAPL recovered for both monitoring events was 2.2 gallons. Based on field measurements and observations collected in 2023, no DNAPL was observed in the groundwater monitoring wells located outside the cutoff wall (North Lobe). As such, it is reasonable to conclude that the cutoff wall is functioning as designed, and that the remedial program continues to meet its design objectives.

The calendar year 2023 groundwater quality monitoring results are consistent with historical results. Analytical results for wells MW-18I and MW-19I were less than the New York State (NYS) Groundwater Standards for Class GA (potable) groundwater. Concentrations of total Targeted Site Compounds (TSCs) were present in MW-20I (average 2,436 micrograms per liter [µg/L] in 2023 versus 2,746 µg/L in 2022) and in MW-22I (average 2,775 µg/L in 2023 versus 3,975 µg/L in 2022). The general trend in the total TSC concentrations in MW-20I has been downward since 1996. As a result of implementation of the in situ chemical oxidation (ISCO) program in 2011/2012, the concentrations observed in MW-20I were reduced and have since stabilized at these reduced concentrations. Historical concentrations of total TSCs in groundwater samples collected from monitoring well MW-22I have shown both increasing and decreasing trends historically. Total TSC concentrations in well MW-22I have remained relatively consistent with only slight increases since 2016, other than recent increased concentrations following implementation of the passive diffusion remedial program (discussed below) that are expected to be short-term. The concentrations prior to implementation of the passive diffusion program were lower than the pre-injection concentrations.

A passive diffusion remedial program was implemented from October 2019 through October 2022 at groundwater monitoring wells MW-16I, MW-20I, and MW-22I. Results of the completed program were submitted to the NYSDEC by GSH under a separate cover on January 30, 2023. The NYSDEC approved GSH's recommendation to continue the passive diffusion remediation program in a letter dated April 4, 2023 but requested that the program be assessed on an annual basis rather than after an additional three-year period. The new passive diffusion remedial program was implemented at groundwater monitoring wells MW-20I and MW-22I in April 2023. The summary report has been included in Appendix E but will not be discussed in detail in this PRR.

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1. INTRODUCTION

Effective July 1, 1998, Site responsibilities for the former Occidental Chemical Corporation (OxyChem) Durez Inlet (Inlet) were assigned by OxyChem to Glenn Springs Holdings, Inc. (GSH), an affiliate of OxyChem. Since that time, pursuant to the individual Site documents and subsequent approved modifications, GSH has conducted routine monitoring and maintenance programs at the Site. On October 1, 2008, GHD, formerly Conestoga-Rovers & Associates (CRA), was retained to perform monitoring, maintenance, and reporting activities for the Site under the direct management of GSH. On August 1, 2022, B&B Engineers and Geologists of New York, P.C. (B&B), an affiliate of Geosyntec Consultants, Inc. (Geosyntec), was retained by GSH to perform operation, maintenance, monitoring, and reporting activities for the Site.

Pursuant to Section 11.0 of the *Approved Inlet Remedial Plan (AIRP)*, GSH is conducting a post-remediation monitoring program at the Inlet. The AIRP is Appendix A to the *Third Stipulation and Partial Consent Judgment* (Third PCJ) filed in United States District Court-Western District of New York by the State and OxyChem as part of the Durez Inlet Remediation Project. The monitoring program has been underway since May 1995, following completion of Site environmental restoration in April 1995.

The requirements of the post-remediation monitoring program were outlined in the NYSDEC-approved "*Inlet Monitoring Plan*" (Rust Environment and Infrastructure, October 1995). The "*Inlet Monitoring Plan*" (IMP) was revised in 2019 (GHD, April 2019) and approved by NYSDEC in an email dated August 13, 2019.

Additional remediation activities that have been conducted over the years include the following:

- An active in situ chemical oxidation (ISCO) program was conducted from April 2011 through April 2012 with injections occurring in April 2011, November 2011, and April 2012.
- A passive diffusion remedial program using Regenesis® Oxygen Release Compound (ORC) socks in October 2019 through October 2022.
- A second passive diffusion remedial program using the Regenesis® ORC socks beginning in April 2023 with completion in April 2026.

A Site location plan is presented on Figure 1.1.

This Periodic Review Report (PRR) describes the monitoring and maintenance activities conducted and presents the data collected for the Inlet from January 1, 2023 through December 31, 2023. The completed *NYSDEC Institutional Controls and Engineering Controls (ICEC) Certification Form* is included as Appendix A.

Other activities associated with the Site include ongoing evaluation of sediment in the Pettit Cove. This evaluation is separate from the operation, maintenance, and monitoring (OM&M) activities for the Durez Inlet Site, and therefore, is not discussed in the PRR. Documentation associated with

the passive diffusion ORC program and the Pettit Cove sediment evaluation will continue to be provided to the NYSDEC as an attachment to the PRR.

2. INLET MONITORING PROGRAM

The activities associated with the Inlet monitoring program in accordance with Section 11.0 of the AIRP include:

- Measurement of the Little Niagara River (River) water level and monitoring well groundwater levels
- Chemical analysis of groundwater samples
- Monitoring and operation of dense non-aqueous phase liquid (DNAPL) extraction wells
- Maintenance of wells
- Inspection of Site physical characteristics
- Evaluation of remediation performance
- Submittal of summary reports to the NYSDEC

This annual report presents the results of hydraulic and chemical monitoring of groundwater; monitoring and extraction of DNAPL; and inspection activities conducted at the Inlet for the calendar year 2023 in support of the AIRP.

2.1 Purpose

The IMP outlines the DNAPL and groundwater monitoring program and a systematic inspection of the Inlet. The purpose of the IMP is to verify the effectiveness of the remedy in the North Lobe, such as extraction of free or mobile DNAPL and isolation of the residuals by the cutoff and sheet pile walls. The North Lobe is defined as the area located inside of the cutoff wall to the north of the Inlet Cove (Figure 2.1). Five (5) DNAPL extraction wells are located within the North Lobe. Eight (8) groundwater monitoring wells are located within and outside of the North Lobe for the purposes of hydraulic and chemical groundwater monitoring. Specific objectives of the DNAPL/groundwater monitoring program for the North Lobe are as follows:

- To identify and remove, as necessary, DNAPL that collects in the extraction well sumps;
- To characterize groundwater flow directions and hydraulic gradients in the vicinity of the North Lobe;
- To identify and document long-term changes in groundwater quality in the North Lobe area (inside and outside of the cutoff wall); and
- To inspect groundwater collected from the lower alluvium monitoring wells outside of the North Lobe for the presence of DNAPL.

Inspection of the Site includes observations for evidence of erosion and disturbance to remedial structures.

2.2 Scope

2.2.1 Groundwater Quality Monitoring Program

The groundwater quality monitoring program (chemical monitoring) consists of collecting and analyzing groundwater samples from five monitoring wells designated as "intermediate" wells, consisting of one well hydraulically upgradient to the North Lobe (MW-16I) and four wells hydraulically down- or cross-gradient to the North Lobe (MW-18I, MW-19I, MW-20I, and MW-22I). The groundwater samples are analyzed for the Targeted Site Compounds (TSCs), consisting of:

Benzene	Toluene	Chlorobenzene
1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene
1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	

The groundwater samples are also inspected for the presence of DNAPL. The monitoring well locations are shown on Figure 2.1.

2.2.2 Hydraulic Monitoring Program

The hydraulic monitoring program consists of measuring groundwater elevations in seven intermediate monitoring wells (MW-15I, MW-16I, MW-17I, MW-18I, MW-19I, MW-20I, and MW-22I) installed in the lower alluvium outside the cutoff wall, and one monitoring well (MW-21S) installed in the upper alluvium and fill inside the cutoff wall and designated as a "shallow" well. Groundwater elevations and DNAPL levels are also measured in five extraction wells (EW-1, EW-2, EW-3, EW-4, and EW-5) installed in the lower alluvium inside the cutoff wall in the isolated area where DNAPL has been detected. The River elevation is recorded utilizing a staff gauge (SG) located along the River's edge and is measured before and after groundwater levels are measured. The monitoring and extraction well locations and the SG location are presented on Figure 2.1.

DNAPL extraction only occurs during the boating off-season from October 15 to April 15. During this period, DNAPL is removed from an extraction well when the level of DNAPL in that well reaches the top of the extraction well sump. During the boating season when DNAPL extraction does not occur, any accumulated DNAPL remains within the containment wall of the North Lobe area. The top of the containment wall is at an elevation of approximately 562 feet above mean sea level (AMSL), while the top of sump elevations range from 538.10 to 539.20 feet AMSL (approximately 24 feet below the top of the containment wall). The actual cut off wall embedment is approximately 530 feet AMSL with some variations due to obstructions. In addition, the cutoff wall is anchored 4- to 6-feet into the upper till. The bottom elevation of sumps is 537 feet AMSL which is approximately 8-feet above the embedment of the cutoff wall. Therefore, containment of DNAPL occurs even when DNAPL is not being pumped during the boating season.

3. INLET MONITORING PROGRAM RESULTS

3.1 Groundwater Quality Monitoring

Sampling, analytical protocols, and detection limits for the sampling program have been established and set forth in the original Partial Consent Judgment (PCJ) Appendix B-1, which is also included as Appendix B to the IMP. The IMP also includes sampling and field procedures that supplement those in the PCJ. The five intermediate groundwater monitoring wells (MW-16I, MW-18I, MW-19I, MW-20I, and MW-22I) were sampled semiannually on April 13, 2023 and October 31, 2023. All sampling was conducted in accordance with the procedures described in Appendix B of the IMP.

ALS Environmental (ALS) in Rochester, New York, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified (NELAP New York ID # 10145) laboratory, conducted the sample analyses. The analytical results are summarized in Table 2.1. The Quality Assurance/Quality Control (QA/QC) reviews for the two semiannual sampling events are provided in Appendix B.

The analytical results were compared to New York State (NYS) Class GA Groundwater Standards (Class GA Groundwater Standards) [NYS GQS] set forth in the Division of Water "*Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations"* (June 1998). The comparison is presented in Table 2.1. Concentrations of individual TSCs versus time for the five monitoring wells sampled are presented on Charts 1 through 5. Graphs showing concentrations of total TSCs versus time are presented on Figures 2.2 through 2.6. Only the TSC concentrations for the parent samples are shown on the charts and figures. Historical groundwater results and TSC concentrations are provided in Appendix C.

3.1.1 Chemical Concentrations

Groundwater quality generally remained stable during the calendar year 2023. A review of the analytical results for the two sampling events conducted in 2023 from monitoring wells MW-18I and MW-19I indicated that TSC concentrations were less than the NYS GQS, which is generally consistent with previous monitoring results. Chlorobenzene was detected at estimated concentrations less than the NYSGQS for the April 2023 event at MW-18I and the fall event for MW-19I. Concentrations of benzene; chlorobenzene; and 1,3- and 1,4-dichlorobenzene detected at the remaining two monitoring wells, MW-20I and MW-22I, were significantly greater than the NYS GQS, which is also consistent with previous monitoring results.

A passive diffusion remedial program was implemented at groundwater monitoring wells MW-16I, MW-20I, and MW-22I from October 2019 through October 2022. Results of the completed program was submitted to the NYSDEC by GSH under a separate cover on January 30, 2023. The NYSDEC approved GSH's recommendation to continue the passive diffusion remediation program in a letter dated April 4, 2023 but requested that the program be

assessed on an annual basis rather than after an additional three-year period. The new passive diffusion remedial program was implemented at groundwater monitoring wells MW-20I and MW-22I in April 2023. A summary report for the 2023 activities under this program was submitted under separate cover, however a copy of the report can be found in Appendix E.

The groundwater quality in each of the five intermediate groundwater monitoring wells is further discussed below.

MW-16I

The concentrations of total TSCs in samples collected from monitoring well MW-16I, which is considered to be an upgradient well for the Site, were primarily non-detect (ND) at 1.0 micrograms per liter (µg/L) from the time monitoring began in July 1995 until June 2006 (Figure 2.2 and Appendix C). In June 2006, the total concentration of TSCs at this monitoring well was 17.63 µg/L. In September 2006, the total TSC concentration at this monitoring well decreased back to nearly ND and then began to fluctuate, demonstrating a general increasing trend. The reason for this increasing trend is not known. Total TSC concentrations have remained at less than 4 µg/L since September 2006.

Total TSC concentrations at monitoring well MW-16I in 2023 was 5.78 µg/L (5.13 µg/L for the duplicate) during the spring monitoring event and 0.262 µg/L during the fall monitoring event. These concentrations were similar to the total TSC concentrations in 2022 (1.87 µg/L during the spring monitoring event and 3.05 µg/L during the fall monitoring event).

During each of the 2023 monitoring events, the individual TSCs in MW-16I were either ND or were detected at estimated concentrations below the reporting limits of 1.0 µg/L and NYS GQS, except for chlorobenzene during the spring monitoring event (Table 2.1). Benzene was detected at an estimated concentration of 0.260 µg/L (non-detect in the duplicate) and non-detect during the spring and fall monitoring events, respectively, which was less than the NYS GQS of 1 µg/L. Benzene has been detected consistently at estimated concentrations less than 1.0 µg/L or slightly greater than 1.0 µg/L since 2006. Benzene marginally exceeded the NYS GQS in at least one quarter per year from 2013 through 2018 but has not been detected at a concentration greater than the NYS GQS since February 2018. The chlorobenzene was detected at concentrations of 5.51 µg/L (5.13 µg/L in the duplicate) and an estimated concentration of 0.262 µg/L detected during the spring and fall monitoring events, respectively. The spring monitoring event exceeded the NYS GQS of 5 µg/L for chlorobenzene while the fall monitoring event did not exceed the NYS GQS for chlorobenzene. Concentrations of individual TSCs at MW-16I with time are shown on Chart 3.

MW-18I

The total concentrations of TSCs in samples collected from monitoring well MW-18I have been primarily ND since July 1999 (Figure 2.3 and Appendix C). Individual concentrations of TSCs at this location have not exceeded the NYS GQS since April 1999. The concentrations of individual TSCs during 2023 were all ND at 1.0 µg/L or at estimated concentration(s) less than the NYS GQS

(Table 2.1). Chlorobenzene was detected during the spring sampling event at an estimated concentration of 0.350 µg/Lwhile Toluene was detected at an estimated concentration of 0.212 µg/L (duplicate sample) during the fall sampling event. Concentrations of individual TSCs at MW-18I versus time are shown on Chart 4.

MW-19I

The total concentrations of TSCs in samples collected from monitoring well MW-19I have been primarily ND since July 2002 (Figure 2.4 and Appendix C). Individual concentrations of TSCs at this location have not exceeded the NYS GQS since July 1999. Individual concentrations of TSCs during 2023 were all ND at 1.0 µg/L or at estimated concentration(s) less than the NYS GQS (Table 2.1). Toluene was detected at an estimated concentration of 0.349 µg/L during the fall sampling event. Concentrations of individual TSCs at MW-19I versus time are shown on Chart 5.

MW-20I

The total concentration of TSCs in samples collected from well MW-20I has fluctuated during the years of Site monitoring; however, overall, the trend has been downward since 1996 (Figure 2.5 and Appendix C). In 2008 and 2009, the total concentrations of TSCs were consistently greater than 10,000 µg/L. Following the first ISCO injection event in April 2011, the total concentration of TSCs decreased to less than 3,200 µg/L during the May 2011 sampling event. Upon completion of the final ISCO injection event in April 2012, the total concentration of TSCs decreased to less than 2,200 µg/L during the May 2012 sampling event. From May 2012 to December 2020, the total concentration of TSCs had trended slightly upwards, likely due to rebound effects following the ISCO injections. Since December 2020, the total concentration of TSCs has been trending downward. Overall, the concentrations remain stable. Total TSC concentrations have remained at less than 4,000 µg/L since February 2012.

Total concentrations of TSCs during 2023 were 2,737 µg/L during the spring monitoring event and 2,136 µg/L during the fall monitoring event. These concentrations were slightly lower than the total TSC concentrations in 2022 (3,055 µg/L [2,672 µg/L in the duplicate sample] during the spring monitoring event and 2,511 µg/L during the fall monitoring event).

During each of the 2023 monitoring events, benzene; chlorobenzene; and 1,3- and 1,4-dichlorobenzene were detected at concentrations greater than the NYS GQS at MW-20I (Table 2.1). Benzene was detected at a concentration of 12.0 µg/L (estimated)and 15.1 µg/L (estimated) during the spring and fall monitoring events, respectively, which were greater than the NYS GQS of 1 µg/L. These concentrations were less than the concentrations detected in 2022 (367 µg/L [295 µg/L in the duplicate sample] in the spring and 254 µg/L in the fall), but within the historical concentration range for benzene at this location (refer to Appendix C). Concentrations of chlorobenzene; 1,3-dichlorobenzene; and 1,4-dichlorobenzene detected in 2023 were marginally less than the concentrations detected in 2022. The concentrations of these three TSCs have remained relatively stable since approximately 2012 along with a slight downward trend for all three compounds since that time. Concentrations of individual TSCs at MW-20I versus time are shown on Chart 1.

The post-injection concentrations observed in MW-20I have remained orders of magnitude lower than those observed prior to the implementation of the ISCO program and have since stabilized and appear to be trending downward. with the implementation of the passive diffusion ORC program.

MW-22I

The total concentration of TSCs in samples collected from well MW-22I has fluctuated during the years of Site monitoring (Figure 2.6 and Appendix C). The total TSC concentration at this location exhibited an overall increasing trend from approximately 2005 to approximately 2009, and then exhibited fluctuations from 2009 through 2016. Concentrations were relatively stable and consistent from approximately 2016 through 2019. Following implementation of the passive diffusion remedial program in October 2019, both total and individual concentrations of TSCs decreased to near-historic lows in May 2020 and then started increasing. The total concentrations of TSCs in well MW-22I during 2023 were 4,733 µg/L during the spring 2023 monitoring event and 818 µg/L during the fall 2023 monitoring event, which were slightly greater than and less than the total TSC concentrations of 4,104 µg/L and 3,846 µg/L during the spring and fall 2022 events, respectively. These wide-ranging concentration fluctuations are likely attributable to the ongoing passive diffusion remedial program (refer to Appendix E) and are expected to be short-term.

During each of the 2023 monitoring events, benzene; chlorobenzene; and 1,3- and 1,4-dichlorobenzene were detected at concentrations greater than the NYS GQS at MW-22I (Table 2.1). Benzene was detected at concentrations of 29.3 µg/L and 28.4 µg/L during the spring and fall monitoring events, respectively, which were greater than the NYS GQS of 1 µg/L. These concentrations were less than the concentrations detected in 2022 (47.7 µg/L in the spring and 28.4 µg/L in the fall), respectively. The concentration of benzene detected at this location was relatively stable from approximately 2014 through October 2019 and has also fluctuated since implementation of the first passive diffusion remediation program (October 2019 to October 2022). A second passive diffusion remediation program was implemented in April 2023. Concentrations of chlorobenzene; 1,3-dichlorobenzene; and 1,4-dichlorobenzene detected in 2023 were slightly higher during the spring 2023 monitoring event than the concentrations detected in 2022, while concentrations were much lower in the fall 2023 monitoring event than the concentrations detected in 2022. Concentrations of individual TSCs at MW-22I with time are shown on Chart 2.

Although the 2011 to 2012 ISCO program targeted the areas around MW-20I and MW-22I, the concentrations of TSCs in MW-22I were consistently lower than in MW-20I following the ISCO treatment, up until 2021. Total concentrations of TSCs in MW-22I were reduced after the 2011 and 2012 ISCO events to less than 1,000 µg/L; however, rebound was observed following the injection events. The increase in concentrations since the 2011 and 2012 ISCO events is indicative of rebound within clayey soils after three injections of activated sodium persulfate however, the passive diffusion programs may have contributed to additional dissolution of TSCs and the increases in 2021 through 2023.

Total TSC concentrations in MW-20I and MW-22I during 2021, 2022, and 2023 are summarized and presented in the following tables.

Table 1 2021 Total TSC Concentrations (µg/L)

Well Location	First Semiannual Period	Second Semiannual Period
MW-20I	3,546	3,229
MW-22I	3,870	4,051

Table 2 2022 Total TSC Concentrations (µg/L)

Well Location	First Semiannual Period	Second Semiannual Period
MW-20I	3,055 (2,672 duplicate)	2,511
MW-22I	4,104	3,846

Table 3 2023 Total TSC Concentrations (µg/L)

Well Location	First Semiannual Period	Second Semiannual Period
MW-20I	2,737	2,136
MW-22I	4,733	818

The clayey (tight) soils, the sheet pile wall installed cross-gradient to groundwater flow, the adjacent River, and a clay aquitard surrounding the MW-20I and MW-22I well cluster do not allow significant groundwater flow through this area of the Site. These factors, combined with the ISCO injections and the passive diffusion programs, help to explain the fluctuating concentrations observed at well MW-22I in the years subsequent to the injections. No DNAPL has been observed in MW-22I during any of the monitoring events.

Figure 2.6 and Chart 2 show that the concentrations of TSCs in MW-22I were lower than the pre-injection concentrations and were relatively stable until concentrations started increasing in 2020. These increases in concentration in MW-22I likely represent a short-term fluctuation associated with the first passive diffusion remedial program implemented in October 2019 and completed in October 2022. A second passive diffusion remedial program was implemented in April 2023.

3.1.2 Chemical Trends

As indicated in Section 3.1.1, graphs of the total concentrations of TSCs in monitoring wells MW-16I, MW-18I, MW-19I, MW-20I, and MW-22I since completion of Site remedy (April 1995) through the end of the year 2023 are presented on Figures 2.2 through 2.6. Concentrations of

individual TSCs are shown in Charts 1 through 5. The historical and current analytical data for these wells are presented in Appendix C.

A review of the graphs and data indicate:

1. While occasional detections of low concentrations of the TSCs have occurred in the upgradient monitoring well MW-16I, the concentrations of the TSCs in this well have been less than the NYS GQS since July 1996, with the exception of:

    a. the chlorobenzene concentrations during the June 2006 sampling event (16 µg/L) and October 2020 sampling event (7.04 µg/L [estimated] in the duplicate sample versus 2.79 J µg/L [estimated] in the parent sample) and the April 2023 sampling event (5.51 µg/L[duplicate was 5.13 µg/L])

    b. the benzene concentrations during the August 2009, November 2013, May and November 2014, May 2015, February 2016, February 2017, and February 2018 sampling events. These benzene concentrations exceeding the NYS GQS of 1.0 µg/L have ranged from 1.1 to 1.3 µg/L.

    c. No other TSC concentrations exceeded the NYS GQS in 2023.

2. Individual concentrations of TSCs detected in groundwater samples collected from monitoring wells MW-18I and MW-19I have been less than the NYS GQS since October 1999.

3. Although there is variability in the concentrations of TSCs in monitoring well MW-20I between groundwater monitoring events, concentrations have stabilized at lower than historical levels, with slight increases in concentrations since 2012 until December 2020. This is likely due to rebound following completion of the 2011/2012 ISCO injections. Since December 2020, total TSCs have trended downward.

4. The concentrations of TSCs in groundwater samples collected from monitoring well MW-22I have fluctuated historically. Concentrations were relatively stable and consistent from approximately 2016 through 2019. Increases in concentrations of TSCs have been observed since the start of the first passive diffusion remedial program in October 2019 through October 2022, but these increases appeared to be stabilizing during the passive diffusion program and was likely due to changing geochemical conditions in the subsurface resulting from the passive diffusion remedial program. The concentration of TSC increased again during the spring 2023 monitoring event but decreased significantly during the fall 2023 monitoring. A second passive diffusion program was implemented in April 2023 and could explain the decrease in TSC concentrations from the April 2023 sampling event to the October 2023 sampling event.

3.1.3 Passive Diffusion Remediation at MW-16I, MW-20I, and MW-22I

The first passive diffusion remedial program was implemented at groundwater monitoring wells MW-16I, MW-20I, and MW-22I from October 2019 through October 2022. Results of the completed program were submitted to the NYSDEC by GSH under a separate cover on January 30, 2023. The NYSDEC approved GSH's recommendation to continue the passive diffusion remediation program in a letter dated April 4, 2023 but requested that the program be assessed on an annual basis rather than after an additional three-year period. The new passive diffusion remedial program was implemented at groundwater monitoring wells MW-20I and MW-22I in April 2023. The summary report for the 2023 activities under this program can be found in Appendix E.

3.2 Hydraulic Monitoring

Groundwater elevations were measured semiannually in the DNAPL extraction wells, and the groundwater monitoring wells on April 12 and October 30, 2023.

During a hydraulic monitoring event, the elevation of the River is also measured for comparison to the groundwater elevations. A summary of the 2023 water elevations for the eight monitoring wells, five extraction wells, and the River is presented in Table 2.2.

Groundwater potentiometric surface maps for the Site have been prepared based on the semiannual groundwater elevations and are presented on Figures 2.7 and 2.8.

A review of the hydraulic data measured during the 29 years of monitoring shows a correlation of the lower alluvium groundwater elevations (as measured in Inlet Site monitoring wells) with the elevation of the River. The potentiometric contours presented on Figures 2.7 and 2.8 show that groundwater flow is generally in an east-to-west direction across the upland area of the Site toward the River. However, groundwater flow has been observed from the River into the North Lobe. Groundwater flow direction that fluctuates temporally is not uncommon near the groundwater-surface water interface. However, based on a comparison of the groundwater elevations in the wells farthest from the River (MW-15I through MW-18I) to wells closest to the River's shoreline, over the course of the monitoring period, the overall general direction of groundwater flow at the Site was still east to west.

3.2.1 Dense Non-Aqueous Phase Liquid

DNAPL levels were measured in the five extraction wells (EW-1, EW-2, EW-3, EW-4, and EW-5) on a semiannual basis on April 12 and October 30, 2023. Table 2.3 summarizes the DNAPL elevations.

DNAPL removal from the five extraction wells is restricted to October 15 to April 15, during the boating off-season. Historically, DNAPL was only removed if its elevation was greater than the top of the sump in the bottom of the extraction well. However, per comment No. 6 on the NYSDEC response letter for the 2022 Periodic Review Report (PRR) for Durez NT/Inlet Site, the NYSDEC

requested that GSH pump, to the extent practicable, DNAPL from the sumps regardless of the elevation of the DNAPL. GSH pumped dense non-aqueous phase liquid (DNAPL) from the extraction wells (EW-1 through EW-5) during both semiannual monitoring events regardless of DNPAL volume in the well. The total volume of DNAPL recovered for both monitoring events was 2.2 gallons.

Table 2.4 shows the volume of DNAPL recovered from the Site since the onset of maintenance and monitoring activities in May 1995. A total of 1,137.3 gallons of DNAPL has been recovered from the Site since remediation began in August 1993. The accumulation rate of DNAPL in the extraction wells has slowed over time. Since 2002, 21.3 gallons of DNAPL have been recovered. The highest annual amount of DNAPL recovered since 2002 was 5.3 gallons in 2010. No DNAPL was removed from the extraction wells from 2002 through 2008, from 2015 through 2018, or from 2020 through 2022.

3.2.2 Site and Well Inspections

Site and physical well inspections were completed semiannually on April 12 and October 30, 2023. The completed field inspection forms are included as Appendix D. Evidence of minor animal burrowing was observed beneath the concrete pads at EW-2 and MW-15I during both Site inspections. It is not anticipated that these animal burrows present a concern to the integrity of the wells at this time and therefore no repairs were required.

Results of the semiannual well inspections are presented in Table 2.5. No deficiencies were noted during the semiannual well inspections. Repairs were not required.

3.2.3 Maintenance Activities

No maintenance activities were performed during the monitoring period.

4. SUMMARY OF 2023 OPERATION

The remedial systems at the Site are functioning as designed to contain the DNAPL, which allows for DNAPL removal and off-Site disposal as necessary.

The concentrations observed in MW-20I have remained orders of magnitude lower than those observed prior to the implementation of the ISCO program in 2011/2012 and have since stabilized; however, the concentrations have remained orders of magnitude greater than the NYS GQS. Only slight increases have occurred in MW-20I since 2012 due to rebound however since December 2020 concentrations continue to trend downward. The pre-injection concentrations observed in MW-22I were significantly lower than those observed in nearby well MW-20I. The concentrations of TSCs in MW-22I have remained relatively consistent with only slight increases since 2016, other than recent increased concentrations following implementation of the passive diffusion remedial program (discussed below) that are expected to be short-term.

Overall, groundwater quality to the north and east outside the cutoff wall has stabilized. The 2023 semiannual groundwater quality data for MW-16I, MW-18I, and MW-19I are consistent with historical analytical data. Analytical results for well MW-16I showed chlorobenzene was slightly greater than the NYS GQS in the spring 2023 monitoring event but returned to less than the NYS GQS in the fall 2023 monitoring event. All other analytical results for MW-16I were less than the NYS GQS. Analytical results for wells MW-18I and MW-19I were less than the NYS GQS.

The first passive diffusion remedial program was implemented at groundwater monitoring wells MW-16I, MW-20I, and MW-22I from October 2019 through October 2022. Results of the completed program were submitted to the NYSDEC by GSH under a separate cover on January 30, 2023. The NYSDEC approved GSH's recommendation to continue the passive diffusion remediation program in a letter dated April 4, 2023 but requested that the program be assessed on an annual basis rather than after an additional three-year period. The new passive diffusion remedial program was implemented at groundwater monitoring wells MW-20I and MW-22I in April 2023. The summary report for the 2023 activities under this program can be found in Appendix E.

The hydraulic monitoring data show that the overall direction of groundwater flow at the Site is from east to west, across the upland area of the Inlet toward the River, however there are localized groundwater flow patterns where there is a west to east directionality from the River towards the North Lobe.

GSH pumped DNAPL from the extraction wells (EW-1 through EW-5) during both semiannual monitoring events regardless of DNPAL volume in the well. A combined total of 2.2 gallons of DNAPL was recovered combined for both monitoring events. Based on field measurements and observations collected in 2023, no DNAPL was observed in the groundwater monitoring wells located outside the cutoff wall. The monitoring results indicate that the cutoff wall is functioning as designed.

The long-term changes in groundwater quality will continue to be monitored and evaluated. The Inlet monitoring program data for the Site demonstrates that the remedial program continues to meet its design objectives.

Tables

Table 2.1

2023 Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

Compound/Parameter	* Standard Value (µg/L)	Reporting Limit (µg/L)	MW-16I		MW-18I	
			April 13, 2023	October 31, 2023	April 13, 2023	October 31, 2023
1,2,3-Trichlorobenzene	5	1	1.00 U / 1.00 U	1.00 U	1.00 U	1.00 U / 1.00 U
1,2,4-Trichlorobenzene	5	1	1.00 U / 1.00 U	1.00 U	1.00 U	1.00 U / 1.00 U
1,2-Dichlorobenzene	3	1	1.00 U / 1.00 U	1.00 U	1.00 U	1.00 U / 1.00 U
1,3-Dichlorobenzene	3	1	1.00 U / 1.00 U	1.00 U	1.00 U	1.00 U / 1.00 U
1,4-Dichlorobenzene	3	1	1.00 U / 1.00 U	1.00 U	1.00 U	1.00 U / 1.00 U
Benzene	1	1	**0.260 J / 1.00 U**	1.00 U	1.00 U	1.00 U / 1.00 U
Chlorobenzene	5	1	**5.51 / 5.13**	**0.262 J**	**0.350 J**	1.00 U / 1.00 U
Toluene	5	1	1.00 U / 1.00 U	1.00 U	1.00 U	**1.00 U / 0.212 J**
Total Targeted Site Compounds			5.78 / 5.13	0.262	0.350	0.00 / 0.212

Compound/Parameter	* Standard Value (µg/L)	Reporting Limit (µg/L)	MW-19I		MW-20I	
			April 13, 2023	October 31, 2023	April 13, 2023	October 31, 2023
1,2,3-Trichlorobenzene	5	1	1.00 U	1.00 U	25.0 U	25.0 U
1,2,4-Trichlorobenzene	5	1	1.00 U	1.00 U	25.0 U	25.0 U
1,2-Dichlorobenzene	3	1	1.00 U	1.00 U	25.0 U	25.0 U
1,3-Dichlorobenzene	3	1	1.00 U	1.00 U	**22.5 J**	**8.18 J**
1,4-Dichlorobenzene	3	1	1.00 U	1.00 U	**322**	**123**
Benzene	1	1	1.00 U	1.00 U	**12.0 J**	**15.1 J**
Chlorobenzene	5	1	1.00 U	1.00 U	**2380**	**1990**
Toluene	5	1	1.00 U	**0.349 J**	25.0 U	25.0 U
Total Targeted Site Compounds			0.00	0.349	2737	2136

Compound/Parameter	* Standard Value (µg/L)	Reporting Limit (µg/L)	MW-22I	
			April 13, 2023	October 31, 2023
1,2,3-Trichlorobenzene	5	1	25.0 U	5.00 U
1,2,4-Trichlorobenzene	5	1	25.0 U	5.00 U
1,2-Dichlorobenzene	3	1	**5.25 J**	**1.58 J**
1,3-Dichlorobenzene	3	1	**27.5**	**3.76**
1,4-Dichlorobenzene	3	1	**521**	**23.1**
Benzene	1	1	**29.3**	**28.4**
Chlorobenzene	5	1	**4150**	**761**
Toluene	5	1	25.0 U	5.00 U
Total Targeted Site Compounds			4733	818

Notes:
J - Estimated
U - Not detected at the associated reporting limit
µg/L - Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
2.80 / 3.07 - Results of investigative and duplicate sample
52.3 - Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Table 2.2

2023 Water Level Elevations
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

Well Number	Reference Point Elevation (ft. AMSL)	04/12/23	10/30/23
MW-15I	569.79	565.85	565.60
MW-16I	573.31	565.72	565.44
MW-17I	574.41	565.90	565.27
MW-18I	573.51	565.61	565.09
MW-19I	572.29	565.37	565.18
MW-20I	572.35	565.58	564.73
MW-21S	572.02	565.35	564.73
MW-22I	572.31	565.34	564.45
EW-1	572.09	565.32	564.69
EW-2	571.89	565.37	564.84
EW-3	572.29	565.27	564.67
EW-4	572.69	565.31	564.75
EW-5	573.06	565.37	564.81
SG(1)	567.66	565.64	565.17
SG(2)	567.66		

Notes:
Average elevation of the top of the cut-off wall is 562 feet AMSL
NM -Not measured due to large boat parked on top of well
ft. AMSL - Feet Above Mean Sea Level
SG - Staff Gauge at the River
SG(1) - River measurement at the start of monitoring
SG(2) - River measurement at the end of monitoring

Table 2.3

2023 DNAPL Levels and Volumes
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

	Well Number	Elevation of Top of Pipe	Elevation of DNAPL (ft. AMSL)	Elevation of Top of Sump (ft. AMSL)	Height of DNAPL Above Top of Sump (ft.) *	Elevation of Top of Till (ft. AMSL)	Height of DNAPL Above Top of Till (ft.)	Elevation of Bottom of Sump (ft. AMSL)	DNAPL Above Bottom of Sump (ft.)	Amount of DNAPL in Well (Gallons)	Amount of DNAPL Pumped (Gallons)
04/12/23	EW-1	572.09	537.15	538.70	-1.55	540.10	-2.95	537.10	0.05	0.08	Trace
04/12/23	EW-2	571.89	538.14	538.52	-0.38	539.40	-1.26	536.92	1.22	1.83	0.05
04/12/23	EW-3	572.29	537.90	538.10	-0.20	539.50	-1.60	536.50	1.40	2.10	1.50
04/12/23	EW-4	572.69	536.66	538.20	-1.54	539.50	-2.84	536.60	0.06	0.09	0.10
04/12/23	EW-5	573.06	538.19	539.20	-1.01	540.00	-1.81	537.60	0.59	0.88	0.10
10/30/23	EW-1	572.09	538.60	538.70	-0.10	540.10	-1.50	537.10	1.50	2.25	Trace
10/30/23	EW-2	571.89	537.65	538.52	-0.87	539.40	-1.75	536.92	0.73	1.10	0.08
10/30/23	EW-3	572.29	537.23	538.10	-0.87	539.50	-2.27	536.50	0.73	1.10	0.25
10/30/23	EW-4	572.69	536.62	538.20	-1.58	539.50	-2.88	536.60	0.02	0.03	0.08
10/30/23	EW-5	573.06	537.86	539.20	-1.34	540.00	-2.14	537.60	0.26	0.39	0.06

Notes:
- Dense non-aqueous phase liquid (DNAPL) volume was calculated based on a 1.5-gallon/foot multiplier for a 6-inch diameter pipe
-x.xx - (Negative value) DNAPL level is below the reference point
ft. AMSL - Feet Above Mean Sea Level
NP - Not pumped
NA - Not applicable
NM - Not measured
* - Positive value indicates a requirement to remove DNAPL from well

Table 2.4

Cumulative DNAPL Extracted from Site - From Remediation
August 1993 to Present
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

Period	Cumulative (gallons)	Extraction Wells (gallons)
Remediation(1)	880.0	
Year One, May 1995 - April 1996	959.3	79.3
Year Two, May 1996 - April 1997	1012.5	53.2
Year Three, May 1997 - April 1998	1041.5	29.0
Year Four, May 1998 - April 1999	1075.5	34.0
Year Five, May 1999 - April 2000	1099.5	24.0
Year Six, May 2000 - April 2001	1112.0	12.5
*Year Seven, May - December 2001	1116.0	4.0
Year Eight, January - December 2002	1116.0	0.0
Year Nine, January - December 2003	1116.0	0.0
Year Ten, January - December 2004	1116.0	0.0
Year Eleven, January - December 2005	1116.0	0.0
Year Twelve, January - December 2006	1116.0	0.0
Year Thirteen, January - December 2007	1116.0	0.0
Year Fourteen, January - December 2008	1116.0	0.0
Year Fifteen, January - December 2009	1121.0	5.0
Year Sixteen, January - December 2010	1126.3	5.3
Year Seventeen, January - December 2011	1128.8	2.5
Year Eighteen, January - December 2012	1130.8	2.0
Year Nineteen, January - December 2013	1131.8	1.0
Year Twenty, January - December 2014	1133.4	1.6
Year Twenty-One, January - December 2015	1133.4	0.0
Year Twenty-Two, January - December 2016	1133.4	0.0
Year Twenty-Three, January - December 2017	1133.4	0.0
Year Twenty-Four, January - December 2018	1133.4	0.0
Year Twenty-Five, January - December 2019	1135.1	1.8
Year Twenty-Six, January - December 2020	1135.1	0.0
Year Twenty-Seven, January - December 2021	1135.1	0.0
Year Twenty-Eight, January - December 2022	1135.1	0.0
Year Twenty-Nine, January - December 2023 **	1137.3	2.2
Total:	**1137.3**	**255.1**

Notes:

(1) - Remediation of the Site was completed between August 1993 to April 1995
* - Minor Change 11, annual reporting year January-December
** - DNAPL was removed from all EWs regardless of the volume of DNAPL present per NYSDEC request.
DNAPL - Dense non-aqueous phase liquid

Table 2.5

2023 Well Inspections
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

Date: June 21, 2023												
Well Number	Elevation of Top of Pipe	Depth to Water[3]	Installed Depth	Sounded Depth	Depth to NAPL[3]	* Depth Below Top of Pipe at which DNAPL Required to be Pumped	DNAPL Removed (gal)	Well Integrity				Comments
								Locked	Capped	Cracked	Obstructed	
MW-15I	569.79	3.84	22.7	22.25	NN	NR	NR	Y	Y	N	N	
MW-16I	573.31	7.59	32.5	31.60	NN	NR	NR	Y	Y	N	N	
MW-17I	574.41	8.51	28.6	29.32	NN	NR	NR	Y	Y	N	N	
MW-18I	573.51	7.90	34.9	34.64	NN	NR	NR	Y	Y	N	N	
MW-19I	572.29	6.92	35.4	35.48	NN	NR	NR	Y	Y	N	N	
MW-20I	572.35	6.77	34.5	-	NN	NR	NR	Y	Y	N	N	(1)
MW-21S	572.02	6.67	10.2	7.75	NN	NR	NR	Y	Y	N	N	
MW-22I	572.31	6.97	32.0	-	NN	NR	NR	Y	Y	N	N	(1)
EW-1	572.09	6.77	34.5	35.08	34.94	≤ 33.49	Trace	Y	Y	N	N	
EW-2	571.89	6.52	35.5	34.35	33.75	≤ 33.49	0.5	Y	Y	N	N	
EW-3	572.29	7.02	36.5	35.35	34.39	≤ 34.29	1.5	Y	Y	N	N	
EW-4	572.69	7.38	35.4	-	36.03	≤ 34.59	0.1	NA	NA	NA	Y	(2)
EW-5	573.06	7.69	35.4	35.28	34.87	≤ 33.96	0.1	Y	Y	Y	N	
SG-1	567.66	2.02	NA	NA	NM	NR	NR	NA	NA	NA	NA	
SG-1	567.66	NM	NA	NA	NM	NR	NR	NA	NA	NA	NA	

Description of Site: Gravel parking lot, grass embankment
Site Conditions: Good
Weather: Sun/Clouds 64-84°F Winds E 0-5 MPH

Date: 10/30/23												
Well Number	Elevation of Top of Pipe	Depth to Water	Installed Depth	Sounded Depth	Depth to NAPL	* Depth Below Top of Pipe at which DNAPL Required to be Pumped	DNAPL Removed (gal)	Well Integrity				Comments
								Locked	Capped	Cracked	Obstructed	
MW-15I	569.79	4.19	22.7	22.25	NN	NR	NR	Y	Y	N	N	
MW-16I	573.31	7.87	32.5	31.60	NN	NR	NR	Y	Y	N	N	
MW-17I	574.41	9.14	28.6	29.33	NN	NR	NR	Y	Y	N	N	(4)
MW-18I	573.51	8.42	34.9	34.64	NN	NR	NR	Y	Y	N	N	
MW-19I	572.29	7.11	35.4	35.48	NN	NR	NR	Y	Y	N	N	
MW-20I	572.35	7.62	34.5	33.45	NN	NR	NR	Y	Y	N	N	
MW-21S	572.02	7.29	10.2	7.75	NN	NR	NR	Y	Y	N	N	
MW-22I	572.31	7.86	32.0	31.21	NN	NR	NR	Y	Y	N	N	
EW-1	572.09	7.40	34.5	35.08	Trace	≤ 33.49	Trace	Y	Y	N	N	
EW-2	571.89	7.05	35.5	34.35	34.24	≤ 33.49	0.08	Y	Y	N	N	
EW-3	572.29	7.62	36.5	35.36	35.06	≤ 34.29	0.25	Y	Y	N	N	
EW-4	572.69	7.94	35.4	36.18	36.07	≤ 34.59	0.08	Y	Y	N	N	
EW-5	573.06	8.25	35.4	35.28	35.20	≤ 33.96	0.06	Y	Y	N	N	(4)
SG-1	567.66	2.49	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SG-1	567.66	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Description of Site: Gravel parking lot, grass embankment
Site Conditions: Good
Weather: Cloudy Rain 41-45°F Winds N 5-10 MPH

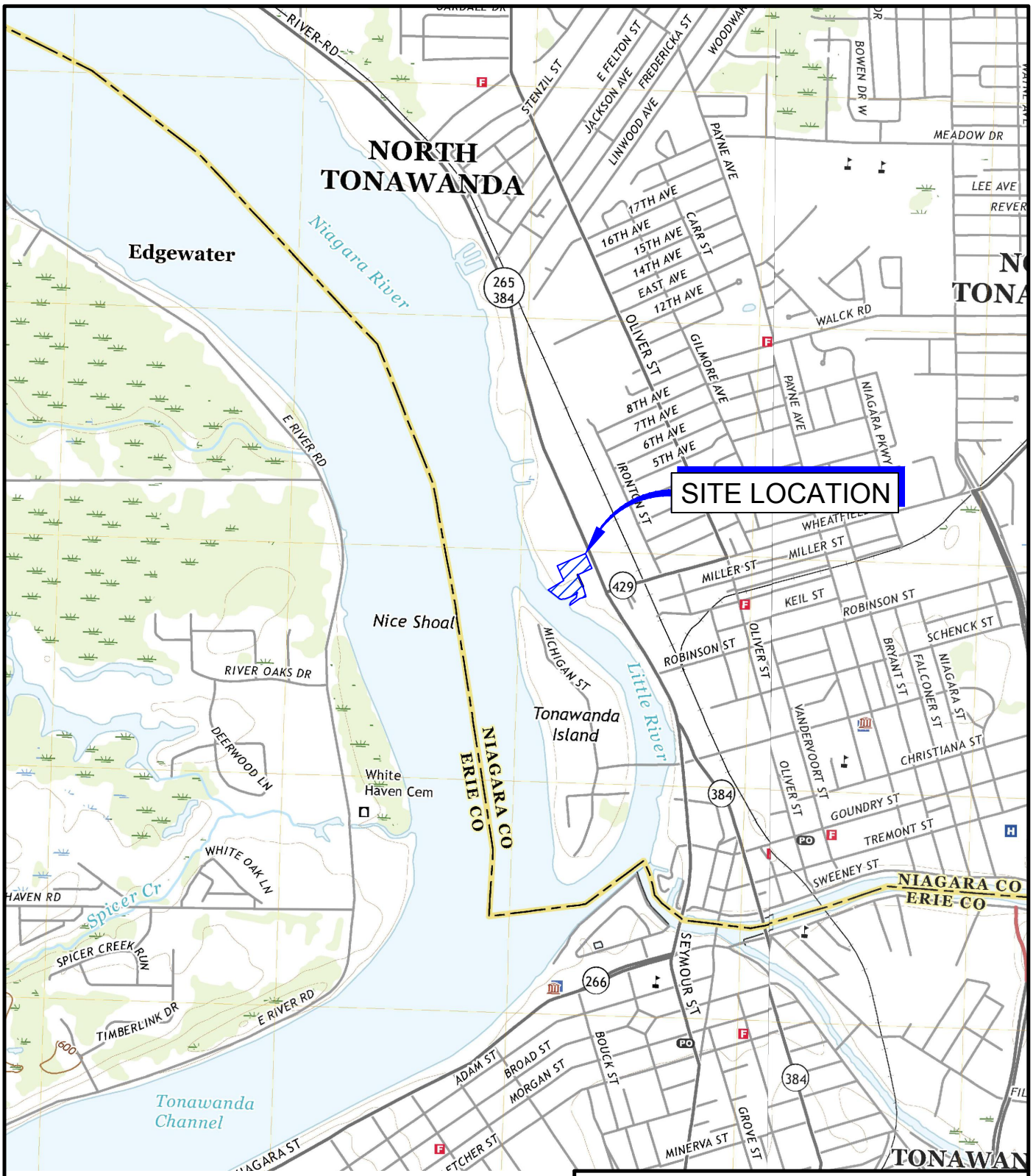
Footnotes:

(1) Not measured because ORC Socks installed in wells
(2) Could not be measured as boart was parked on top of well
(3) Depth to Water was measured on 4/12/23
(4) Soft Bottoms

Abbreviations:

DNAPL - Dense Non-Aqueous Phase Liquid
NAPL - Non-Aqueous Phase Liquid
* - DNAPL requires pumping/removal when it reaches the top of the extraction well (EW) sumps
- Depths listed are representative of the depth of the top of the sump from the top of the pipe
NA - Not applicable
NM - Not measured
NN - No DNAPL present
NR - Not required to be measured/assessed
gal - Gallon

Figures



DATA SOURCE:
USGS QUAD MAPS; TONAWANDA WEST, NY, 2019
AND TONAWANDA EAST, NY, 2019.

SITE LOCATION

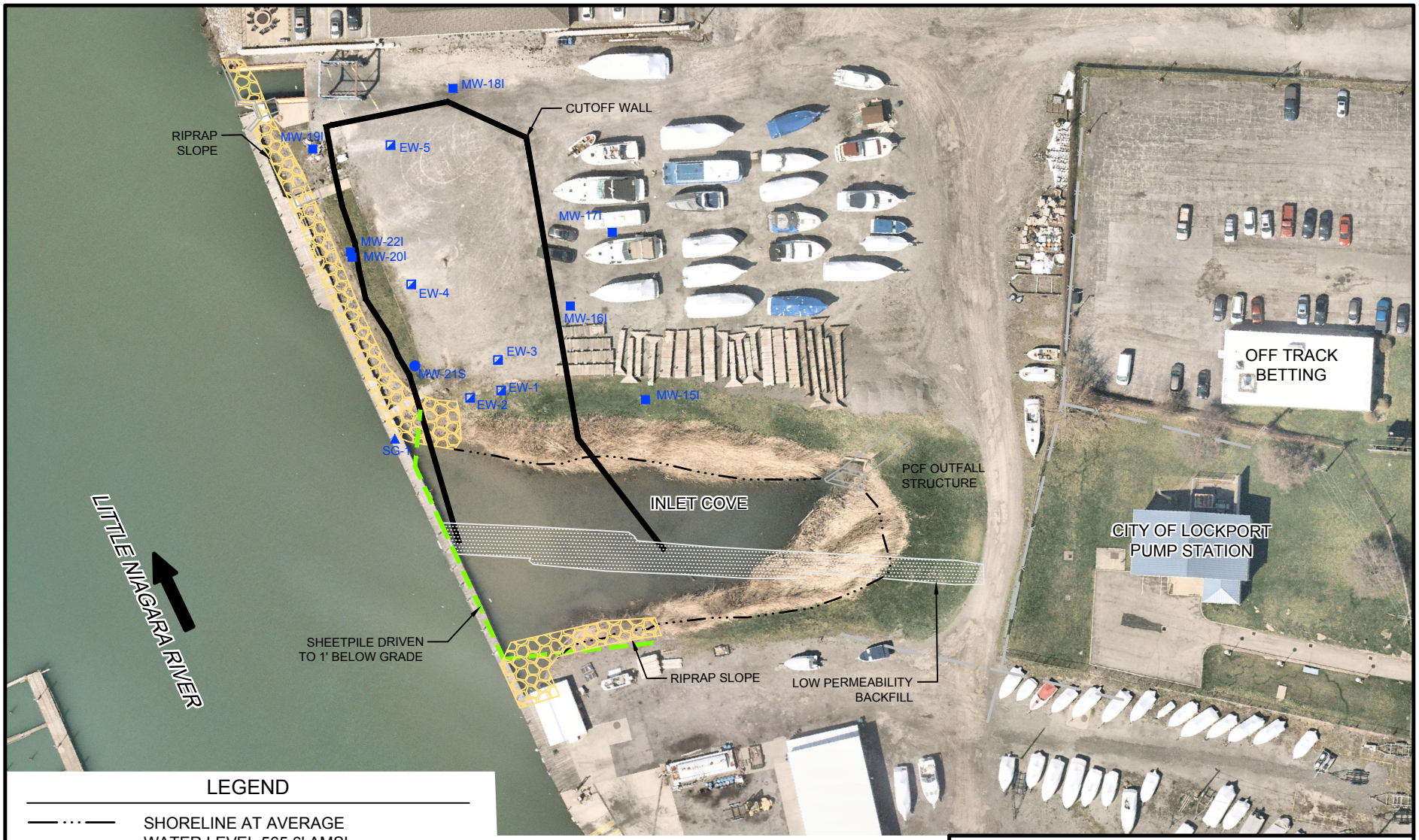
GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

Geosyntec consultants

FIGURE
1.1

PROJECT NO: TR1045 | JANUARY 2024

\\WATERLOO-01\DATA\PRJ\PROJECTS\TR1045 GSH WNY O&M\09-CADD\04-DUREZ INLET\02 - 2023 PERIODIC REVIEW REPORT\DRAWINGS\SHEETS\TR1045-001 - MJerome 5/29/23



LEGEND

- SHORELINE AT AVERAGE WATER LEVEL 565.6' AMSL
- SHEETPILE DRIVEN TO 1' BELOW GRADE (1)
- MW-21S ● SHALLOW MONITORING WELL
- MW-15I ■ INTERMEDIATE MONITORING WELL
- EW-1 ◪ DNAPL EXTRACTION WELL
- SG-1 ▲ STAFF GAGE

NOTE:
(1) SHEETPILE DRIVEN TO A MINIMUM OF 1' BELOW GRADE DRIVEN TO APPROXIMATELY 10' INTO THE UPPER TILL.

N

0 80'

SCALE IN FEET

SITE PLAN

GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

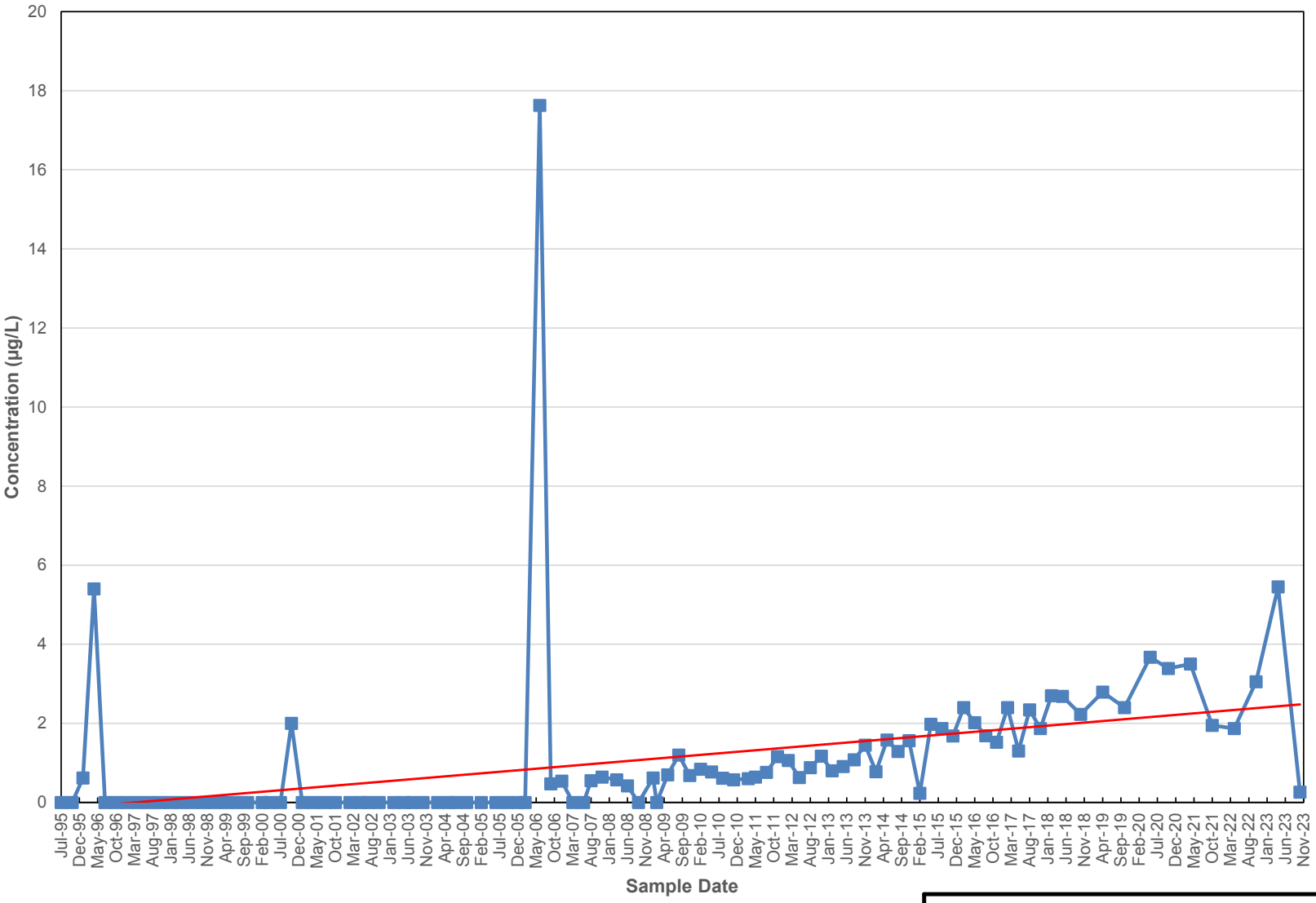
Geosyntec consultants

PROJECT NO: TR1045 | JANUARY 2024

FIGURE 2.1

\\WATERLOO-01\DATA\PRJ\PROJECTS\TR1045 GSH WNY O&M\09-CADD\04-DUREZ INLET\02 - 2023 PERIODIC REVIEW REPORT\DRAWINGS\SHEETS\TR1045-002 - MJerome 5/29/23

DATA SOURCE: GHD, 2021 PERIODIC REVIEW REPORT, SITE PLAN, DECEMBER 2021.
IMAGERY SOURCE: NEARMAP, DATE OF PHOTOGRAPHY 2023-04-02.



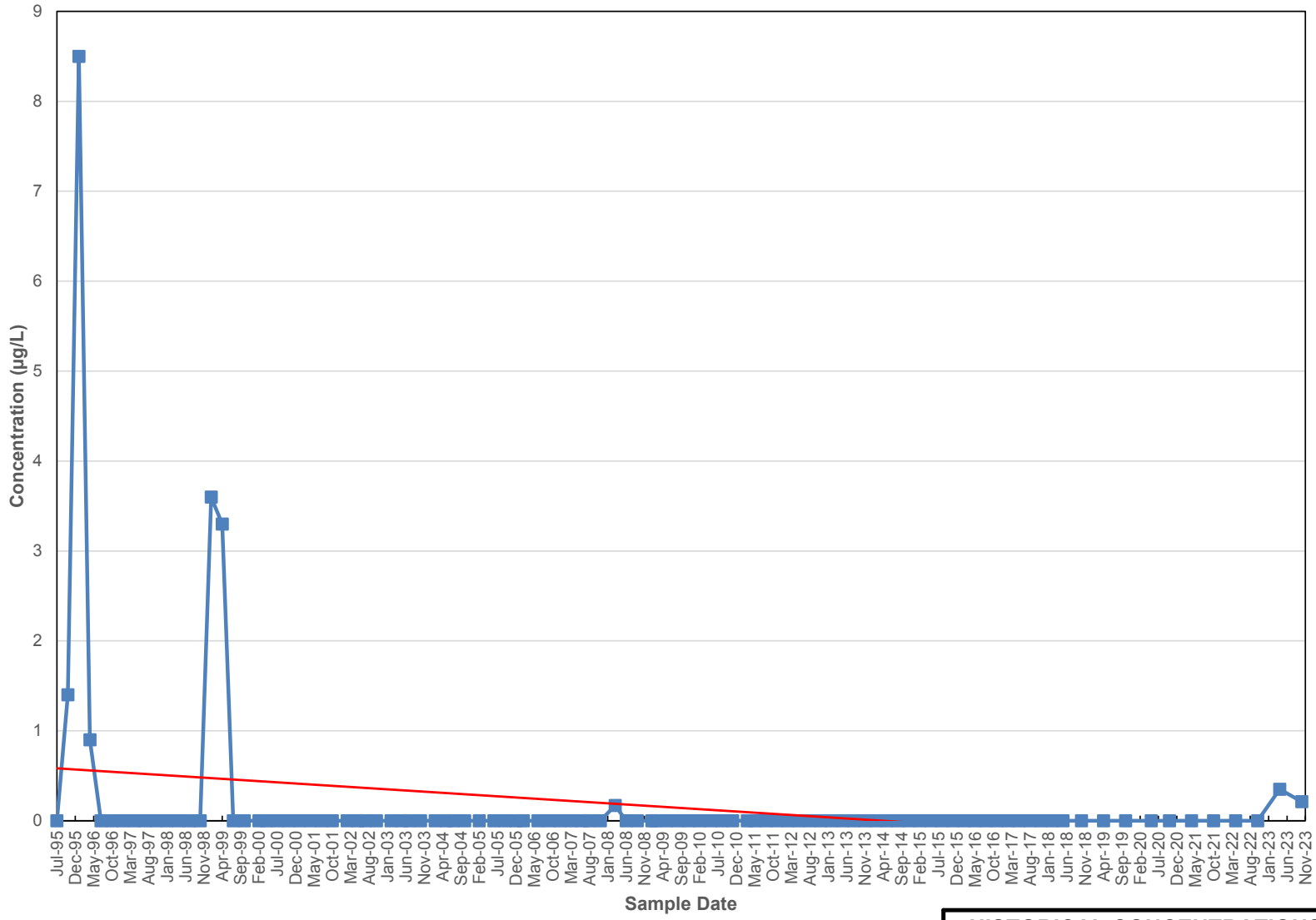
HISTORICAL CONCENTRATIONS OF TOTAL TARGETED SITE COMPOUNDS MW-16I

GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

Geosyntec consultants

FIGURE 2.2

PROJECT NO: TR1045 | JANUARY 2024



HISTORICAL CONCENTRATIONS OF TOTAL TARGETED SITE COMPOUNDS MW-18I

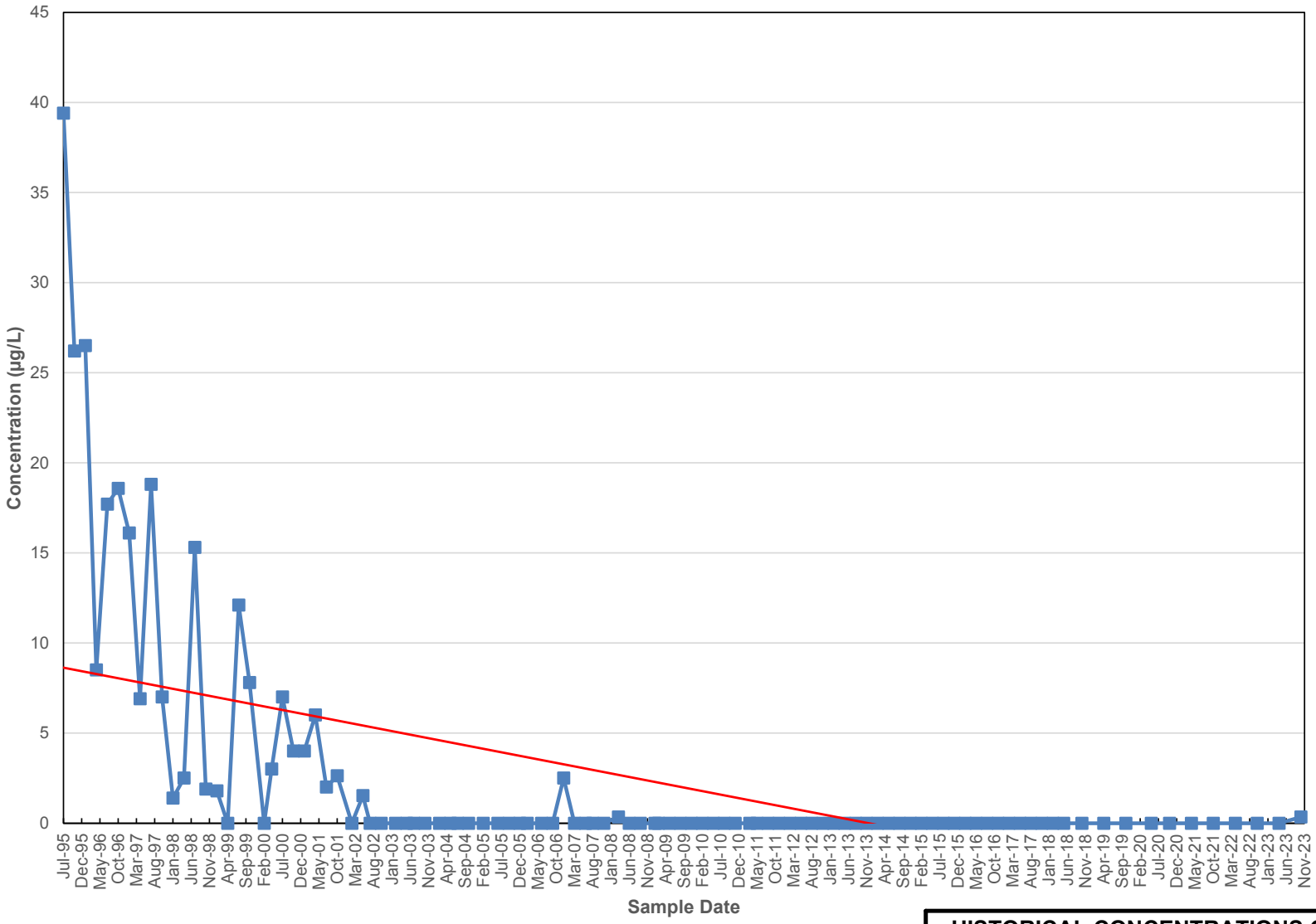
GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

Geosyntec consultants

FIGURE 2.3

PROJECT NO: TR1045 | JANUARY 2024

waterloo-01/data/PRJ/Projects/TR1045 GSH WNY O&M/08-Database and GIS/04-Durez Inlet/Illustrator/Historical Conc Tot Targeted Site Compounds 2024.ai



HISTORICAL CONCENTRATIONS OF TOTAL TARGETED SITE COMPOUNDS MW-19I

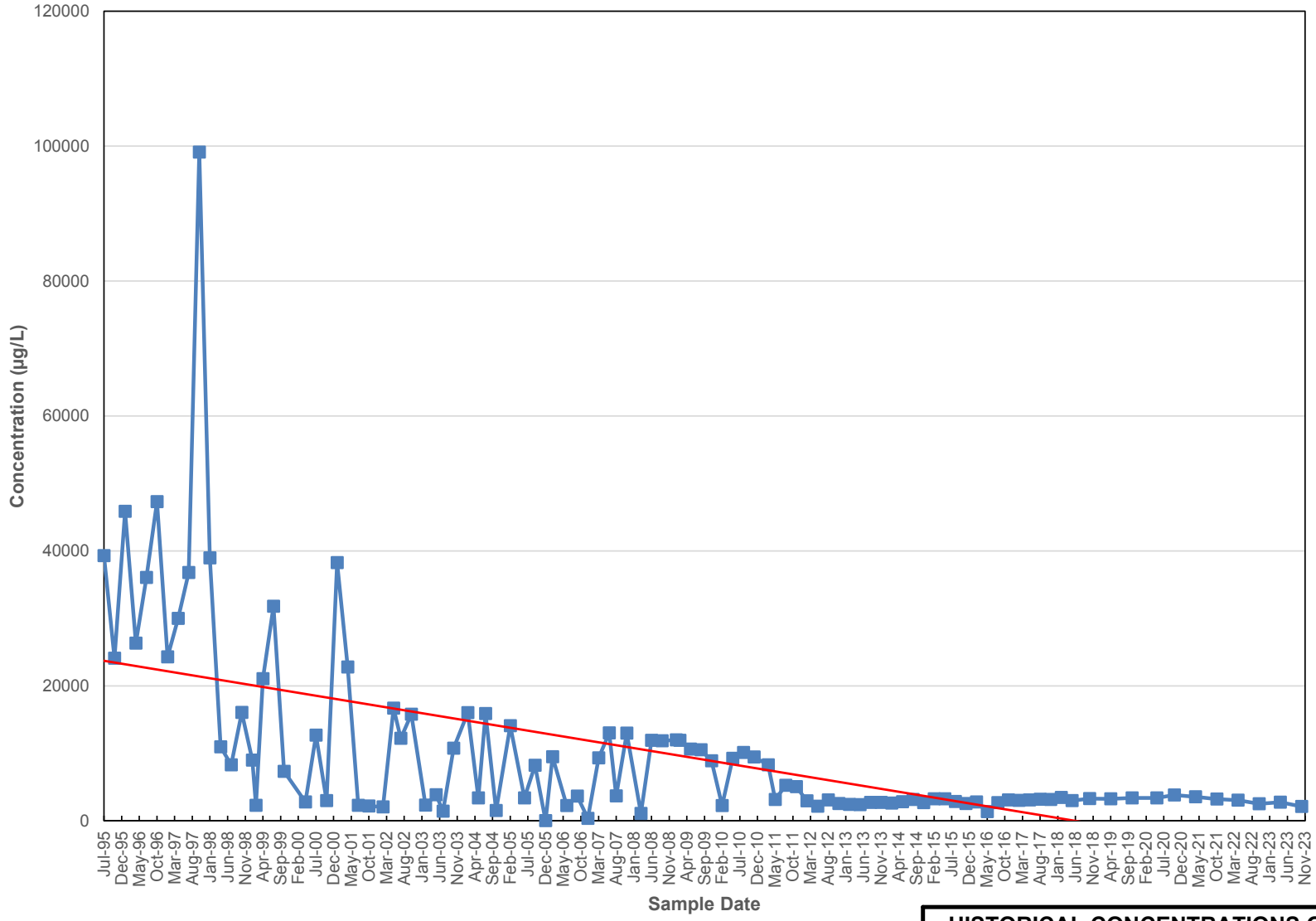
GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

Geosyntec consultants

FIGURE 2.4

PROJECT NO: TR1045 | JANUARY 2024

waterloo-01/data/PRJ/Projects/TR1045 GSH WNY O&M/08-Database and GIS/04-Durez Inlet/Illustrator/Historical Conc Tot Targeted Site Compounds 2024.ai



HISTORICAL CONCENTRATIONS OF TOTAL TARGETED SITE COMPOUNDS MW-20I

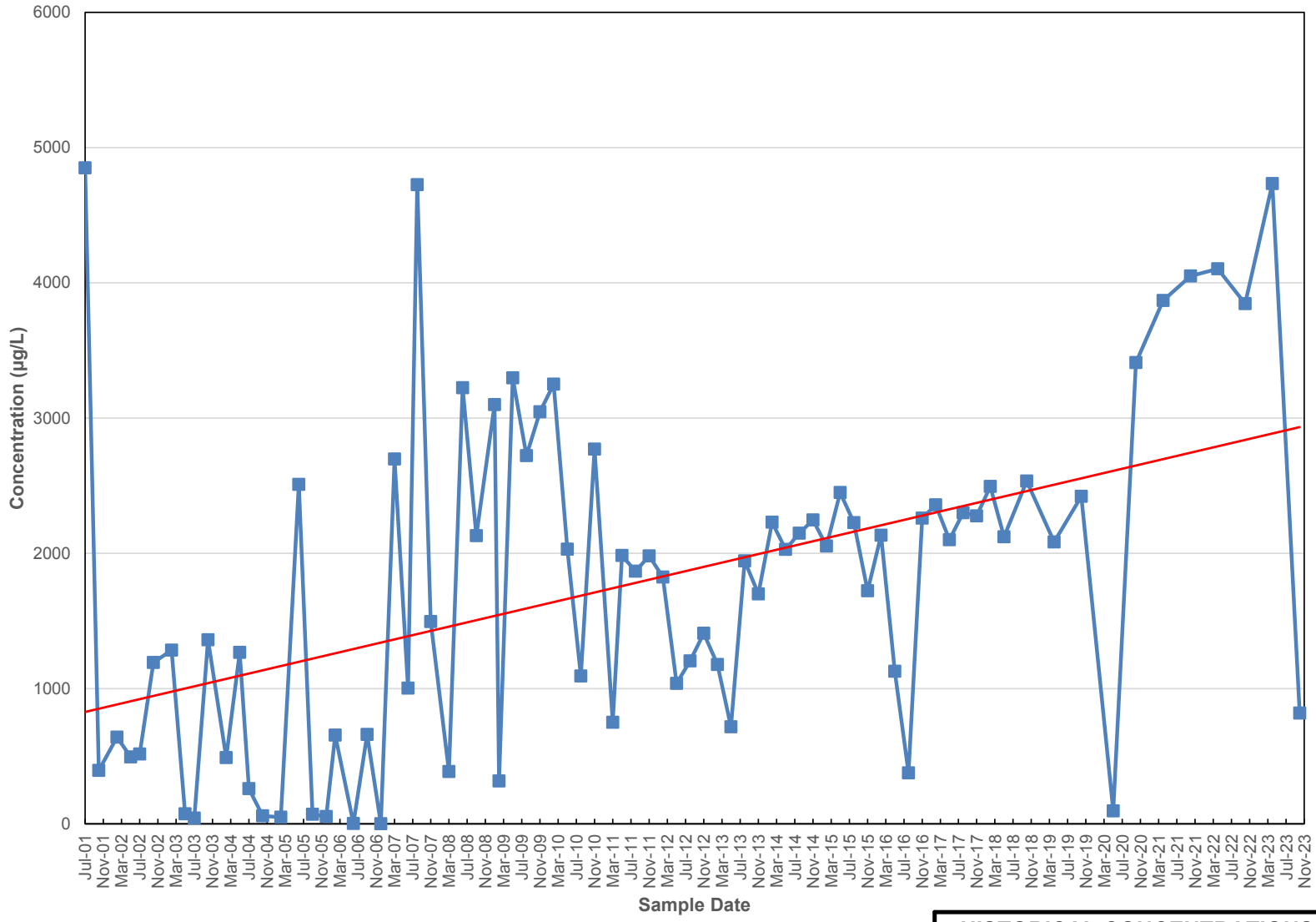
GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

Geosyntec consultants

FIGURE 2.5

PROJECT NO: TR1045 | JANUARY 2024

waterloo-01/data/PRJ/Projects/TR1045 GSH WNY O&M/08-Database and GIS/04-Durez Inlet/Illustrator/Historical Conc Tot Targeted Site Compounds 2024.ai



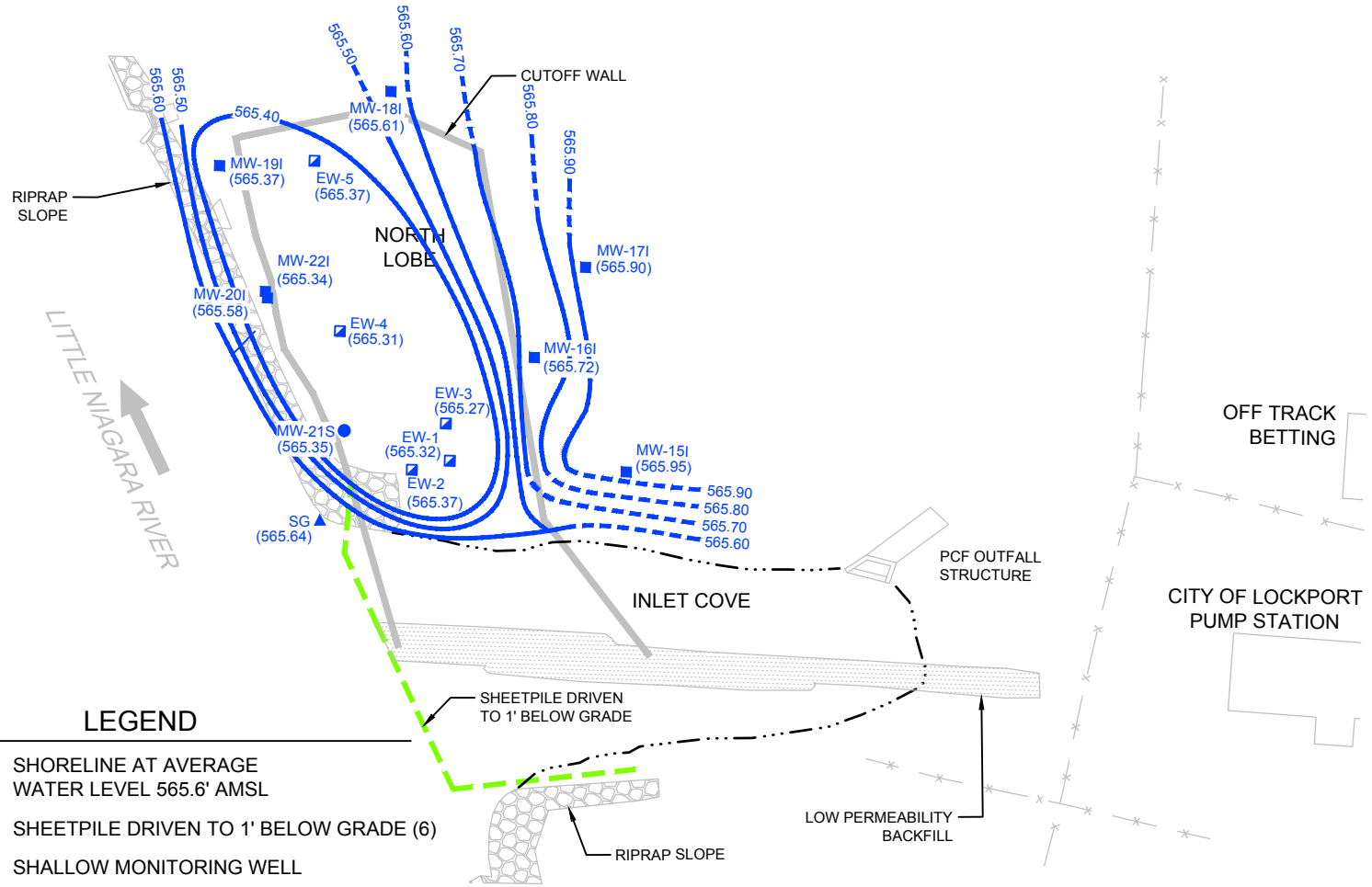
HISTORICAL CONCENTRATIONS OF TOTAL TARGETED SITE COMPOUNDS MW-22I

GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

Geosyntec consultants

PROJECT NO: TR1045 | JANUARY 2024

FIGURE 2.6



LEGEND

- SHORELINE AT AVERAGE WATER LEVEL 565.6' AMSL
- SHEETPILE DRIVEN TO 1' BELOW GRADE (6)
- MW-21S ● SHALLOW MONITORING WELL
- MW-15I ■ INTERMEDIATE MONITORING WELL
- EW-1 ◪ DNAPL EXTRACTION WELL
- SG-1 ▲ STAFF GAGE
- 565.50 WATER LEVEL CONTOUR (DASHED WHERE INFERRED)
- (565.32) WATER LEVEL ELEVATION (ft AMSL)

NOTES:
(1) TOP OF CUTOFF WALL WINDOW = 562.00.
(2) THE RIVER GAUGE IN THE LITTLE NIAGARA RIVER IS REPRESENTATIVE OF THE WATER ELEVATION AT THE END OF THE MONITORING.
(3) CONTOUR INTERVALS 0.25 FT.
(4) CONTOURS WERE DEVELOPED WITH CONSIDERATION OF THE MARGIN OF ERROR ASSOCIATED WITH MANUAL WATER LEVEL MEASUREMENTS.
(5) SG - STAFF GAUGE MEASUREMENT PRIOR TO HYDRAULIC MONITORING.
(6) SHEETPILE DRIVEN TO A MINIMUM OF 1' BELOW GRADE DRIVEN TO APPROXIMATELY 10' INTO THE UPPER TILL.

N

0 80'

SCALE IN FEET

HYDRAULIC HEAD DISTRIBUTION MAP
APRIL 12, 2023

GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

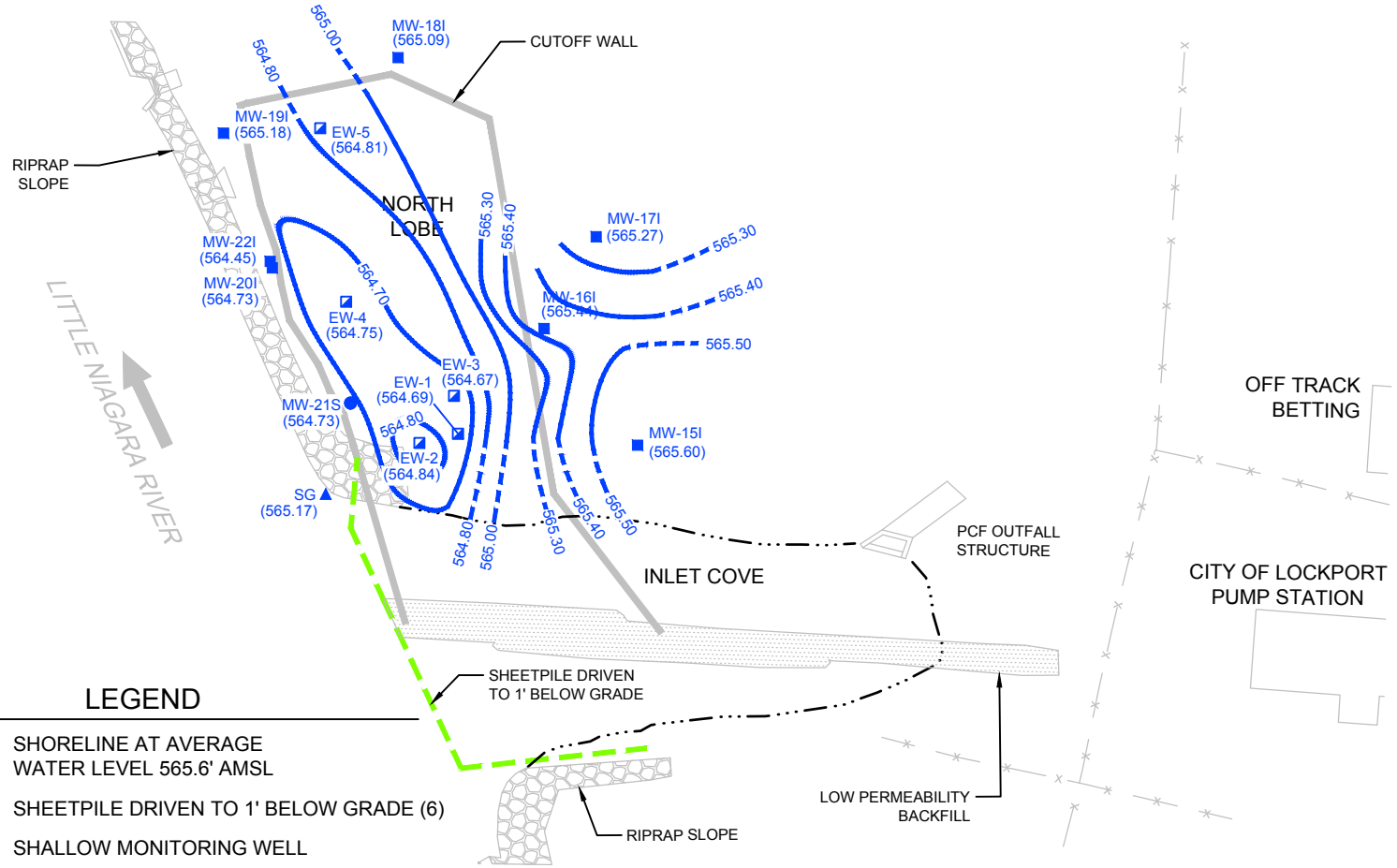
Geosyntec consultants

PROJECT NO: TR1045 | JANUARY 2024

FIGURE 2.7

DATA SOURCE: GHD, 2021 PERIODIC REVIEW REPORT, SITE PLAN, DECEMBER 2021.

\\WATERLOO-01\DATA\PRJ\PROJECTS\TR1045 GSH WNY O&M\09-CADD\04-DUREZ INLET\02 - 2023 PERIODIC REVIEW REPORT\DRAWINGS\SHEETS\TR1045-003 - MJerome 5/29/23



LEGEND

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- SG-1 ▲ STAFF GAGE
- 565.50 WATER LEVEL CONTOUR (DASHED WHERE INFERRED)
- (565.60) WATER LEVEL ELEVATION (ft AMSL)

NOTES:
(1) TOP OF CUTOFF WALL WINDOW = 562.00.
(2) THE RIVER GAUGE IN THE LITTLE NIAGARA RIVER IS REPRESENTATIVE OF THE WATER ELEVATION AT THE END OF THE MONITORING.
(3) CONTOUR INTERVALS 0.25 FT.
(4) CONTOURS WERE DEVELOPED WITH CONSIDERATION OF THE MARGIN OF ERROR ASSOCIATED WITH MANUAL WATER LEVEL MEASUREMENTS.
(5) SG - STAFF GAUGE MEASUREMENT PRIOR TO HYDRAULIC MONITORING.
(6) SHEETPILE DRIVEN TO A MINIMUM OF 1' BELOW GRADE DRIVEN TO APPROXIMATELY 10' INTO THE UPPER TILL.

N

0 80'

SCALE IN FEET

HYDRAULIC HEAD DISTRIBUTION MAP
OCTOBER 30, 2023

GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NYSDEC SITE NO. 932018
NORTH TONAWANDA, NEW YORK

Geosyntec consultants

FIGURE 2.8

PROJECT NO: TR1045 | JANUARY 2024

DATA SOURCE: GHD, 2021 PERIODIC REVIEW REPORT, SITE PLAN, DECEMBER 2021.

\\WATERLOO-01\DATA\PRJ\PROJECTS\TR1045 GSH WNY O&M\09-CADD\04-DUREZ INLET\02 - 2023 PERIODIC REVIEW REPORT\DRAWINGS\SHEETS\TR1045-004 - MJerome 1/17/24

Chart Index

Charts 3a - 3c

Groundwater Concentration Versus Time: MW-16I
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

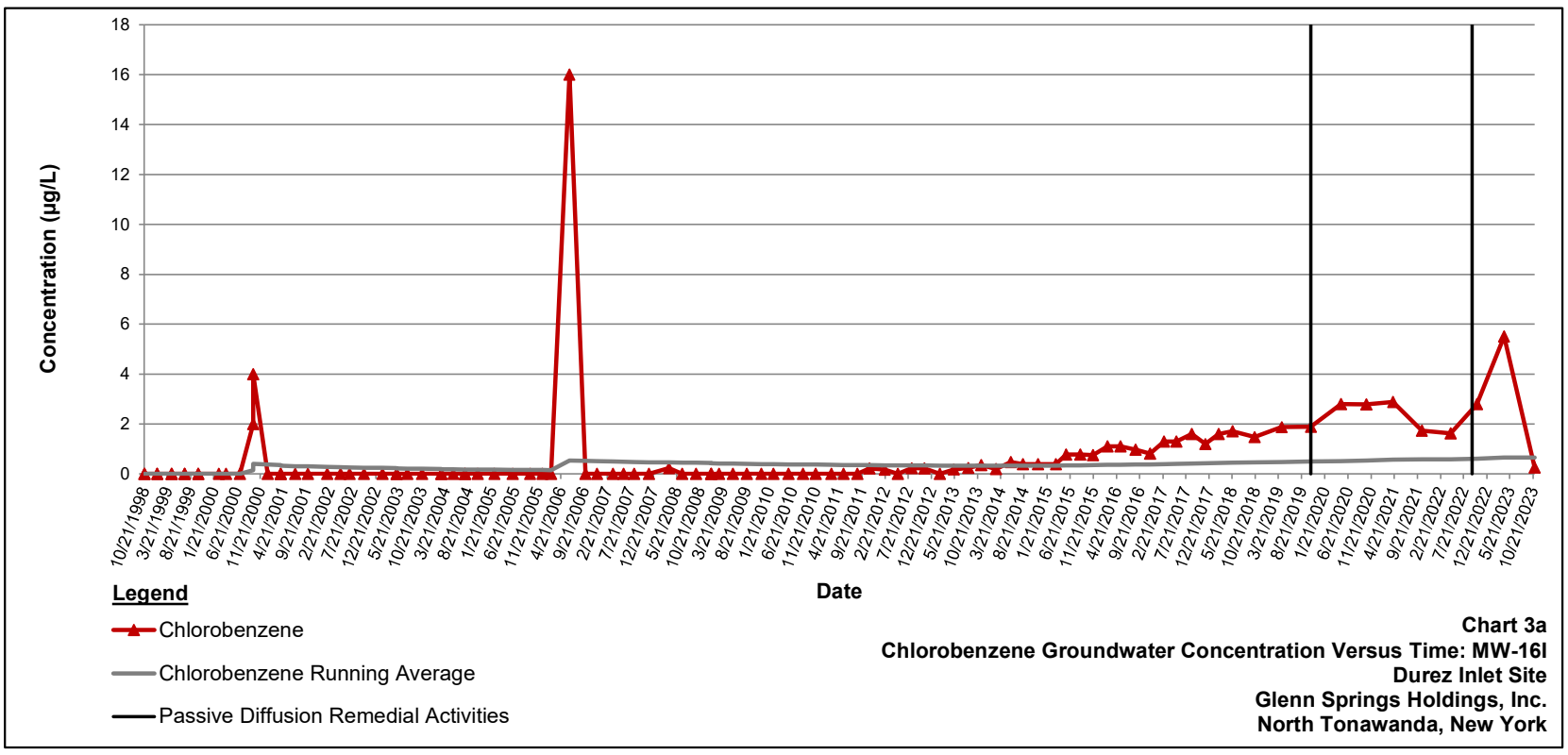

Chart 3a
Chlorobenzene Groundwater Concentration Versus Time: MW-16I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

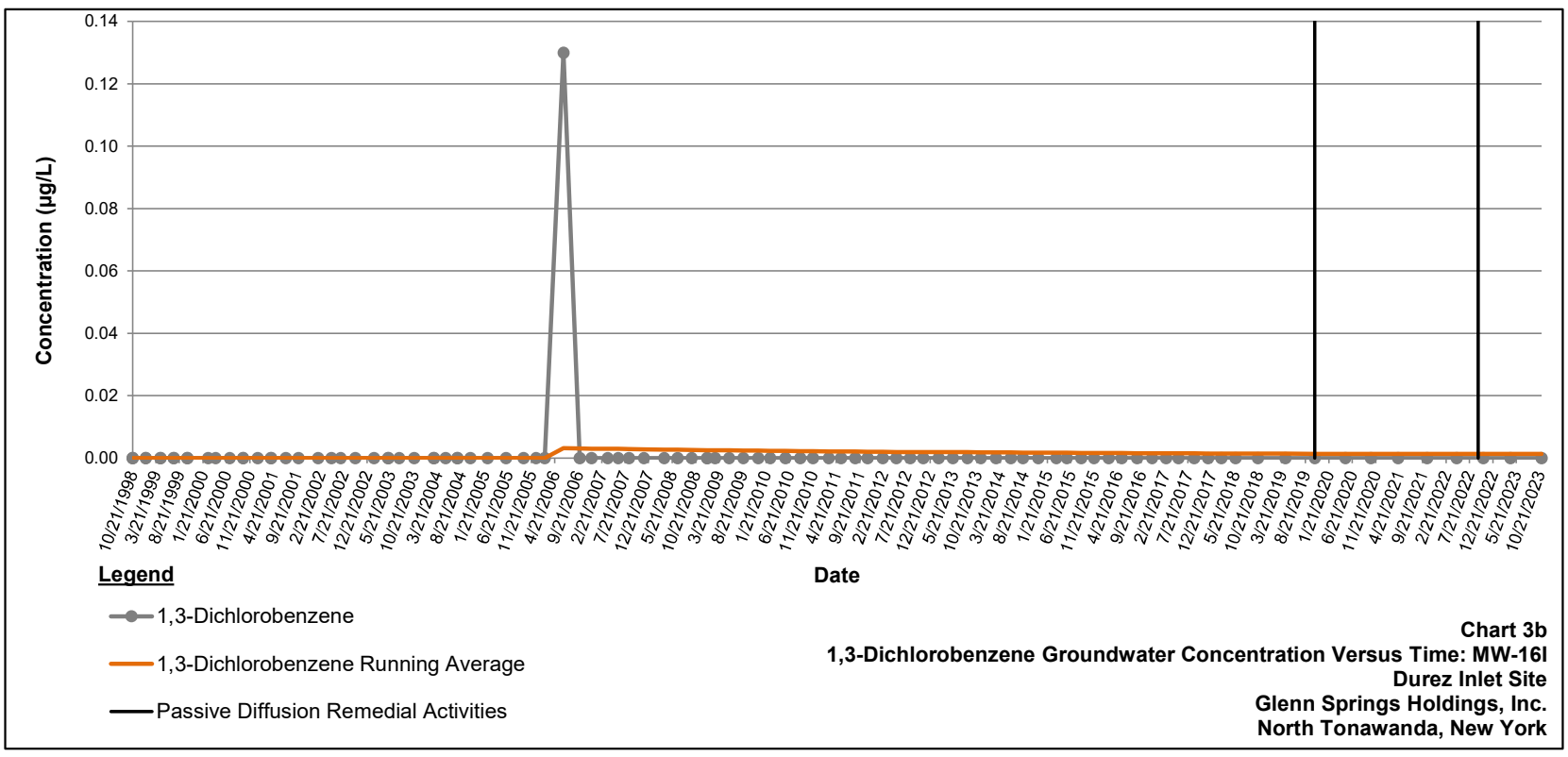

Chart 3b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-16I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

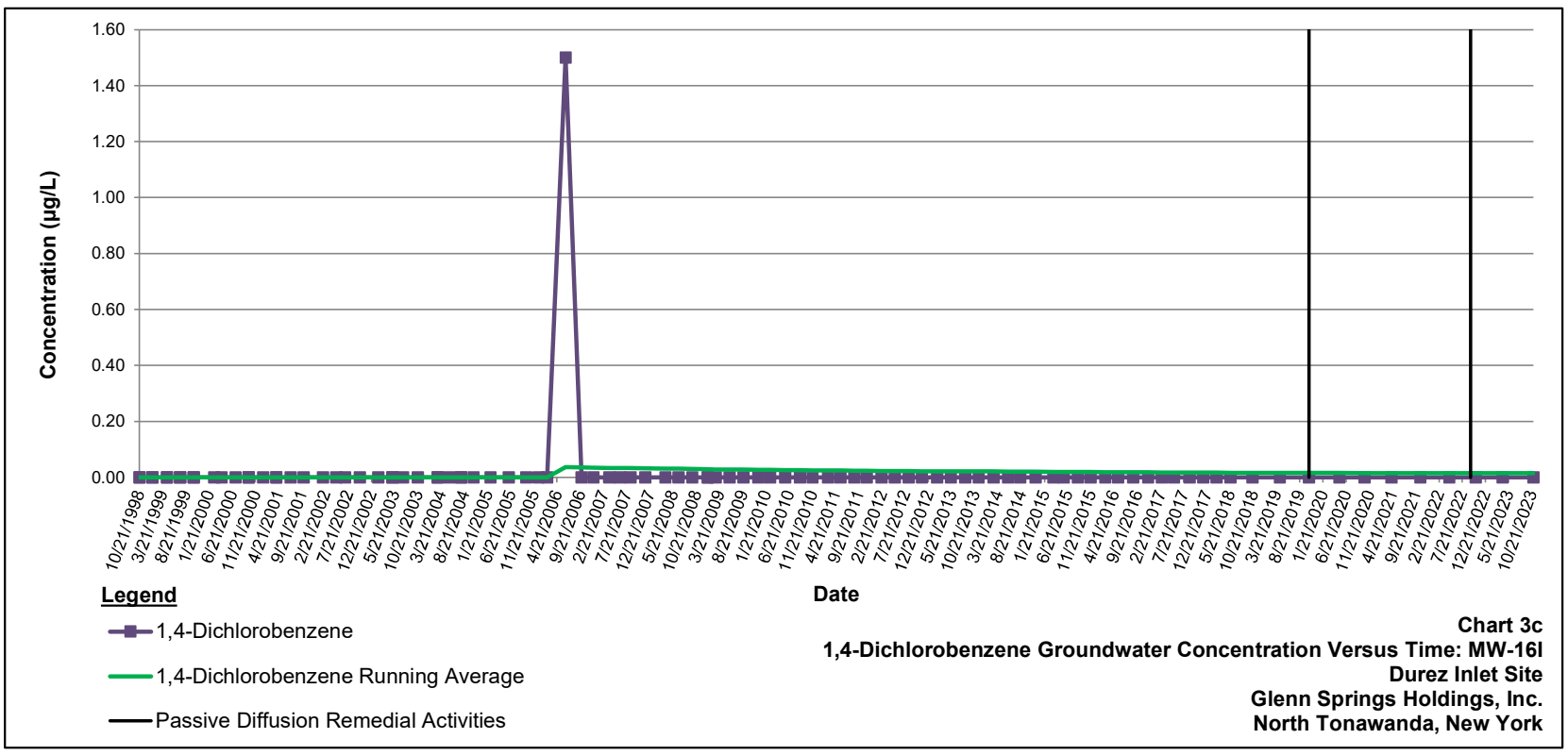

Chart 3c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-16I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Note:
The running average is the equally weighted arithmetic means of the concentrations for the parameter of interest charted. The period is all data beginning October 21, 1998 through the date for each monitoring event. The running average can be represented by the following formula: Ave= (a1 + a2 + …. + an) / n

where i varies from 1 to n

Ave = arithmetic mean or running average

n = *number of values*

a = *data set values*

Charts 4a - 4c

Groundwater Concentration Versus Time: MW-18I
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

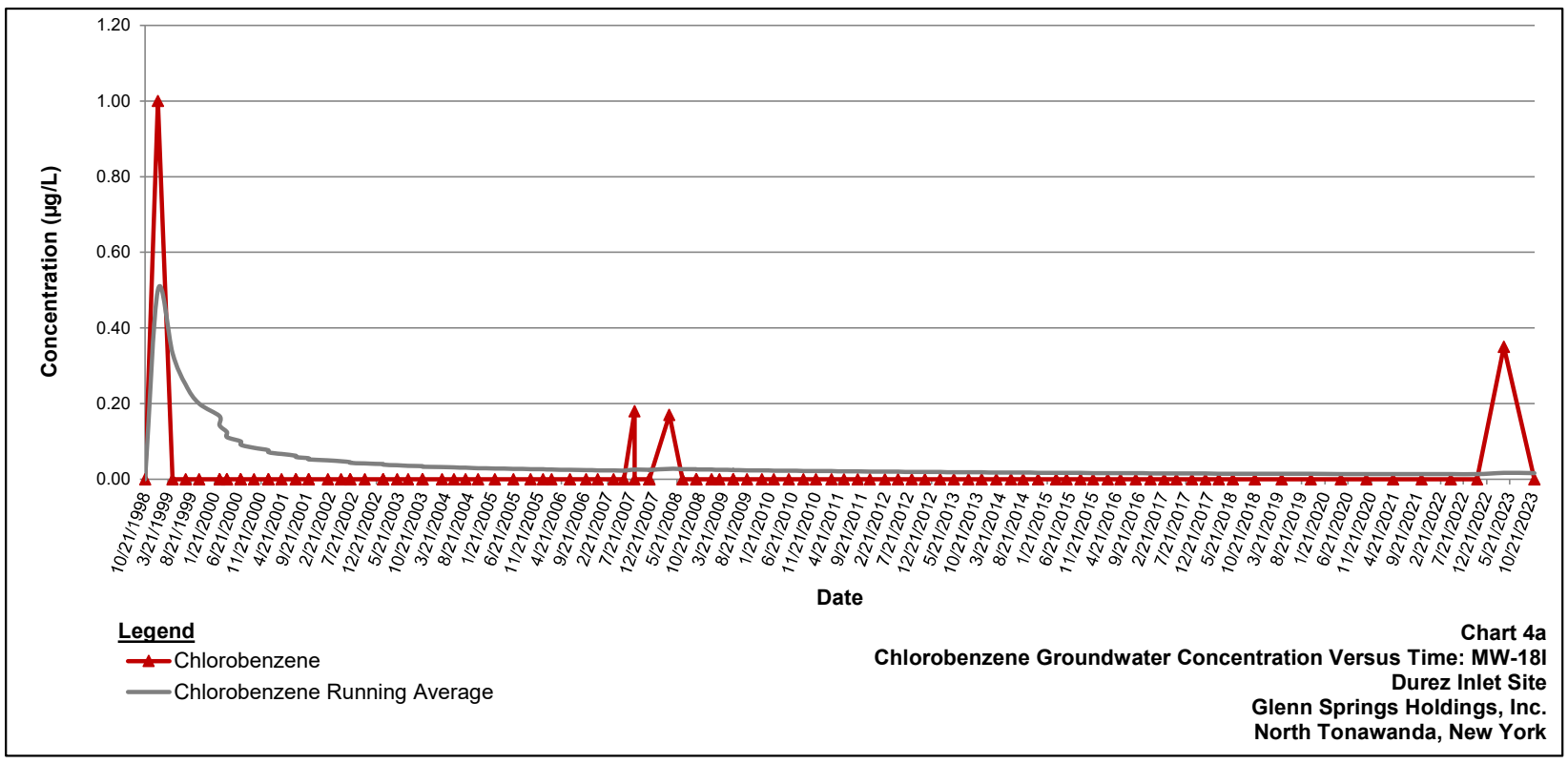

Chart 4a
Chlorobenzene Groundwater Concentration Versus Time: MW-18I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

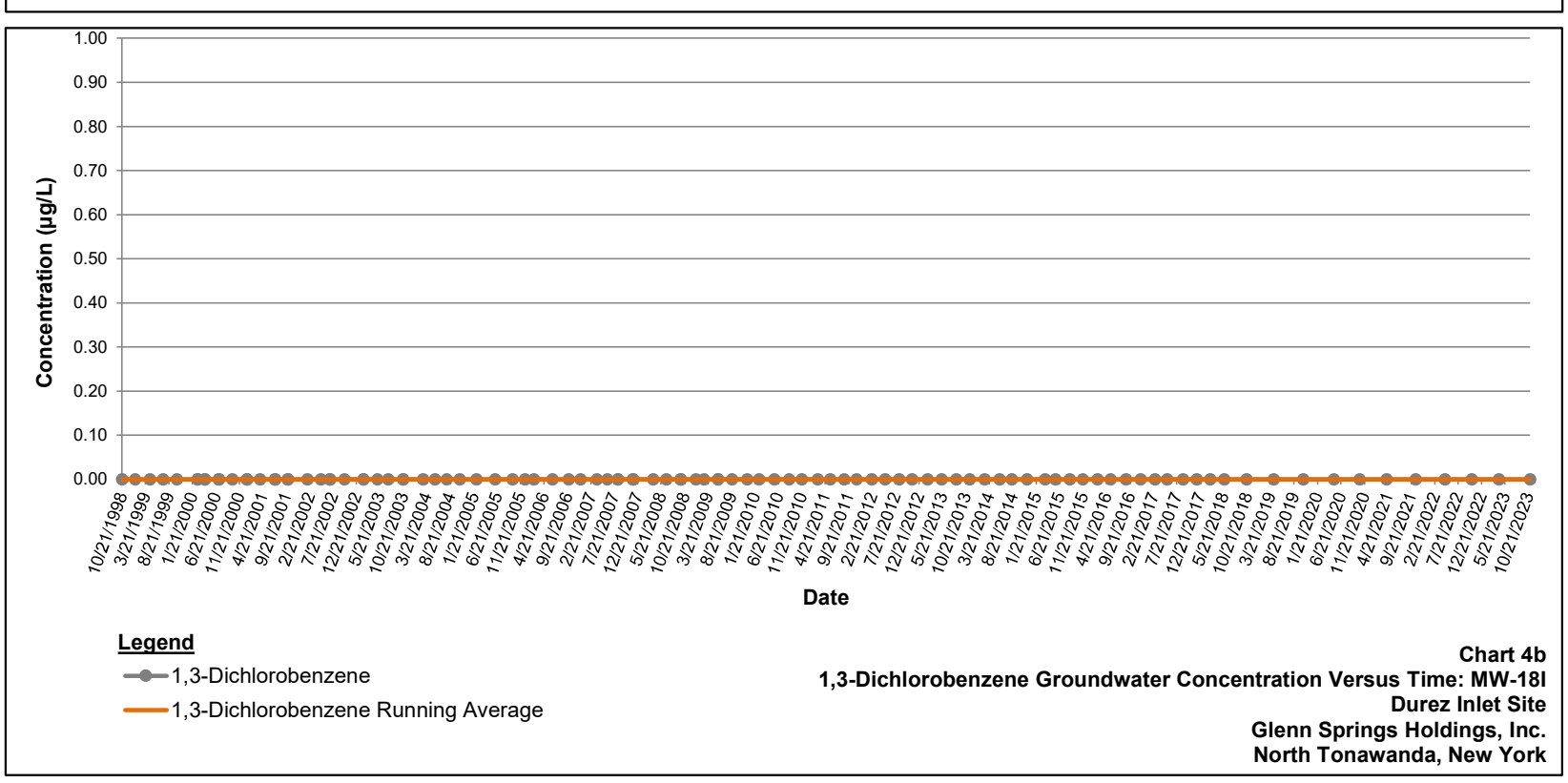

Chart 4b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-18I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

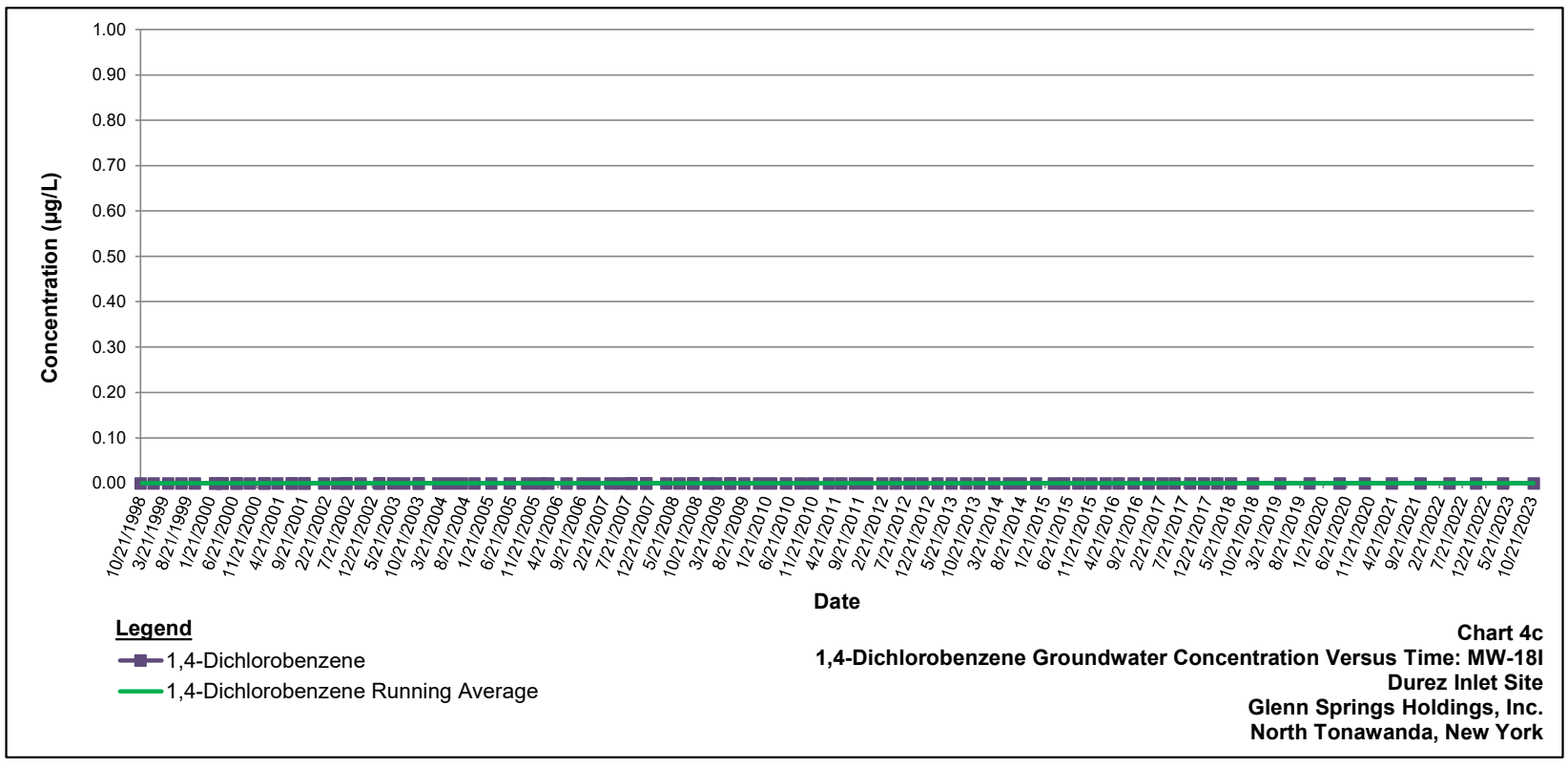

Chart 4c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-18I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Note:
The running average is the equally weighted arithmetic means of the concentrations for the parameter of interest charted. The period is all data beginning October 21, 1998 through the date for each monitoring event. The running average can be represented by the following formula: Ave= (a1 + a2 + …. + an) / n
where i varies from 1 to n
Ave = arithmetic mean or running average
n *= number of values*
a *= data set values*

Charts 5a - 5c

Groundwater Concentration Versus Time: MW-19I
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

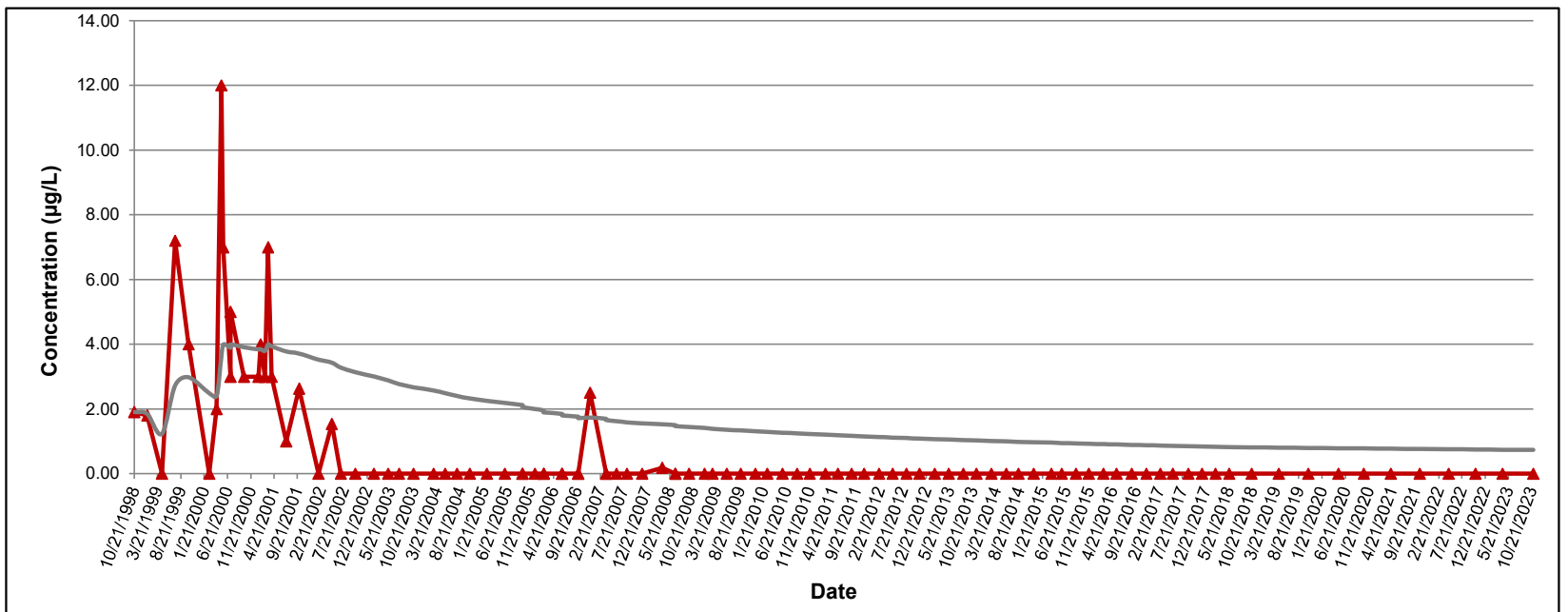

Chart 5a
Chlorobenzene Groundwater Concentration Versus Time: MW-19I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

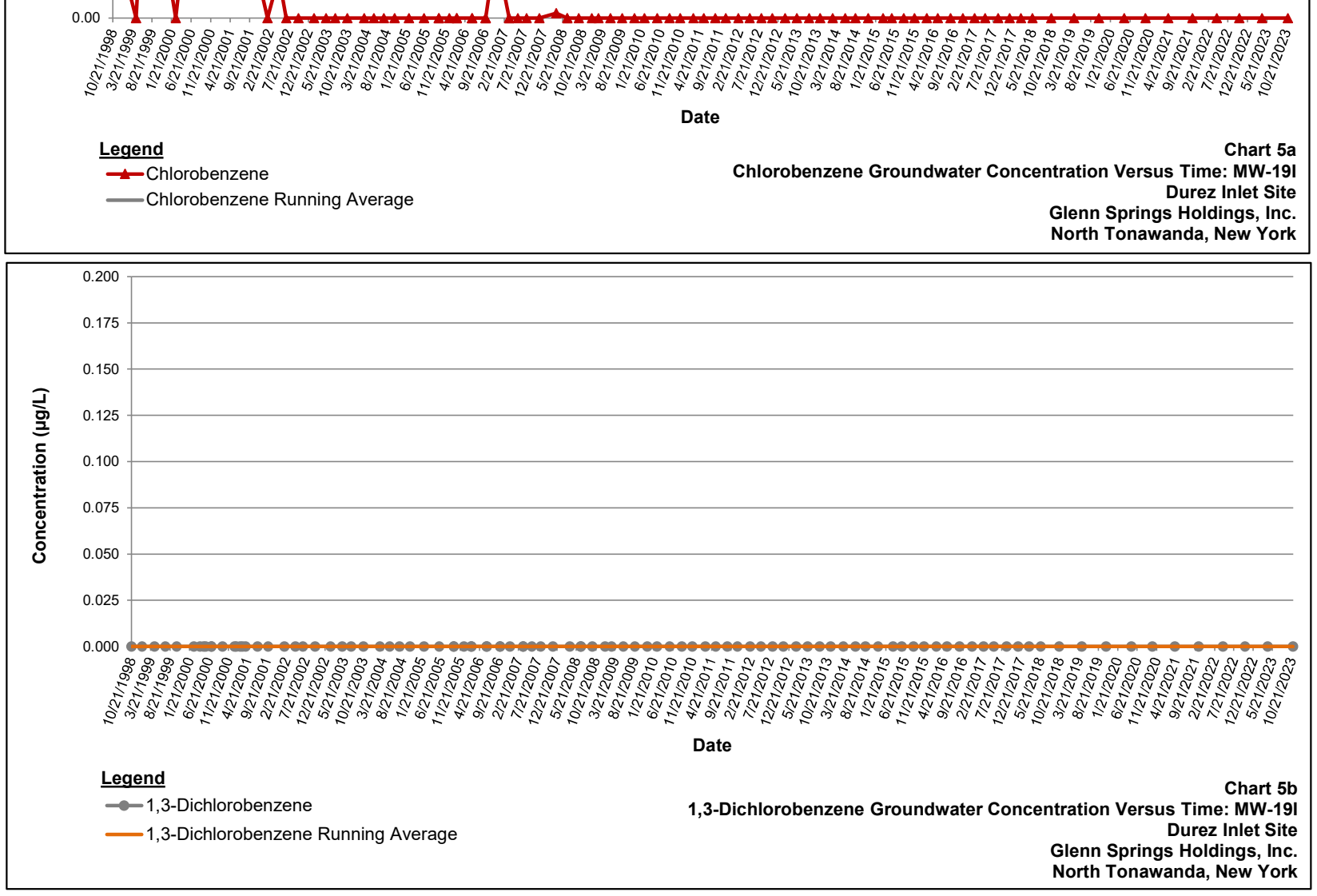

Chart 5b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-19I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

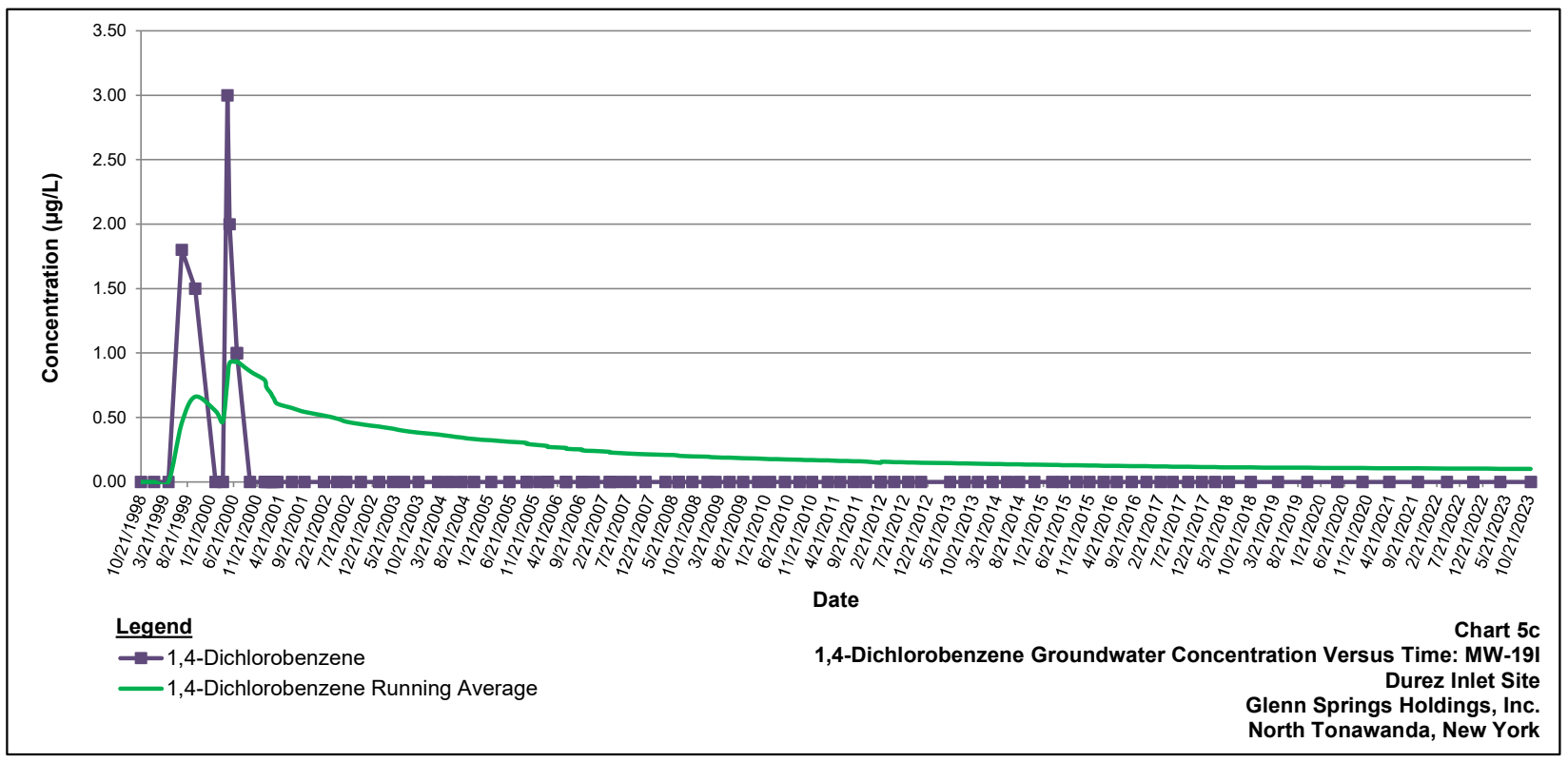

Chart 5c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-19I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Note:
The running average is the equally weighted arithmetic means of the concentrations for the parameter of interest charted. The period is all data beginning October 21, 1998 through the date for each monitoring event. The running average can be represented by the following formula: Ave= (a1 + a2 + …. + an) / n

where i varies from 1 to n

Ave = arithmetic mean or running average

n = *number of values*

a = *data set values*

Charts 1a - 1c

Groundwater Concentration Versus Time: MW-20I
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

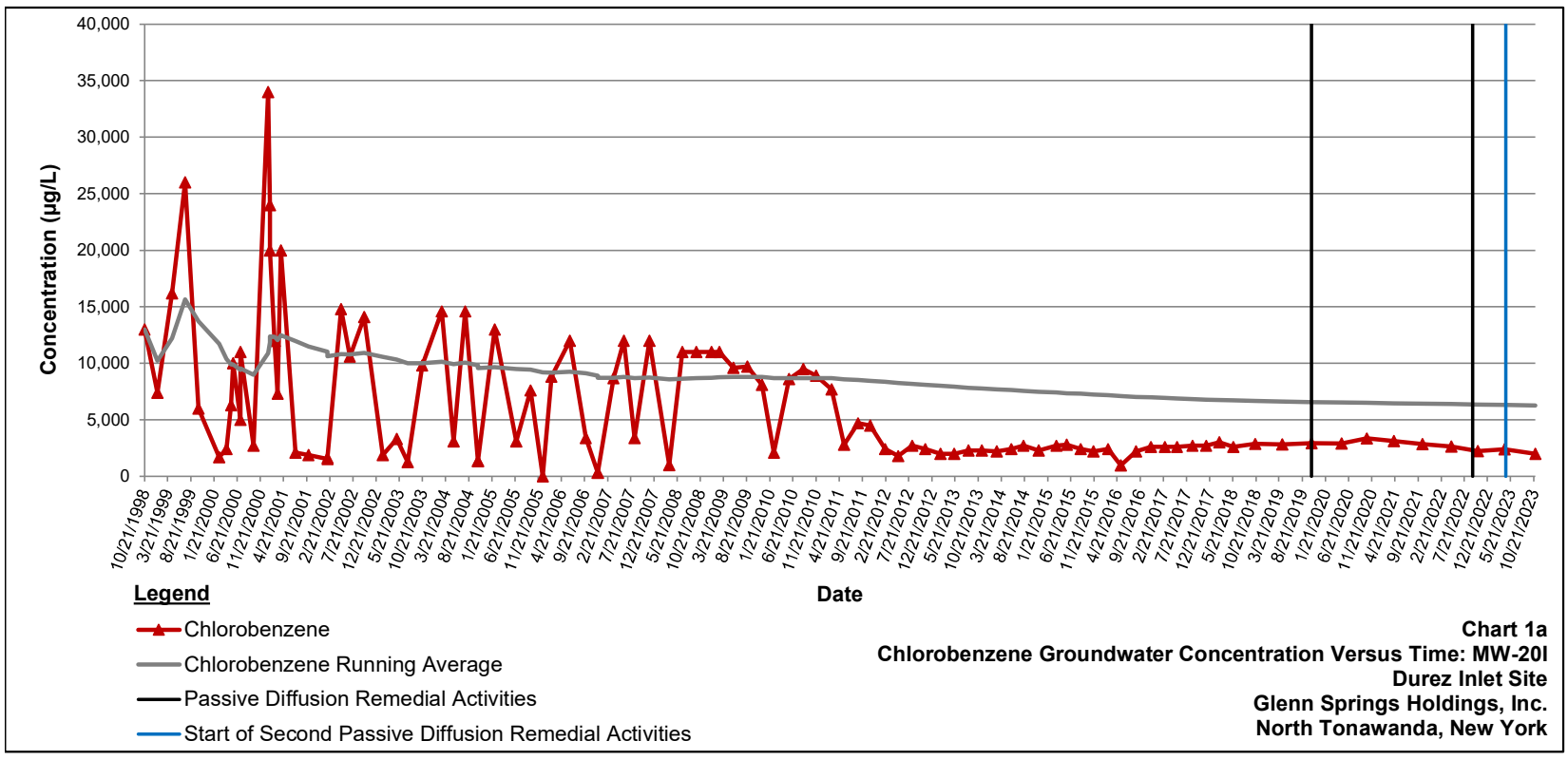

Chart 1a
Chlorobenzene Groundwater Concentration Versus Time: MW-20I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

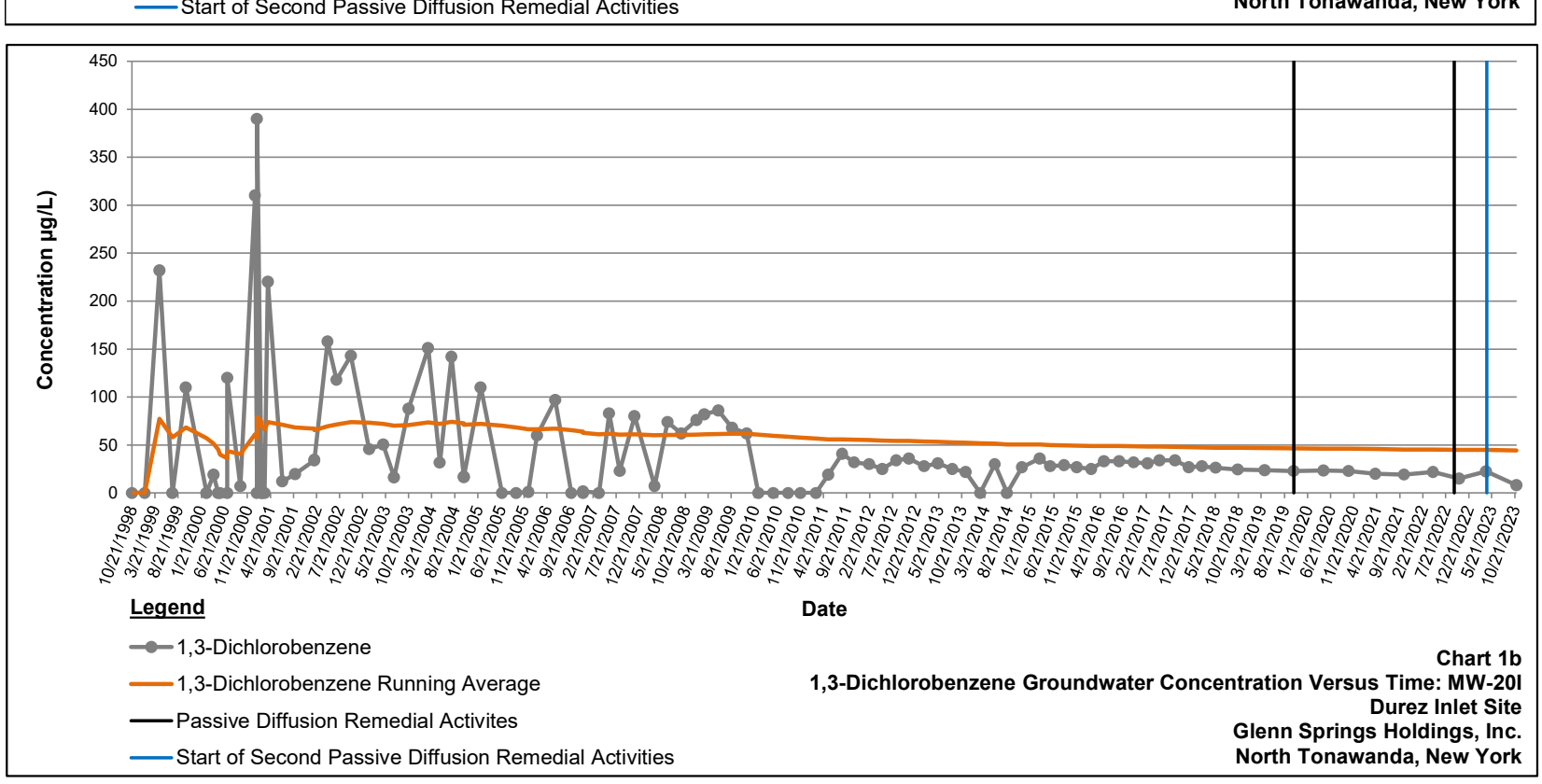

Chart 1b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-20I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

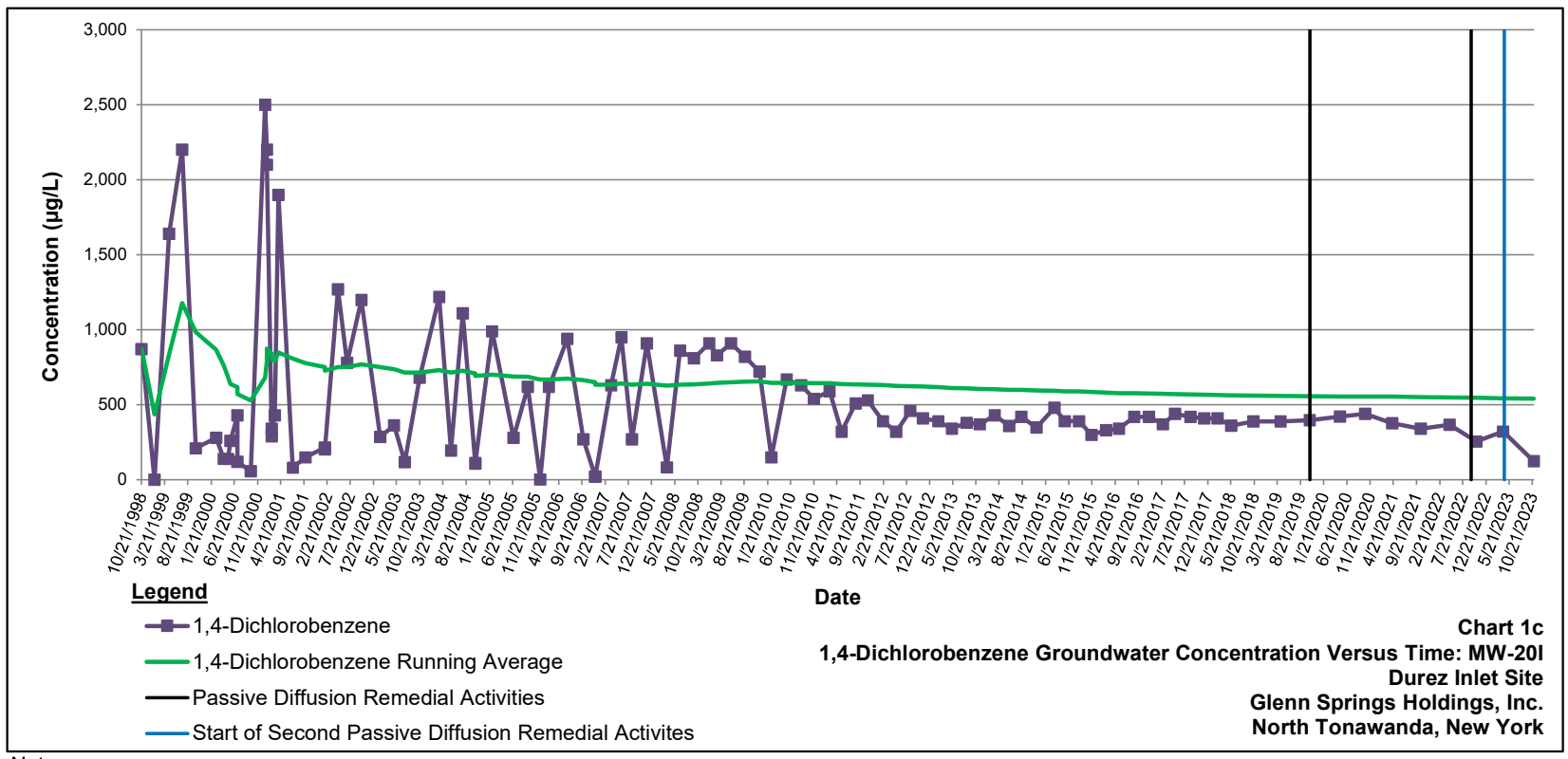

Chart 1c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-20I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Note:
The running average is the equally weighted arithmetic means of the concentrations for the parameter of interest charted. The period is all data beginning October 21, 1998 through the date for each monitoring event. The running average can be represented by the following formula: Ave= (a1 + a2 + …. + an) / n
where i varies from 1 to n
Ave = arithmetic mean or running average
n *= number of values*
a *= data set values*

Charts 2a - 2c

Groundwater Concentration Versus Time: MW-22I
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

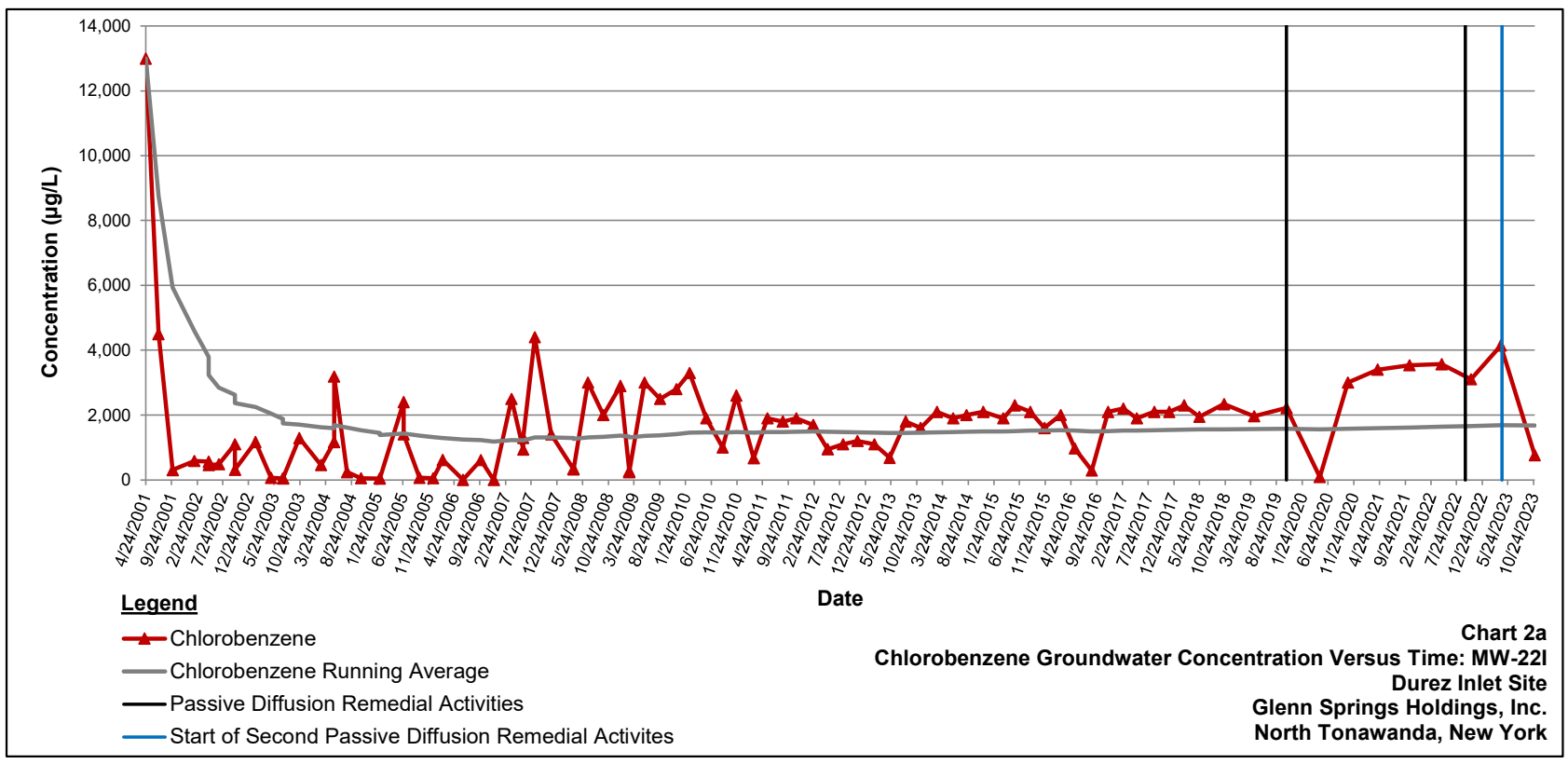

Chart 2a
Chlorobenzene Groundwater Concentration Versus Time: MW-22I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

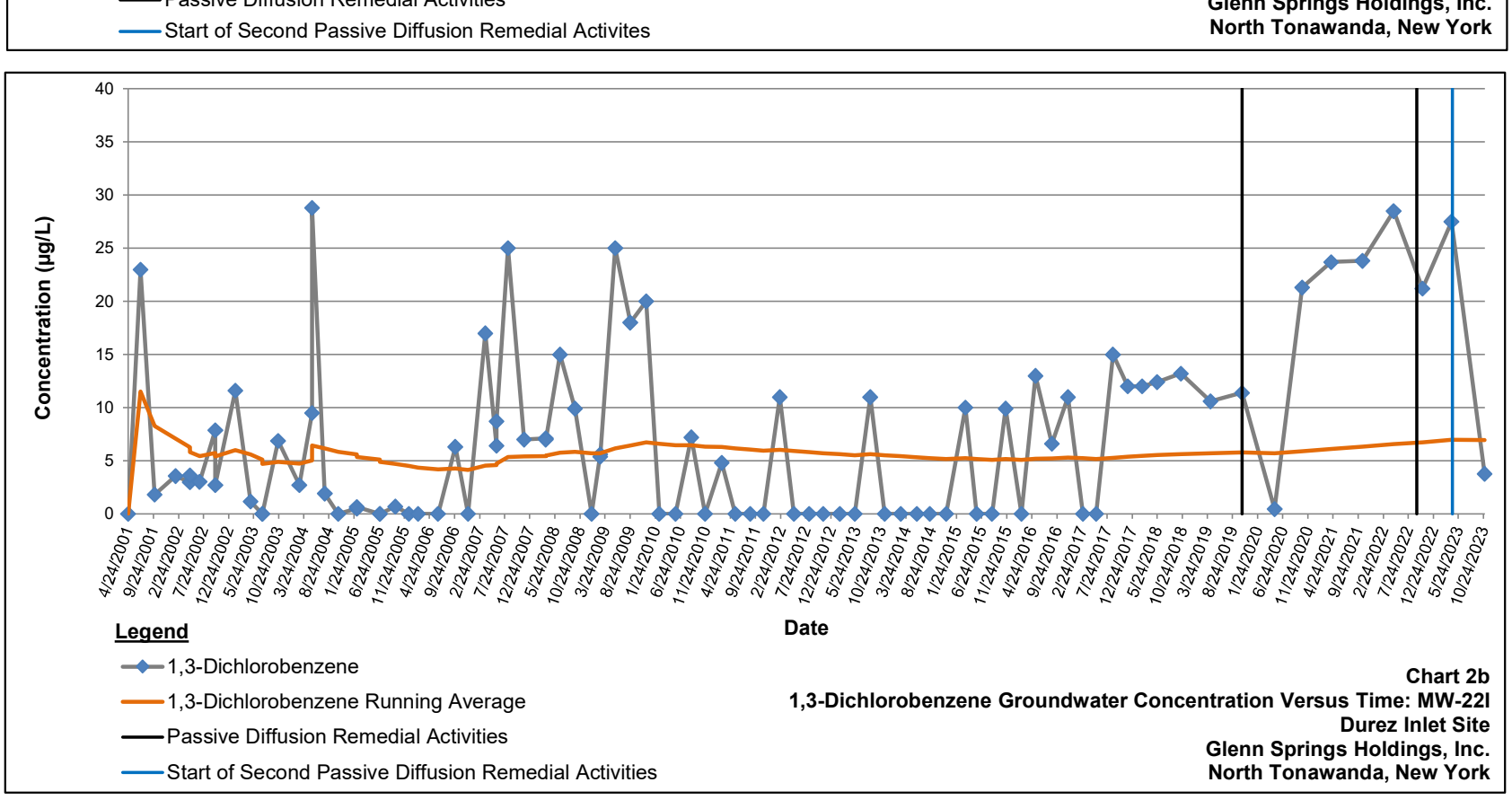

Chart 2b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-22I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

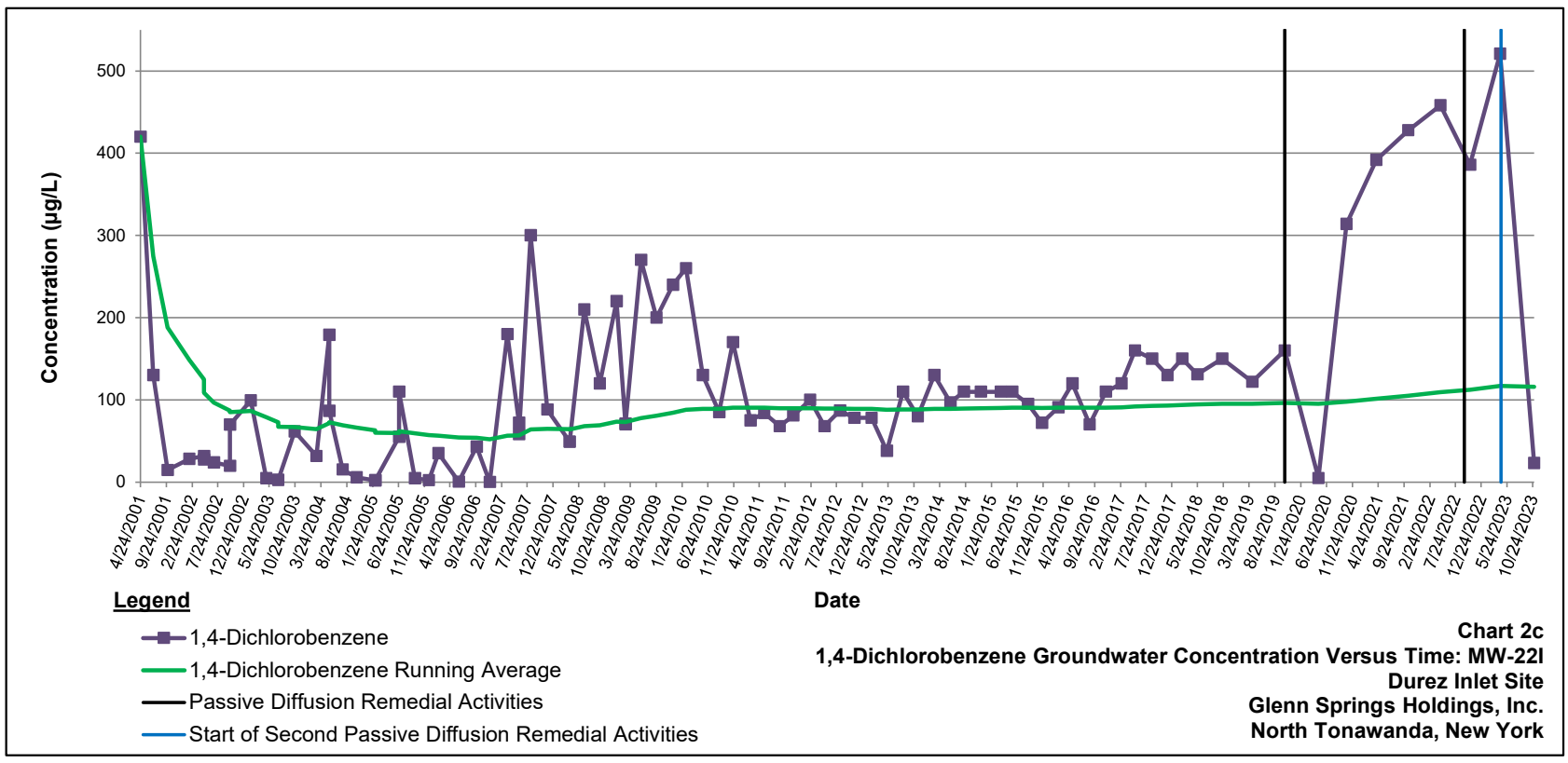

Chart 2c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-22I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Note:
The running average is the equally weighted arithmetic means of the concentrations for the parameter of interest charted. The period is all data beginning October 21, 1998 through the date for each monitoring event. The running average can be represented by the following formula: Ave= (a1 + a2 + …. + an) / n

where i varies from 1 to n

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Appendix A
Institutional and Engineering Controls Certification Form

NEW YORK ST ATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation
625 Broadway, 11th Floor, Albany, NY 12233-7020
P: (518)402-9543 | F: (518)402-9547
www.dec.ny.gov

11/14/2023

Joseph Branch
Project Manager
OCC/Glenn Springs Holdings, Inc.
7601 Old Channel Trail
Montague, MI 49437
Joseph_Branch@oxy.com

Re: Reminder Notice: Site Management Periodic Review Report and IC/EC Certification Submittal
Site Name: Durez Div. - Occidental Chemical Corp.
Site No.: 932018
Site Address: Walck Road/River Road
North Tonawanda, NY 14120

Dear Joseph Branch:

This letter serves as a reminder that sites in active Site Management (SM) require the submittal of a periodic progress report. This report, referred to as the Periodic Review Report (PRR), must document the implementation of, and compliance with, site-specific SM requirements. Section 6.3(b) of DER-10 *Technical Guidance for Site Investigation and Remediation* (available online at http://www.dec.ny.gov/regulations/67386.html) provides guidance regarding the information that must be included in the PRR. Further, if the site is comprised of multiple parcels, then you as the Certifying Party must arrange to submit one PRR for all parcels that comprise the site. The PRR must be received by the Department no later than **January 30, 2024**. Guidance on the content of a PRR is enclosed.

Site Management is defined in regulation (6 NYCRR 375-1.2(at)) and in Chapter 6 of DER-10. Depending on when the remedial program for your site was completed, SM may be governed by multiple documents (e.g., Operation, Maintenance, and Monitoring Plan; Soil Management Plan) or one comprehensive Site Management Plan.

A Site Management Plan (SMP) may contain one or all of the following elements, as applicable to the site: a plan to maintain institutional controls and/or engineering controls ("IC/EC Plan"); a plan for monitoring the performance and effectiveness of the selected remedy ("Monitoring Plan"); and/or a plan for the operation and maintenance of the selected remedy ("O&M Plan"). Additionally, the technical requirements for SM are stated in the decision document (e.g., Record of Decision) and, in some cases, the legal agreement directing the remediation of the site (e.g., order on consent, voluntary agreement, etc.).

When you submit the PRR (by the due date above), include the enclosed forms documenting that all SM requirements are being met. The Institutional Controls (ICs) portion of the form (Box 6) must be signed by you or your designated representative. The Engineering Controls (ECs) portion of the form (Box 7) must be signed by a Professional Engineer (PE). If you cannot certify that all SM requirements are being met, you must submit a Corrective Measures Work Plan that identifies the actions to be taken to restore compliance. The work plan must include a schedule to be approved by the Department. The Periodic Review process will not be considered complete until all necessary corrective measures are completed and all required controls are certified. Instructions for completing the certifications are enclosed.

All site-related documents and data, including the PRR, must be submitted in electronic format to the Department of Environmental Conservation. The required format for documents is an Adobe PDF file with optical character recognition and no password protection. Data must be submitted as an electronic data deliverable (EDD) according to the instructions on the following webpage:

https://www.dec.ny.gov/chemical/62440.html

Documents may be submitted to the project manager either through electronic mail or by using the Department's file transfer service at the following webpage:

https://fts.dec.state.ny.us/fts/

The Department will not approve the PRR unless all documents and data generated in support of the PRR have been submitted using the required formats and protocols.

You may contact Benjamin Mcpherson, the Project Manager, at 716-851-7235 or benjamin.mcpherson@dec.ny.gov with any questions or concerns about the site. Please notify the project manager before conducting inspections or field work. You may also write to the project manager at the following address:

New York State Department of Environmental Conservation
700 Delaware Ave

Buffalo, NY 14209-2202

Enclosures

PRR General Guidance
Certification Form Instructions
Certification Forms

ec: w/ enclosures

Occidental Chemical Corporation - joseph_branch@oxy.com

ec: w/ enclosures

Benjamin Mcpherson, Project Manager

Andrea Caprio, Hazardous Waste Remediation Supervisor, Region 9

GHD - Margaret Popek - margaret.popek@ghd.com
GHD - John Pentilchuk - jpentilchuk@ghd.com
B&B Engineers and Geologists of New York, P.C. - Dennis Hoyt - dhoyt@geosyntec.com

The following parcel owner did not receive an ec:

National Grid - Parcel Owner
Oar Marina, Llc - Parcel Owner

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7**):**

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 932018

Site Name Durez Div. - Occidental Chemical Corp.

Site Address: Walck Road/River Road Zip Code: 14120
City/Town: North Tonawanda
County: Niagara
Site Acreage: ~~73.500~~ 72.23

Walck Road = 67.45 acres
River Road = 4.78 acres

Reporting Period: December 31, 2022 to December 31, 2023

	YES	NO
1. Is the information above correct?	☐	☒
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☒	☐
7. Are all ICs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 932018 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
181.20-2-9	Oar Marina, LLC	
		Monitoring Plan O&M Plan

Site Operation, Maintenance and Monitoring (OMM) is conducted by the RP in accordance with the February 1989 Record of Decision and approved work plans. At the Inlet Site, site management includes groundwater quality monitoring, NAPL removal from extraction wells during the off-boating season, and maintenance of the cover system.

Groundwater Quality Monitoring; Durez Third Stipulation and PCJ and associated minor changes to the PCJ (currently minor change number 10, Rev.2, September 1999).

DNAPL Removal: Inlet Monitoring Plan, GHD 2019.

182.06-3-19	Occidental Chemical Corporation	
		Monitoring Plan O&M Plan

Site Operation, Maintenance and Monitoring (OMM) is conducted by the RP in accordance with the February 1989 Record of Decision and approved work plans.

182.06-3-20	Occidental Chemical Corporation	
		Monitoring Plan O&M Plan

Site Operation, Maintenance and Monitoring (OMM) is conducted by the RP in accordance with the February 1989 Record of Decision and approved work plans.

182.06-3-21	Occidental Chemical Corporation	
		Monitoring Plan O&M Plan

Site Operation, Maintenance and Monitoring (OMM) is conducted by the RP in accordance with the February 1989 Record of Decision and approved work plans.

182.07-1-14	Occidental Chemical Corporation	
		Monitoring Plan O&M Plan

Record of Decision (ROD); February 25, 1989.

Appendix B, Durez Partial Consent Judgement (PCJ) "Monitoring, Operations,and Maintenance Plan" (1989) Subsequent Minor Modification #10, Rev. 2 "Minor Change to Appendix B" Monitoring, Operations, and Maintenace Plan"(September 1999) (Minor Change No. 10) groundwater monitoring.

PCJ 1992; amended by Minor Change No. 5 to allow for semi-annual reporting to the NYSDEC on quarterly hydraulic groundwater data.

Plant Site: OMM includes operation, maintenance and monitoring of the cover system, groundwater collection system, groundwater conveyance system, groundwater treatment system, groundwater monitoring wells, fencing/access points and the panhandle area.

182.32.-1-47 Occidental Chemical Corporation

Monitoring Plan
O&M Plan

Site Operation, Maintenance and Monitoring (OMM) is conducted by the RP in accordance with the February 1989 Record of Decision and approved work plans.

p/o 182.07-1-17 National Grid

Monitoring Plan
O&M Plan

Site Operation, Maintenance and Monitoring (OMM) is conducted by the RP in accordance with the February 1989 Record of Decision and approved work plans.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
181.20-2-9	Cover System Groundwater Containment Monitoring Wells Subsurface Barriers

Sheet pile wall, NAPL extraction wells and cover system.

182.06-3-19	Groundwater Treatment System Cover System Groundwater Containment Leachate Collection Fencing/Access Control

At the Plant Site, OMM includes operation, maintenance and monitoring of the cover system, groundwater collection system, groundwater conveyance system, groundwater treatment system, goundwater monitoring wells, fencing/access points and the panhandle area.

182.06-3-20	Groundwater Treatment System Cover System Groundwater Containment Leachate Collection Fencing/Access Control

At the Plant Site, OMM includes operation, maintenance and monitoring of the cover system, groundwater collection system, groundwater conveyance system, groundwater treatment system, groundwater monitoring wells,fencing/access points and the panhandle area.

182.06-3-21

Parcel	Engineering Control
	Groundwater Treatment System Cover System Groundwater Containment Leachate Collection Fencing/Access Control

At the Plant Site, OMM includes operation, maintenance and monitoring of the cover system, groundwater collection system, groundwater conveyance system, groundwater treatment system, goundwater monitoring wells, fencing/access points and the panhandle area.

182.07-1-14

Point-of-Entry Water Treatment
Monitoring Wells
Groundwater Treatment System
Cover System
Groundwater Containment
Leachate Collection
Fencing/Access Control

Soil cover system with encompassing groundwater interceptor trench and conveyance to an onsite treatment plant.

182.32.-1-47

Groundwater Treatment System
Cover System
Groundwater Containment
Leachate Collection
Fencing/Access Control

At the Plant Site, OMM includes operation, maintenance and monitoring of the cover system, groundwater collection system, groundwater conveyance system, groundwater treatment system, groundwater monitoring wells, fencing/access points and the panhandle area.

p/o 182.07-1-17

Monitoring Wells
Groundwater Treatment System
Cover System
Groundwater Containment
Leachate Collection
Fencing/Access Control

At the Plant Site, OMM includes operation, maintenance and monitoring of the cover system, groundwater collection system, groundwater conveyance system, groundwater treatment system, groundwater monitoring wells and fencing/access points. The Right Of Way (ROW) for National Grid is on site. Reporting is done by the RP; OCC/Glenn Springs Holdings, Inc.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☐	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 932018

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Joseph Branch (print name) at 7601 Old Channel Trail (print business address),

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

1-30-24
Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Ian Richardson (print name) at B&B Engineers & Geologists of New York P.C. PO Box 351 Ransomville, NY 14131 (print business address),

am certifying as a Professional Engineer for the Owner (Owner or Remedial Party)

STATE OF NEW YORK
IAN KERR RICHARDSON
LICENSED PROFESSIONAL ENGINEER

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)
104815-01

Jan 30, 2024
Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.

C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.
D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.
E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations
A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
1. whether all requirements of each plan were met during the reporting period
2. any requirements not met
3. proposed plans and a schedule for coming into full compliance.
B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.
C. Future PRR Submittals
1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

Appendix B
Data Validation Memoranda

Data Verification Report

May 18, 2023

To	Joseph Branch	**Contact No.**	716-205-1942
Copy to	Christa Bucior, Dennis Hoyt, Paul Fowler, Linda Waters	**Email**	Kathleen.willy@ghd.com
From	Kathy Willy/cs/48	**Project No.**	11223794
Project Name	Durez Inlet		
Subject	Analytical Results and Data Verification Semiannual Groundwater Monitoring Program Durez Inlet North Tonawanda, New York April 2023		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

Groundwater samples were collected on April 13, 2023 in support of the Semiannual Groundwater Monitoring Program at the Durez Inlet site. ALS Environmental (ALS) in Rochester, New York analyzed the samples for the following:

Parameter	Methodology
Volatile Organic Compounds (VOCs)	USEPA 624.1[1]

A field sample key is presented in Table 1. The analytical results are summarized in Table 2. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical method and the "National Functional Guidelines for Superfund Organic Methods Data Review", EPA-540-R-20-005, November 2020.

A copy of the chain of custody is attached.

Final data assessment was based on information obtained from the chain of custody, finished data sheets, blank data, surrogate recoveries, laboratory control sample (LCS)/matrix spike (MS) recoveries, and field QA/QC samples.

2. QA/QC Review

All samples were analyzed within the method required holding time.

[1] 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants", United States Environmental Protection Agency (USEPA).

Surrogate compounds were added to all samples, blanks, and QC samples prior to analysis. All surrogate recoveries were acceptable, demonstrating good analytical efficiency.

Method blanks were prepared from deionized water and analyzed with the samples. All method blank results were non-detect, demonstrating laboratory contamination was not a factor for this investigation.

LCS were prepared and analyzed with the samples. The LCS analyses demonstrated acceptable analytical accuracy.

A matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample MW-20I-0423. All MS/MSD results were acceptable, demonstrating good analytical precision and accuracy, with the exception of a high chlorobenzene recovery in the MS. No qualification of the data was required based on the acceptable companion spike recovery and the resulting relative percent difference (RPD).

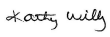
A field duplicate from well MW-16I was collected and submitted "blind" to the laboratory, as indicated in Table 1. The sample results from the original and field duplicate sample showed acceptable agreement.

One trip blank was submitted with the samples. All trip blank results were non-detect.

3. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Regards,



Kathy Willy
Digital Intelligence-Data Management-Chemist

Table 1

Sample Collection and Analysis Summary
Semiannual Groundwater Monitoring Program
Durez Inlet
North Tonawanda, New York
April 2023

				Analysis/Parameters	
Sample ID	**Location ID**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hh:mm)**	**VOCs**	**Comment**
MW-18I-0423		04/13/2023	09:35	X	
MW-16I-0423		04/13/2023	11:05	X	
MW-9I-0423		04/13/2023	11:05	X	Field duplicate of MW-16I-0423
MW-19I-0423		04/13/2023	11:55	X	
MW-20I-0423		04/13/2023	13:20	X	MS/MSD
MW-22I-0423		04/13/2023	14:55	X	
INLETTRIP-041323		04/13/2023	-	X	Trip Blank

Notes:

-	- Not applicable
MS/MSD	- Matrix Spike/Matrix Spike Duplicate
VOCs	- Volatile Organic Compounds

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring Program
Durez Inlet
North Tonawanda, New York
April 2023

Location ID:		**MW-18I**	**MW-16I**	**MW-16I**	**MW-19I**	**MW-20I**	**MW-22I**
Sample Name:		**MW-18I-0423**	**MW-16I-0423**	**MW-9I-0423**	**MW-19I-0423**	**MW-20I-0423**	**MW-22I-0423**
Sample Date:		**04/13/2023**	**04/13/2023**	**04/13/2023**	**04/13/2023**	**04/13/2023**	**04/13/2023**
				Duplicate			
Parameters	**Unit**						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U	25.0 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U	25.0 U
1,2-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U	5.25 J
1,3-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	22.5 J	27.5
1,4-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	322	521
Benzene	µg/L	1.00 U	0.260 J	1.00 U	1.00 U	12.0 J	29.3
Chlorobenzene	µg/L	0.350 J	5.51	5.13	1.00 U	2380	4150
Toluene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U	25.0 U

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit

CHAIN OF CUSTODY RECORD

Laboratory: ALS
1565 Jefferson Road Building 300, Suite 360 Rochester, NY 14623
(585) 288-5380

WO # / LAB USE ONLY:

DATE: 04/24/23
PAGE: 1 OF 1

LABORATORY CLIENT: Geosyntec | Report to Paul McMahon
ADDRESS: 805 97th Street
CITY: Niagara Falls STATE: NY ZIP: 14304
TEL: 716-818-2743 Fax:

CLIENT PROJECT NAME / NUMBER: Durez Inlet 112237954
PROJECT CONTACT: Shawn Gardner
E-MAIL: Shawn.Gardner@geosyntec.com

P.O. NO.: 281-402-D02-3100
SAMPLER(S): (PRINT) Shawn Gardner

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

SPECIAL INSTRUCTIONS:

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	624 / VOC_FP 14D						MS/MSD
	MW-18I-0423	4/13/2023	9:35	WG	3		X		X						
	MW-16I-0423	4/13/2023	11:05	WG	3		X		X						
	MW-9I-0423	4/13/2023	11:05	WG	3		X		X						
	MW-19I-0423	4/13/2023	11:55	WG	3		X		X						
	MW-20I-0423	4/13/2023	13:20	WG	9		X		X						X
	MW-22I-0423	4/13/2023	14:55	WG	3		X		X						
	INLETTRIP-041323	4/13/2023		WGQ	3		X		X						

Relinquished by: (Printed)	Relinquished by: (Signature)	Date:	Time:	Received by: (Print)	Received by: (Signature/Affiliation)	Date:	Time:
SHAWN GARDNER	Shawn Gardner	4/14/23	0900	Gregory O. Esmerian		4/17/23	11:50

R2303227 5
Glenn Springs Holdings, Inc.
Durez Inlet/281-402-D02-3100

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR#_____

001

T063911

ALS Environmental
1565 Jefferson Road, Bldg 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 / FAX (585) 288-8475
www.alsglobal.com

Project Name: Durez Inlet/281-402-D02-3100	
Project Number: 7405: Semi-Annual GW	Report To Paul McMahon
Company / Address GHD Services Inc. 2055 Niagara Falls Blvd., Niagara Falls NY, 14304	
Phone # 716-297-2160	FAX # 716-297-2265
Sampler Signature	Sampler Printed Name

CLIENT SAMPLE ID	LABID	SAMPLING Date Time	Matrix	NUMBER OF CONTAINERS	14D 624 / VOC_FP	1	2	3	4	5	Remarks
			Liquid	3	X						
			Liquid	3	X						
			Liquid	3	X						
			Liquid	3	X						
			Liquid	3	X						
			Liquid	3	X						
			Liquid	3	X						
			Liquid								
			Liquid								
			Liquid								

Special Instructions/Comments:

Turnaround Requirements

___ RUSH (SURCHARGES APPLY)

___ Standard

_____ REQUESTED FAX DATE

_____ Requested Report Date

Report Requirements

___ I. Results Only

___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III. Results + QC and Cilibration Summaries

___ IV. Data Validation Report with Raw Data

EData ____Yes ____No

Invoice Information

P.O.#_____

Bill To:_____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Data Verification Report

November 29, 2023

To	Joseph Branch	**Contact No.**	315-802-0343
Copy to	Christa Bucior, Dennis Hoyt, Paul Fowler	**Email**	Linda.Waters@ghd.com
From	Linda Waters/cs/58-NF	**Project No.**	11223794
Project Name	Durez Inlet		
Subject	Analytical Results and Data Verification Semiannual Groundwater Monitoring Program Durez Inlet North Tonawanda, New York October 2023		

1. Introduction

Groundwater samples were collected on October 31, 2023 in support of the Semiannual Groundwater Monitoring Program at the Durez Inlet site. ALS Environmental (ALS) in Rochester, New York analyzed the samples for the following:

Parameter	Methodology
Volatile Organic Compounds (VOCs)	USEPA 624.1[1]

A field sample key is presented in Table 1. The analytical results are summarized in Table 2. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical method and the "National Functional Guidelines for Superfund Organic Methods Data Review", EPA-540-R-20-005, November 2020.

A copy of the chain of custody is attached.

Final data assessment was based on information obtained from the chain of custody, finished data sheets, blank data, surrogate recoveries, laboratory control sample (LCS)/matrix spike (MS) recoveries, and field QA/QC samples.

2. QA/QC Review

All samples were analyzed within the method required holding time.

Surrogate compounds were added to all samples, blanks, and QC samples prior to analysis. All surrogate recoveries were acceptable, demonstrating good analytical efficiency.

[1] 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants", United States Environmental Protection Agency (USEPA).

Method blanks were prepared from deionized water and analyzed with the samples. All method blank results were non-detect, demonstrating laboratory contamination was not a factor for this investigation.

LCS were prepared and analyzed with the samples. The LCS analyses demonstrated acceptable analytical accuracy.

A matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample MW-20I-1023. All MS/MSD results were acceptable, demonstrating good analytical precision and accuracy.

A field duplicate from well MW-18 was collected and submitted "blind" to the laboratory, as indicated in Table 1. The sample results from the original and field duplicate sample showed acceptable agreement.

One trip blank was submitted with the samples. All trip blank results were non-detect.

3. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Regards,

Linda Waters

Linda Waters
Digital Intelligence-Data Management-Chemist

Table 1

Sample Collection and Analysis Summary
Semiannual Groundwater Monitoring Program
Durez Inlet
North Tonawanda, New York
October 2023

				Analysis/Parameters	
Sample ID	**Location ID**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hh:mm)**	**VOCs**	**Comment**
MW-16I-1023	MW-16I	10/31/2023	11:30	X	
MW-18I-1023	MW-18I	10/31/2023	08:55	X	
MW-9I-1023	MW-18I	10/31/2023	08:55	X	Field duplicate of MW-18I-1023
MW-19I-1023	MW-19I	10/31/2023	10:05	X	
MW-20I-1023	MW-20I	10/31/2023	12:50	X	MS/MSD
MW-22i-1023	MW-22I	10/31/2023	14:20	X	
INLETTRIP-103123	-	10/31/2023	-	X	Trip Blank

Notes:

-	- Not applicable
MS/MSD	- Matrix Spike/Matrix Spike Duplicate
VOCs	- Volatile Organic Compounds

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring Program
Durez Inlet
North Tonawanda, New York
October 2023

Location ID:		MW-16I	MW-18I	MW-18I	MW-19I	MW-20I	MW-22I
Sample Name:		MW-16I-102	MW-18I-1023	MW-9I-1023	MW-19I-1023	MW-20I-1023	MW-22i-1023
Sample Date:		10/31/2023	10/31/2023	10/31/2023	10/31/2023	10/31/2023	10/31/2023
				Duplicate			
Parameters	**Unit**						
Volatile Organic Compounds							
1,2,3-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U	5.00 U
1,2,4-Trichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U	5.00 U
1,2-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U	1.58 J
1,3-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	8.18 J	3.76 J
1,4-Dichlorobenzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	123	23.1
Benzene	µg/L	1.00 U	1.00 U	1.00 U	1.00 U	15.1 J	28.4
Chlorobenzene	µg/L	0.262 J	1.00 U	1.00 U	1.00 U	1990	761
Toluene	µg/L	1.00 U	1.00 U	0.212 J	0.349 J	25.0 U	5.00 U

Notes:

U - Not detected at the associated reporting limit

J - Estimated concentration

CHAIN OF CUSTODY RECORD

Laboratory: ALS
1565 Jefferson Road Building 300, Suite 360 Rochester, NY 14623
(585) 288-5380

WO # / LAB USE ONLY:

DATE: 10/31/23
PAGE: 1 OF 1

LABORATORY CLIENT: Geosyntec | Report to Paul McMahon
ADDRESS: 805 97th Street
CITY: Niagara Falls STATE: NY ZIP: 14304
TEL: 716-818-2743 Fax:

CLIENT PROJECT NAME / NUMBER: Durez Inlet 112237954
PROJECT CONTACT: Shawn Gardner
E-MAIL: Shawn.Gardner@geosyntec.com

P.O. NO.: 281-402-D02-3100
SAMPLER(S): (PRINT) Shawn Gardner

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	624 / VOC_FP 14D						MS/MSD
	MW-18I-1023	10/31/2023	8:55	WG	3		X		X						
	MW-16I-1023	10/31/2023	11:30	WG	3		X		X						
	MW-9I-1023	10/31/2023	8:55	WG	3		X		X						
	MW-19I-1023	10/31/2023	10:05	WG	3		X		X						
	MW-20I-1023	10/31/2023	12:50	WG	9		X		X						X
	MW-22I-1023	10/31/2023	14:20	WG	3		X		X						
	INLETTRIP-103123	10/31/2023	8:00	WGQ	2		X		X						

Relinquished by: (Printed)	Relinquished by: (Signature)	Date:	Time:	Received by: (Print)	Received by: (Signature/Affiliation)	Date:	Time:
SHAWN GARDNER	Shawn Gardner	10/31/23	1600	RR	Remy Rubin	11/1/23	1015
Relinquished by: (Printed)	Relinquished by: (Signature)	Date:	Time:	Received by: (Print)	Received by: (Signature/Affiliation)	Date:	Time:
Relinquished by: (Printed)	Relinquished by: (Signature)	Date:	Time:	Received by: (Print)	Received by: (Signature/Affiliation)	Date:	Time:

R2310074 5
Glenn Springs Holdings, Inc.
Durez Inlet/281-402-D02-3100

Appendix C
Historical Groundwater Chemistry Monitoring Analytical Results

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-16I

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-95	Oct-95	Jan-96	Apr-96	Jul-96	Oct-96	Jan-97	Apr-97	Jul-97	Oct-97	Jan-98	Apr-98	Jul-98	Oct-98
Benzene	1	1	1.0 U	1.0 U	0.62 J	5.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U/1.0 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U/1.0 U
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U/1.0 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U/1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U/1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U/1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U/1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.1 U	1.0 U	1.0 U	1.0 U/1.0 U
Total Targeted Site Compounds			0.0	0.0	0.62	5.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jan-99	Apr-99	Jul-99	Oct-99	Feb-00	Apr-00	Jul-00	Oct-00	Jan-01	Apr-01	Jul-01	Oct-01	Feb-02	May-02
Benzene	1	1	1.0 U/2.8	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1 U	1 U	1 U/1 U	1.0 U	2.0 U/2.0 U	1 U	1.00 U	1.00 U	1.00 U
Toluene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1 U	1 U	1 U/1 U	1.0 U	2.0 U/2.0 U	1 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1 U	1 U	2/4	1.0 U	2.0 U/2.0 U	1 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1 U	1 U	1 U/1 U	1.0 U	2.0 U/2.0 U	1 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1 U	1 U	1 U/1 U	1.0 U	2.0 U/2.0 U	1 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1 U	1 U	1 U/1 U	1.0 U	2.0 U/2.0 U	1 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1 U	1 U	1 U/1 U	1.0 U	2.0 U/2.0 U	1 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1 U	1 U	1 U/1 U	1.0 U	2.0 U/2.0 U	1 U	1.00 U	1.00 U	1.00 U
Total Targeted Site Compounds			0.0/2.8	0.0/0.0	0.0/0.0	0.0/0.0	0.0	0.0	0.0	2/4	0.0	0.0/0.0	0.0	0.0	0.0	0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-02	Oct-02	Feb-03	May-03	Jul-03	Oct-03	Feb-04	May-04	Jul-04	Oct-04	Feb-05	Jun-05	Sep-05	Dec-05
Benzene	1	1	1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Toluene	5	1	1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Chlorobenzene	5	1	1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,2-Dichlorobenzene	3	1	1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,3-Dichlorobenzene	3	1	1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,4-Dichlorobenzene	3	1	1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,2,3-Trichlorobenzene	5	1	1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,2,4-Trichlorobenzene	5	1	1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Total Targeted Site Compounds			0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0/0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0	0.0

Notes:

J	- Estimated
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
µg/L	- Micrograms per liter
*	- New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0	- Results of investigative and duplicate sample
38	- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-16I - Continued

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-06	Jun-06	Sep-06	Dec-06	Mar-07	Jun-07	Aug-07	Nov-07	Mar-08	Jun-08	Sep-08	Jan-09	Feb-09	May-09
Benzene	1	1	1.0 U	1.0 U	0.47 J	0.54 J	1.0 U	1.0 U	0.55 J	0.64 J	0.34 J	0.42 J	1.0 U	0.62 J/0.67 J	1.0 U	0.70 J
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1	1.0 U	16	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.23 J	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	0.13 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U
Total Targeted Site Compounds			0.0	17.63	0.47	0.54	0.0	0.0	0.55	0.64	0.57	0.42	0.0	0.62/0.67	0.0	0.7

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-09	Nov-09	Feb-10	May-10	Aug-10	Nov-10	Mar-11	May-11	Aug-11	Nov-11	Feb-12	May-12	Aug-12	Nov-12
Benzene	1	1	1.2	0.68 J	0.84 J	0.77 J	0.61 J	0.57 J	0.60 J	0.64 J/0.63 J	0.76 J/0.71 J	0.94 J/0.96 J	0.89 J/0.88 J	0.63 J/0.68 J	0.65 J/0.68 J	0.95 J
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	0.22 J/0.22 J	0.17 J/0.21 J	1.0 U/1.0 U	0.23 J/0.23 J	0.22 J
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U
Total Targeted Site Compounds			1.2	0.68	0.84	0.77	0.61	0.57	0.60	0.64/0.63	0.76/0.71	1.16/1.18	1.06/1.09	0.63/0.68	0.88/0.91	1.17

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-13	May-13	Aug-13	Nov-13	Feb-14	May-14	Aug-14	Nov-14	Feb-15	May-15	Aug-15	Nov-15	Feb-16	May-16
Benzene	1	1	0.80 J	0.73 J/0.67 J	0.84 J	1.1/1.0	0.58 J	1.1	0.90 J/0.88 J	1.1	0.23 J	1.2 / 1.2	0.95 J	0.93 J	1.3	0.92 J
Toluene	5	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1	1.0 U	0.18 J/1.0 U	0.24 J	0.35 J/0.42 J	0.20 J	0.48 J	0.39 J/0.42 J	0.46 J	1.0 U	0.78 J / 0.72 J	0.92 J	0.75 J	1.1	1.1
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Targeted Site Compounds			0.80	0.91/0.67	1.08	1.45/1.42	0.78	1.58	1.29 J/1.30 J	1.56	0.23	1.98 / 1.92	1.87	1.68	2.4	2.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	May-18	Oct-18	Apr-19	Oct-19	May-20	Oct-20	Apr-21
Benzene	1	1	0.72 J	0.70 J	1.1	1.0 U	0.74 J / 0.75 J	0.69 J / 0.67 J	1.1 / 1.1	0.970 J / 0.978 J	0.760 J / 0.730 J	0.910 J	0.510 J / 0.520 J	0.866 J / 0.949 J	0.595 J / 1.0 U	0.622 J / 0.673 J
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.00 U / 1.00 U	1.00 U / 1.00 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
Chlorobenzene	5	1	0.97 J	0.82 J	1.3	1.3	1.6 / 1.6	1.2 / 1.2	1.6 / 1.6	1.71 / 1.76	1.47 / 1.57	1.88	1.89 / 1.76	2.80 / 3.07	2.79 J / 7.04 J	2.88 / 3.01
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.00 U / 1.00 U	1.00 U / 1.00 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.00 U / 1.00 U	1.00 U / 1.00 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.00 U / 1.00 U	1.00 U / 1.00 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.82	1.0 U / 1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.00 U / 1.00 U	1.00 U / 1.00 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.00 U / 1.00 U	1.00 U / 1.00 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
Total Targeted Site Compounds			1.69	1.52	2.40	1.3	2.34 / 2.33	1.87	2.7 / 2.7	2.68 / 2.74	2.23 / 2.30	2.79	2.40 / 2.28	3.67 / 4.02	3.39 / 8.86	3.50 / 3.68

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-16I - Continued

			Reported Values				
			Oct-21	**Apr-22**	**Oct-22**	**Apr-23**	**Oct-23**
Benzene	1	1	0.222 J / 0.295 J	0.236 J	0.254 J	0.260 J / 1.00 U	1.00 U
Toluene	5	1	1.0 U / 1.0 U	1.0 U	1.0 U	1.00 U / 1.00 U	1.00 U
Chlorobenzene	5	1	1.73 / 2.04	1.63	2.8	5.51 / 5.13	0.262 J
1,2-Dichlorobenzene	3	1	1.0 U / 1.0 U	1.0 U	1.0 U	1.00 U / 1.00 U	1.00 U
1,3-Dichlorobenzene	3	1	1.0 U / 1.0 U	1.0 U	1.0 U	1.00 U / 1.00 U	1.00 U
1,4-Dichlorobenzene	3	1	1.0 U / 1.0 U	1.0 U	1.0 U	1.00 U / 1.00 U	1.00 U
1,2,3-Trichlorobenzene	5	1	1.0 U / 1.0 U	1.0 U	1.0 U	1.00 U / 1.00 U	1.00 U
1,2,4-Trichlorobenzene	5	1	1.0 U / 1.0 U	1.0 U	1.0 U	1.00 U / 1.00 U	1.00 U
Total Targeted Site Compounds			1.95 / 2.34	1.87	3.05	5.78 / 5.13	0.262

Notes:

J	- Estimated
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
µg/L	- Micrograms per liter
*	- New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0	- Results of investigative and duplicate sample
38	- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-18I

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-95	Oct-95	Jan-96	Apr-96	Jul-96	Oct-96	Jan-97	Apr-97	Jul-97	Oct-97	Jan-98	Apr-98	Jul-98	Oct-98
Benzene	1	1	1.0 U	1.4	8.5 J	0.9 J/0.8 J	1.0 U/1.0 U	1.0 U/0.38 J	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/0.21 J	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
Total Targeted Site Compounds			0.0	1.4	8.5	0.9 J/0.8 J	0.0/0.0	0.0/0.59 J	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jan-99	Apr-99	Jul-99	Oct-99	Feb-00	Apr-00	Jul-00	Oct-00	Jan-01	Apr-01	Jul-01	Oct-01	Feb-02	May-02
Benzene	1	1	2.6/2.8	1.9/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1 U/1 U	1 U/1 U	1 U	1 U/1 U	2 U	1 U/1 U	1.00 U/1.00 U	1.00 U	1.00 U
Toluene	5	1	1.0 U/1.0 U	1.4/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1 U/1 U	1 U/1 U	1 U	1 U/1 U	2 U	1 U/1 U	1.00 U/1.00 U	1.00 U	1.00 U
Chlorobenzene	5	1	1.0/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1 U/1 U	1 U/1 U	1 U	1 U/1 U	2 U	1 U/1 U	1.00 U/1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1 U/1 U	1 U/1 U	1 U	1 U/1 U	2 U	1 U/1 U	1.00 U/1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1 U/1 U	1 U/1 U	1 U	1 U/1 U	2 U	1 U/1 U	1.00 U/1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1 U/1 U	1 U/1 U	1 U	1 U/1 U	2 U	1 U/1 U	1.00 U/1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1 U/1 U	1 U/1 U	1 U	1 U/1 U	2 U	1 U/1 U	1.00 U/1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1 U/1 U	1 U/1 U	1 U	1 U/1 U	2 U	1 U/1 U	1.00 U/1.00 U	1.00 U	1.00 U
Total Targeted Site Compounds			3.6/2.8	3.3/0.0	0.0/0.0	0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0	0.0/0.0	0.0	0.0/0.0	0.0/0.0	0.0	0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-02	Oct-02	Feb-03	May-03	Jul-03	Oct-03	Feb-04	May-04	Jul-04	Oct-04	Feb-05	Jun-05	Sep-05	Dec-05
Benzene	1	1	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Toluene	5	1	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Chlorobenzene	5	1	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,2-Dichlorobenzene	3	1	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,3-Dichlorobenzene	3	1	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,4-Dichlorobenzene	3	1	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,2,3-Trichlorobenzene	5	1	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
1,2,4-Trichlorobenzene	5	1	1.00 U/1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Total Targeted Site Compounds			0.0/0.0	0.0	0.0/0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes:

J	- Estimated
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
µg/L	- Micrograms per liter
*	- New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0	- Results of investigative and duplicate sample
38	- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-18I - Continued

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-06	Jun-06	Sep-06	Dec-06	Mar-07	Jun-07	Aug-07	Nov-07	Mar-08	Jun-08	Sep-08	Jan-09	Feb-09	May-09
Benzene	1	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/0.18 J	1.0 U/1.0 U	0.17 J	1.0 U	1.0 U/1.0 U	1.0 UJ	1.0 U	1.0 U/1.0 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ	1.0 U	1.0 U/1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ	1.0 U	1.0 U/1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ	1.0 U	1.0 U/1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U/1.0 U
Total Targeted Site Compounds			0.0	0.0	0.0	0.0	0.0	0.0	0.0/0.18	0.0	0.17	0.0	0.0/0.0	0.0	0.0	0.0/0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-09	Nov-09	Feb-10	May-10	Aug-10	Nov-10	Mar-11	May-11	Aug-11	Nov-11	Feb-12	May-12	Aug-12	Nov-12
Benzene	1	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Total Targeted Site Compounds			0.0	0.0	0.0	0.0	0.0	0.0/0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-13	May-13	Aug-13	Nov-13	Feb-14	May-14	Aug-14	Nov-14	Feb-15	May-15	Aug-15	Nov-15	Feb-16	May-16
Benzene	1	1	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U /1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
Toluene	5	1	1.0 U/0.20 J	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U /1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
Chlorobenzene	5	1	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U /1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
1,2-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U /1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
1,3-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U /1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
1,4-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U /1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U /1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U /1.0 U	1.0 U /1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U
Total Targeted Site Compounds			0/0.20	0.0	0.0/0.0	0.0	0/0	0/0	0	0	0	0	0 / 0	0 / 0	0.0	0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	May-18	Oct-18	Apr-19	Oct-19	May-20	Oct-20	Apr-21
Benzene	1	1	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Targeted Site Compounds			0 / 0	0 / 0	0 / 0	0 / 0	0	0	0	0	0	0	0	0.0	0.0	0.0

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-18I - Continued

			Reported Values				
			Oct-21	**Apr-22**	**Oct-22**	**Apr-23**	**Oct-23**
Benzene	1	1	1.0 U	1.0 U	1.0 U / 1.0 U	1.00 U	1.00 U / 1.00 U
Toluene	5	1	1.0 U	1.0 U	1.0 U / 1.0 U	1.00 U	1.00 U / 0.212 J
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U / 1.0 U	0.350 J	1.00 U / 1.00 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U / 1.0 U	1.00 U	1.00 U / 1.00 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U / 1.0 U	1.00 U	1.00 U / 1.00 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U / 1.0 U	1.00 U	1.00 U / 1.00 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U / 1.0 U	1.00 U	1.00 U / 1.00 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U / 1.0 U	1.00 U	1.00 U / 1.00 U
Total Targeted Site Compounds			0.0	0.0	0.0	0.4	0.00 / 0.212

Notes:

J	- Estimated
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
µg/L	- Micrograms per liter
*	- New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0	- Results of investigative and duplicate sample
38	- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-19I

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-95	Oct-95	Jan-96	Apr-96	Jul-96	Oct-96	Jan-97	Apr-97	Jul-97	Oct-97	Jan-98	Apr-98	Jul-98	Oct-98
Benzene	1	1	6.2	7.2	9.1 J	0.9 J	0.24 J	0.29 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1	25	14	13	3.8	13	13	12	5.0	14.0	5.2	1.4	1.5	11	1.9
1,2-Dichlorobenzene	3	1	5.8	3.3	3	2.6	3.1	3.2	2.8	1.9	3.4	1.8	1.0 U	1.0	3.1	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.59 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	2.4	1.7	1.4	1.2	1.4	1.5	1.3	1.0 U	1.4	1.0 U	1.0 U	1.0 U	1.2	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Targeted Site Compounds			39.4	26.2	26.5	8.5	17.7	18.58 J	16.1	6.9	18.8	7.0	1.4	2.5	15.3	1.9

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jan-99	Apr-99	Jul-99	Oct-99	Feb-00	Apr-00	Jul-00	Oct-00	Jan-01	Apr-01	Jul-01	Oct-01	Feb-02	May-02
Benzene	1	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	1 U	1.00 U	1.00 U	1.00 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	1 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	5	1	1.8	1.0 U	7.2	4.0	1.0 U	2	3	3	3	3	1	2.63	1.00 U	1.53
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	3.1	2.3	1.0 U	1 U	3	1	1	3	1	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0	1 U	1 U	1 U	2 U	1 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.8	1.5	1.0 U	1 U	1	1 U	1 U	2 U	1 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	1 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	2 U	1 U	1.00 U	1.00 U	1.00 U
Total Targeted Site Compounds			1.8	0.0	12.1	7.8	0.0	3	7	4	4	6	2	2.63	0.0	1.53

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-02	Oct-02	Feb-03	May-03	Jul-03	Oct-03	Feb-04	May-04	Jul-04	Oct-04	Feb-05	Jun-05	Sep-05	Dec-05
Benzene	1	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ
Toluene	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ
Chlorobenzene	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ
1,2-Dichlorobenzene	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ
1,3-Dichlorobenzene	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ
1,4-Dichlorobenzene	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ
1,2,3-Trichlorobenzene	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ
1,2,4-Trichlorobenzene	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 UJ
Total Targeted Site Compounds			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0/0.0	0.0

Notes:

J	- Estimated
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
µg/L	- Micrograms per liter
*	- New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0	- Results of investigative and duplicate sample
38	- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-19I - Continued

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-06	Jun-06	Sep-06	Dec-06	Mar-07	Jun-07	Aug-07	Nov-07	Mar-08	Jun-08	Sep-08	Jan-09	Feb-09	May-09
Benzene	1	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	2.5	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	0.18 J	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	0.16 J	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Targeted Site Compounds			0.0/0.0	0.0/0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-09	Nov-09	Feb-10	May-10	Aug-10	Nov-10	Mar-11	May-11	Aug-11	Nov-11	Feb-12	May-12	Aug-12	Nov-12
Benzene	1	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
Toluene	5	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
Chlorobenzene	5	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 UJ	1.0 U/1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U/1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U/1.0 U	1.0 U/1.0 U	1.0 U/1.0 U
Total Targeted Site Compounds			0.0	0.0	0.0	0.0/0.0	0.0/0.0	0.0	0.0	0.0	0.0	0.0	0.0	0/0	0/0	0/0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-13	May-13	Aug-13	Nov-13	Feb-14	May-14	Aug-14	Nov-14	Feb-15	May-15	Aug-15	Nov-15	Feb-16	May-16
Benzene	1	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U /1.0 U	1.0 U / 1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Targeted Site Compounds			0.0	0.0	0.0	0.0	0	0	0	0/0	0 / 0	0	0.0	0 / 0	0 / 0	0.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	May-18	Oct-18	Apr-19	Oct-19	May-20	Oct-20	Apr-21
Benzene	1	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Targeted Site Compounds			0.0	0 / 0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-19I - Continued

			Reported Values				
			Oct-21	**Apr-22**	**Oct-22**	**Apr-23**	**Oct-23**
Benzene	1	1	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Toluene	5	1	1.0 U	1.0 U	1.0 U	1.00 U	0.349 J
Chlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	3	1	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	5	1	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U
Total Targeted Site Compounds			0.0	0.0	0.0	0.0	0.3

Notes:

J	- Estimated
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
µg/L	- Micrograms per liter
*	- New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0	- Results of investigative and duplicate sample
38	- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-20I

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-95	Oct-95	Jan-96	Apr-96	Jul-96	Oct-96	Jan-97	Apr-97	Jul-97	Oct-97	Jan-98	Apr-98	Jul-98	Oct-98
Benzene	1	1	7700	3300	8300	4600	5500	6100	4300	4000	4800	3100	3200	1900	1000	2200
Toluene	5	1	1000 U	1000 U	500 U	100 U	500 U	2000 U	2000 U	2000 U	2000 U	2000 U	50 U	200 U	200 U	400 U
Chlorobenzene	5	1	28000	18000	32000	19000	27000	37000	20000	26000	32000	96000	32000	8100	6600	13000
1,2-Dichlorobenzene	3	1	2000	1400	2700	1300	1600	1,900 J	2000 U	2000 U	2000 U	2000 U	1100	310	200	400 U
1,3-Dichlorobenzene	3	1	1000 U	1000 U	370 J	210	260 J	2000 U	2000 U	2000 U	2000 U	2000 U	360	200 U	200 U	400 U
1,4-Dichlorobenzene	3	1	1600	1400	2500	1200	1700	2300	2000 U	2000 U	2000 U	2000 U	2300	630	500	870
1,2,3-Trichlorobenzene	5	1	1000 U	1000 U	500 U	100 U	500 U	2000 U	2000 U	2000 U	2000 U	2000 U	50 U	200 U	200 U	400 U
1,2,4-Trichlorobenzene	5	1	1000 U	1000 U	500 U	100 U	500 U	2000 U	2000 U	2000 U	2000 U	2000 U	50 U	200 U	200 U	400 U
Total Targeted Site Compounds			39300	24100	45870	26310	36060	47300	24300	30000	36800	99100	38960	10940	8300	16070

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jan-99	Apr-99	Jul-99	Oct-99	Feb-99	Apr-00	Jul-00	Oct-00	Jan-01	Apr-01	Jul-01	Oct-01	Feb-02	May-02
Benzene	1	1	1600	2660	3600	890	310	220	1100	230	1400	660	90	118	142/135	391
Toluene	5	1	400 U	50 U	1000 U	50 U	100 U	1 U	1	5 U	13 U	100 U	2 U	1.00 U	1.00 U/1.00 U	1.61 J
Chlorobenzene	5	1	7400	16200	26000	6000	1700	2400	11000	2700	34000	20000	2100	1880	1630/1540	14800
1,2-Dichlorobenzene	3	1	400 U	329	1000 U	100	100 U	18	54	9	58	100 U	8	12.0	20.2/20.4	83.0 J
1,3-Dichlorobenzene	3	1	400 U	232	1000 U	110	100 U	19	120	7	310	220	12	19.7	34.6/34.1	158
1,4-Dichlorobenzene	3	1	400 U	1640	2200	210	280	140	430	56	2500	1900	80	150	215/203	1270
1,2,3-Trichlorobenzene	5	1	400 U	50 U	1000 U	50 U	100 U	1 U	1 U	5 U	13 U	100 U	2 U	1.00 U	1.00 U/1.00 U	1.0 U
1,2,4-Trichlorobenzene	5	1	400 U	50 U	1000 U	50 U	100 U	1 U	1 U	5 U	13 U	100 U	2 U	1.00 U	1.87/2.03	1.0 U
Total Targeted Site Compounds			9000	21061	31800	7310	2290	2797	12705	3002	38268	22780	2290	2180	2044/1935	16703.61

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-02	Oct-02	Feb-03	May-03	Jul-03	Oct-03	Feb-04	May-04	Jul-04	Oct-04	Feb-05	Jun-05	Sep-05	Dec-05
Benzene	1	1	664	347	74.5	89.4	18.5	164	41.5	44.8	34.5 J	8.92/9.40	500 U	250 U	500 U	1.0 UJ
Toluene	5	1	1.00 U	100 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U/1.00U	500 U	250 U	500 U	1.0 UJ
Chlorobenzene	5	1	10600	14100	1880	3310	1270	9810	14600	3100	14600	1370/1330	13000	3100	7600	9.5 J
1,2-Dichlorobenzene	3	1	66	100 U	23.5	27.0	7.47	1.00 U	1.00 U	14.8	1.00 U	6.08/ 6.16	500 U	250 U	500 U	0.26 J
1,3-Dichlorobenzene	3	1	118	143	45.7	50.4	16.3	87.7	151	31.7	142 J	16.8/16.7	110 J	250 U	500 U	0.91 J
1,4-Dichlorobenzene	3	1	779	1200	285	363	119	680	1220	194	1110	112/107	990	280	620	1.7 J
1,2,3-Trichlorobenzene	5	1	1.00 U	100 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U/1.00U	500 U	250 U	500 U	1.0 UJ
1,2,4-Trichlorobenzene	5	1	1.00 U	100 U	1.75	1.72	1.00 U	3.24	1.00 U	1.70	1.00 U	1.00 U/1.08	500 U	250 U	500 U	1.0 UJ
Total Targeted Site Compounds			12227.3	15790	2310.45	3841.5	1431	10745	16013	3387	15886.5	1513/1469	14100	3380	8220	12.4

Notes:

J - Estimated
U - Not detected at the associated reporting limit
UJ - Not detected; associated reporting limit is estimated
µg/L - Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0 - Results of investigative and duplicate sample
38 - Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-20I - Continued

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-06	Jun-06	Sep-06	Dec-06	Mar-07	Jun-07	Aug-07	Nov-07	Mar-08	Jun-08	Sep-08	Jan-09	Feb-09	May-09
Benzene	1	1	500 U	500 U	250 U	15 U/20 U	500 U	170 U	50 U	330 U	12 U	250 U	250 UJ	200 U	11	11 J
Toluene	5	1	500 U	500 U	250 U	15 U/20 U	500 U	170 U	50 U	330 U	12 U	250 U	250 UJ	200 U	1.0 U	1.0 U
Chlorobenzene	5	1	8800	12000	3400	340 /320	8700	12000	3400	12000	1000	11000	11000 J	11000	11000	9600
1,2-Dichlorobenzene	3	1	500 U	500 U	250 U	15 U/20 U	500 U	170 U	50 U	330 U	12 U	250 UJ	250 UJ	200 U	5	1.0 U
1,3-Dichlorobenzene	3	1	60 J	97 J	250 U	1.7 J/20 U	500 U	83	23 J	80 J	7.4 J	74 J	62 J	76 J	82	86 J
1,4-Dichlorobenzene	3	1	620	940	270	20 /20	630	950	270	910	83	860 J	810 J	910	830	910
1,2,3-Trichlorobenzene	5	1	500 U	500 U	250 U	15 U/20 U	500 U	170 U	50 U	330 U	12 U	250 U	250 U	200 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1	500 U	500 U	250 U	15 U/20 U	500 U	170 U	50 U	330 U	12 U	250 U	250 U	200 U	1.0 U	1.0 U
Total Targeted Site Compounds			9480	2237	3670	361.7/340	9330	13033	3693	12990	1090	11934	11872	11986	11928	10607

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-09	Nov-09	Feb-10	May-10	Aug-10	Nov-10	Mar-11	May-11	Aug-11	Nov-11	Feb-12	May-12	Aug-12	Nov-12
Benzene	1	1	15 J/14 J	10 J	200 U	500 U	500 U	500 U	500 U/400 U	120 U	250 U/200 U	250 U	200 U/200 U	80 U	100 U/130 U	100 U/16 J
Toluene	5	1	1.0 U/1.0 U	1.0 U	200 U	500 U	500 U	500 U	500 U/400 U	120 U	250 U/250 U	250 U	200 U/200 U	80 U	100 U/130 U	100 U/100 U
Chlorobenzene	5	1	9600/9700	8100	2100	8600	9500	8900	7700/8100	2800	4700/4400	4500	2400/3300	1800	2600/2700	2100/2400
1,2-Dichlorobenzene	3	1	5.2 J/5.9 J	5.4 J	200 U	500 U	500 U	500 U	500 U/400 U	120 U	250 U/200 U	250 U	200 U/200 U	80 U	100 U/130 U	100 U/100 U
1,3-Dichlorobenzene	3	1	68 J/68 J	62 J	200 U	500 U	500 U	500 U	500 U/400 U	19 J	29 J/41 J	32 J	30 J/334 J	25 J	36 J/34 J	36 J/25 J
1,4-Dichlorobenzene	3	1	820/840	720	150 J	670	630	540	590/670	320	510/470	530	540/390	320	460/460	410/410
1,2,3-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U	200 U	500 U	500 U	500 U	500 U/400 U	120 U	250 U/200 U	250 U	200 U/200 U	80 U	100 U/130 U	100 U/100 U
1,2,4-Trichlorobenzene	5	1	1.0 U/1.0 U	1.0 U	200 U	500 U	500 U	500 U	500 U/400 U	120 U	250 U/200 U	250 U	200 U/200 U	80 U	100 U/130 U	100 U/100 U
Total Targeted Site Compounds			10508/10628	8897	2250	9270	10130	9440	8,290/8,770	3139	5239/4911	5062	2970/3724	2145	3096/3194	2546/2851

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-13	May-13	Aug-13	Nov-13	Feb-14	May-14	Aug-14	Nov-14	Feb-15	May-15	Aug-15	Nov-15	Feb-16	May-16
Benzene	1	1	130 U	130 U	21 J	17 J	200 U	27 J	26 J	25 J	26 J	37 J	23 J	35	32 J	8.1
Toluene	5	1	130 U	130 U	100 U	100 U	200 U	200 U	200 U	200 U	100 U	200 U	200 U	0.20 J	100 U	5.0 U
Chlorobenzene	5	1	2000	2000	2300	2300	2200	2400	2700	2300	2700	2800	2400	2200	2400	960
1,2-Dichlorobenzene	3	1	130 U	130 U	100 U	100 U	200 U	200 U	200 U	200 U	100 U	200 U	200 U	4.8	100 U	5.1
1,3-Dichlorobenzene	3	1	28 J	31 J	25 J	22 J	200 U	30 J	200 U	27 J	36 J	28 J	29 J	27	25 J	33
1,4-Dichlorobenzene	3	1	390	340	380	370	430	360	420	350	480	390	390	300	330	340
1,2,3-Trichlorobenzene	5	1	130 U	130 U	100 U	100 U	200 U	200 U	200 U	200 U	100 U	200 U	200 U	1.0 U	100 U	5.0 U
1,2,4-Trichlorobenzene	5	1	130 U	130 U	100 U	100 U	200 U	200 U	200 U	200 U	100 U	200 U	200 U	1.0 U	100 U	5.0 U
Total Targeted Site Compounds			2418	2371	2726	2709	2630	2817	3146	2702	3242	3255	2842	2567	2787.0	1346.0

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	May-18	Oct-18	Apr-19	Oct-19	May-20	Oct-20	Apr-21
Benzene	1	1	29	29	25	23	25	19 J	20	16.3 J	15.0 J	12.8 J	12.8 J	17.4	17.8 J	20.2 J
Toluene	5	1	10 U	20 U	20 U	20 U	25 U	25 U	20 U	20.0 U	20.0 U	20.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Chlorobenzene	5	1	2200	2600	2600	2600	2700	2700	3000	2590	2870	2830	2940	2910	3340	3130
1,2-Dichlorobenzene	3	1	4.8 J	20 U	20 U	20 U	25 U	25 U	20 U	20.0 U	20.0 U	20.0 U	25.0 U	25.0 U	25.0 U	25.0 U
1,3-Dichlorobenzene	3	1	33	32	31	34	34	27	28	26.5	24.4	23.6	22.8 J	23.5 J	22.9 J	19.9 J
1,4-Dichlorobenzene	3	1	420	420	370	440	420	410	410	362	388	388	398	421	441	376
1,2,3-Trichlorobenzene	5	1	10 U	20 U	20 U	20 U	25 U	25 U	20 U	20.0 U	20.0 U	20.0 U	25.0 U	25.0 U	25.0 U	25.0 U
1,2,4-Trichlorobenzene	5	1	10 U	20 U	20 U	20 U	25 U	25 U	20 U	20.0 U	20.0 U	20.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Total Targeted Site Compounds			2687	3081	3026	3097	3179	3156	3458	2995	3297	3254	3374	3372	3822	3546

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-20I - Continued

			Reported Values				
			Oct-21	**Apr-22**	**Oct-22**	**Apr-23**	**Oct-23**
Benzene	1	1	18.3 J	15.6 J / 14.9 J	12.1 J	12.0 J	15.1 J
Toluene	5	1	25.0 U	25.0 U / 25.0 U	25.0 U	25.0 U	25.0 U
Chlorobenzene	5	1	2850	2650 / 2340	2230	2380	1990
1,2-Dichlorobenzene	3	1	25.0 U	25.0 U / 25.0 U	25.0 U	25.0 U	25.0 U
1,3-Dichlorobenzene	3	1	19.2 J	22.0 J / 21.7 J	14.9 J	22.5 J	8.18 J
1,4-Dichlorobenzene	3	1	341	367 / 295	254	322	123
1,2,3-Trichlorobenzene	5	1	25.0 U	25.0 U / 25.0 U	25.0 U	25.0 U	25.0 U
1,2,4-Trichlorobenzene	5	1	25.0 U	25.0 U / 25.0 U	25.0 U	25.0 U	25.0 U
Total Targeted Site Compounds			3229	3055 / 2672	2511	2737	2136

Notes:

J - Estimated
U - Not detected at the associated reporting limit
UJ - Not detected; associated reporting limit is estimated
µg/L - Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0 - Results of investigative and duplicate sample
38 - Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-22I

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Jul-01	Oct-01	Feb-02	May-02	Jul-02	Oct-02	Feb-03	May-03	Jul-03	Oct-03	Feb-04	May-04	Jul-04	Oct-04
Benzene	1	1	150	66.9	24.3	5.11/5.76	4.55	14.1/16.0	3.3	1.00 U	1.00 U/1.00 U	1.86	1.00 U	1.80 J/4.89 J	1.00 U	1.00 U
Toluene	5	1	1 U	1.00 U	1.00 U	1.00 U/1.00U	1.00 U	2.50 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U
Chlorobenzene	5	1	4500	308	583	459/566	485	1100 J/315 J	1170	68.4	40.3 /47.5	1290 J	455	1170 J /3190 J	243	53.2
1,2-Dichlorobenzene	3	1	47	3.00	1.58	1.00 U/1.00U	1.00 U	2.50 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	3	1	23	1.81	3.56	2.98/3.62	3.01	7.86 J/2.71 J	11.6	1.15	1.00 U/1.00 U	6.88	2.72	9.49 J/28.8 J	1.91	1.00 U
1,4-Dichlorobenzene	3	1	130	14.7	28.2	27.2/31.6	23.8	69.7 J/19.8 J	99.3	4.41	2.48 /2.73	61.7 J	31.6	86.4 J /179 J	15.4	5.78
1,2,3-Trichlorobenzene	5	1	1 U	1.00 U	1.00 U	1.00 U/1.00U	1.00 U	2.50 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	5	1	1 U	1.00 U	1.00 U	1.00 U/1.00U	1.00 U	2.50 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U	1.00 U/1.00 U	1.00 U	1.00 U
Total Targeted Site Compounds			4,850	394	641	494.29/606.98	516	1192/353.51	1,284	73.96	42.78/50.23	1,360	489	1268/3403	260	58.98

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-05	Jun-05	Sep-05	Dec-05	Feb-06	Jun-06	Sep-06	Dec-06	Mar-07	Jun-07	Aug-07	Nov-07	Mar-08	Jun-08
Benzene	1	1	2.0 U/2.0 U	200 U/50 U	5.0 U	4.0 U	50 U	1.0 U	0.92 J	1.0 U	120 U	20 U/20 U	50 U	25 U	5.0 U/5.0 U	50 U
Toluene	5	1	2.0 U/2.0 U	201 U/50 U	5.0 U	4.0 U	50 U	1.0 U	1.0 U	1.0 U	120 U	20 U/20 U	50 U	25 U	5.0 U/5.0 U	50 U
Chlorobenzene	5	1	46/41	2400 J/1400 J	66	52	620	1.4	610	0.78 J	2500	940/1,300	4400	1400	330/330	3000
1,2-Dichlorobenzene	3	1	2.0 U/2.0 U	200 U/50 U	5.0 U	4.0 U	50 U	1.0 U	0.83 J	1.0 U	120 U	20 U/20 U	50 U	25 U	1.1 J/0.71 J	50 U
1,3-Dichlorobenzene	3	1	0.51 J/0.65 J	200 U/50 U	0.70 J	4.0 U	50 U	1.0 U	6.3	1.0 U	17 J	6.4/8.7	25 J	7.0 J	7.1/7.0	15 J
1,4-Dichlorobenzene	3	1	1.9 J/2.1	110 J/55 J	4.5 J	2.3 J	35 J	0.39 J	43 J	1.0 U	180	58/72	300	88	49/49	210
1,2,3-Trichlorobenzene	5	1	2.0 U/2.0 U	200 U/50 U	5.0 U	4.0 U	50 U	1.0 U	1.0 U	1.0 U	120 U	20 U/20 U	50 U	25 U	5.0 U/5.0 U	50 U
1,2,4-Trichlorobenzene	5	1	2.0 U/2.0 U	200 U/50 U	5.0 U	4.0 U	50 U	1.0 U	1.0 U	1.0 U	120 U	20 U/20 U	50 U	25 U	5.0 U/5.0 U	50 U
Total Targeted Site Compounds			48.41/43.75	2510/1455	71.2	54.3	655	1.79	661	0.78	2697	1004/1381	4725	1495	387.2/386.71	3225

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Sep-08	Jan-09	Feb-09	May-09	Aug-09	Nov-09	Feb-10	May-10	Aug-10	Nov-10	Mar-11	May-11	Aug-11	Nov-11
Benzene	1	1	50 U	100 U	1.0 U/1 U	2.9	3.5	2.5 J	250 U/250 U	120 U	50 U	250 U	30 U	100 U	100 U	100 U
Toluene	5	1	50 U	100 U	1.0 U/1 U	1.0 U	1.0 U	1.0 U	251 U/250 U	120 U	50 U	250 U	30U	100 U	75 U	100 U
Chlorobenzene	5	1	2000	2900	240/270	3000	2500	2800	3001/3300	1900	1000	2600	670	1900	1800	1900
1,2-Dichlorobenzene	3	1	50 U	100 U	1.0 U/1 U	1.0 U	1.0 U	3.1 J	250 U/250 U	120 U	50 U	250 U	30 U	100 U	100 U	100 U
1,3-Dichlorobenzene	3	1	9.9 J	100 U	5.6/5.4	25	18	20 J	250 U/250 U	120 U	7.2 J	250 U	4.8 J	100 U	100 U	100 U
1,4-Dichlorobenzene	3	1	120	200	71/70	270	200	240	250/260	130	85	170 J	75	84 J	68 J	81 J
1,2,3-Trichlorobenzene	5	1	50 U	100 U	1.0 U/1 U	1.0 U	1.0 U	1.0 U	250 U/250 U	120 U	50 U	250 U	30 U	100 U	100 U	100 U
1,2,4-Trichlorobenzene	5	1	50 U	100 U	1.0 U/1 U	1.0 U	1.0 U	1.0 U	250 U/250 U	120 U	50 U	250 U	30 U	100 U	100 U	100 U
Total Targeted Site Compounds			2129.9	3100	316.6/345.4	3298	2722	3046	3250/3560	2030	1092.2	2770	749.8	1984	1868	1981

Notes:

J	- Estimated
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
µg/L	- Micrograms per liter
*	- New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0	- Results of investigative and duplicate sample
38	- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix C

Historical Groundwater Chemistry Monitoring - Analytical Results
Durez Inlet Remediation Project
Groundwater Monitoring Program
Durez Inlet Site

MW-22I - Continued

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Feb-12	May-12	Aug-12	Nov-12	Feb-13	May-13	Aug-13	Nov-13	Feb-14	May-14	Aug-14	Nov-14	Feb-15	May-15
Benzene	1	1	14 J/15 J	6.7 J/50 U	17 J/19 J	20 J/100 U	100 U	40 U	23 J	20 J	200 U	32 J	38 J	36 J	34 J	40 J
Toluene	5	1	100 U/100 U	50 U/50 U	50 U/50 U	100 U/100 U	100 U	40 U	100 U	100 U	200 U	200 U	200 U	200 U	50 U	200 U
Chlorobenzene	5	1	1700/1700	950/950	1100/1200	1300/1200	1100	680	1800	1600	2100	1900	2000	2100	1900	2300
1,2-Dichlorobenzene	3	1	100 U/100 U	50 U/50 U	50 U/50 U	100 U/100 U	100 U	40 U	100 U	100 U	200 U	200 U	200 U	200 U	50 U	200 U
1,3-Dichlorobenzene	3	1	100 U/11 J	6.3 J/50 U	50 U/50 U	11 J/100 U	100 U	40 U	11 J	100 U	200 U	200 U	200 U	200 U	10 J	200 U
1,4-Dichlorobenzene	3	1	110/100	75/68	87/83	78 J/87 J	78 J	38 J	110	80 J	130 J	97 J	110 J	110 J	110	110 J
1,2,3-Trichlorobenzene	5	1	100 U/100 U	50 U/50 U	50 U/50 U	100 U/100 U	100 U	40 U	100 U	100 U	200 U	200 U	200 U	200 U	50 U	200 U
1,2,4-Trichlorobenzene	5	1	100 U/100 U	50 U/50 U	50 U/50 U	100 U/100 U	100 U	40 U	100 U	100 U	200 U	200 U	200 U	200 U	50 U	200 U
Total Targeted Site Compounds			1824/1826	1038/1018	1204/1302	1409/1287	1178	718	1944	1700	2230	2029	2148	2246	2054	2450

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Aug-15	Nov-15	Feb-16	May-16	Aug-16	Nov-16	Feb-17	May-17	Aug-17	Nov-17	Feb-18	May-18	Oct-18	Apr-19
Benzene	1	1	31 J	38	42 J	25	8.1	36	38	40	35	34	33	28.2	30.6	21.0 / 21.2
Toluene	5	1	100 U	0.16 J	100 U	10 U	5.0 U	5.0 U	20 U	20 U	20 U	20 U	20 U	20.0 U	20.0 U	20.0 U / 1.0 U
Chlorobenzene	5	1	2100	1600	2,000	970	290	2100	2200	1900	2100	2100	2300	1950	2340	1930 / 2040
1,2-Dichlorobenzene	3	1	100 U	2.7	100 U	10 U	2.0 J	3.1 J	20 U	20 U	20 U	20 U	20 U	20.0 U	20.0 U	20.0 U / 1.53
1,3-Dichlorobenzene	3	1	100 U	9.9	100 U	13	6.6	11	20 U	20 U	15 J	12 J	12 J	12.4 J	13.2 J	10.6 J / 10.4
1,4-Dichlorobenzene	3	1	95 J	72 J	91 J	120	70	110	120	160	150	130	150	131	150	122 / 117
1,2,3-Trichlorobenzene	5	1	100 U	1.0 U	100 U	10 U	5.0 U	5.0 U	20 U	20 U	20 U	20 U	20 U	20.0 U	20.0 U	20.0 U / 1.0 U
1,2,4-Trichlorobenzene	5	1	100 U	1.0 U	100 U	10 U	5.0 U	5.0 U	20 U	20 U	20 U	20 U	20 U	20.0 U	20.0 U	20.0 U / 1.0 U
Total Targeted Site Compounds			2226	1723	2,133	1,128	377	2,260	2358	2100	2300	2276	2495	2122	2534	2084 / 2189

Compound/Parameter	* Standard Value (µg/L)	Quantitation Limit (µg/L)	Reported Values Oct-19	May-20	Oct-20	Apr-21	Oct-21	Apr-22	Oct-22	Apr-23	Oct-23
Benzene	1	1	29.4	0.824 J	72.6	54.7	58.7	47.7	329	29.3	28.4
Toluene	5	1	20.0 U	1.0 U	1.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	5.00 U
Chlorobenzene	5	1	2220	88.8	3000	3400	3540	3570	3110	4150	761
1,2-Dichlorobenzene	3	1	20.0 U	1.0 U	2.47	25.0 U	25.0 U	25.0 U	25.0 U	5.25 J	1.58 J
1,3-Dichlorobenzene	3	1	11.4 J	0.460 J	21.3	23.7 J	23.8 J	28.5	21.2 J	27.5	3.76
1,4-Dichlorobenzene	3	1	160	4.80	314	392	428	458	386	521	23.1
1,2,3-Trichlorobenzene	5	1	20.0 U	1.0 U	1.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	5.00 U
1,2,4-Trichlorobenzene	5	1	20.0 U	1.0 U	1.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	5.00 U
Total Targeted Site Compounds			2421	94.9	3410	3870	4051	4104	3846	4733	818

Notes:

J	- Estimated
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
µg/L	- Micrograms per liter
*	- New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
8.5/9.0	- Results of investigative and duplicate sample
38	- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Appendix D
2023 Completed Semiannual Inspection Field Sheets

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

SEMIANNUAL INSPECTION - DUREZ INLET

Site: Durez Inlet
Date: 4/12/23
Inspector: S GARDNER
Weather: SUNNY 45°F WINDS SSW 5-10MPH

Inspection Item	Inspect For	
1. Shoreline	- signs of erosion	Y (N)
2. River Bank	- signs of erosion	Y (N)
3. Aquatic Areas	- signs of erosion	Y (N)
4. Cove Cap	- signs of erosion/disturbance - exposed portion	Y (N)
	- signs of erosion/disturbance - submerged portion	Y (N)
5. North Lobe	- evidence of activity or penetration that could impact effectiveness of cutoff wall	Y (N)

Comments/Remarks (Note: If repair/maintenance is recommended, describe its location/extent below)

EW-2 - BURROWING ANIMAL UNDER CONCRETE PAD SOUTH SIDE 2 AREAS

MW-1SI BURROWING ANIMAL UNDER CONCRETE PAD NORTH AND SOUTH SIDE

Shawn Gardner

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

SEMIANNUAL INSPECTION - DUREZ INLET

Site: Durez Inlet
Date: 10/30/2023
Inspector: S GARDNER
Weather: CLOUDY RAIN 41-45°F WINDS N 5-10MPH

Inspection Item	Inspect For	
1. Shoreline	- signs of erosion	Y (N)
2. River Bank	- signs of erosion	Y (N)
3. Aquatic Areas	- signs of erosion	Y (N)
4. Cove Cap	- signs of erosion/disturbance - exposed portion	Y (N)
	- signs of erosion/disturbance - submerged portion	Y (N)
5. North Lobe	- evidence of activity or penetration that could impact effectiveness of cutoff wall	Y (N)

Comments/Remarks (Note: If repair/maintenance is recommended, describe its location/extent below)

Shawn Gardner

Appendix E
2023 Passive Diffusion Summary Report

Glenn Springs Holdings, Inc.
A subsidiary of Occidental Petroleum

Joe Branch
Project Manager
Direct Dial (231) 670-6809

7601 Old Channel Trail
Montague, MI 49437

January 26, 2024 Reference No. 11230176

Mr. Benjamin McPherson, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
700 Delaware Avenue
Buffalo, NY 14209

Dear Mr. McPherson:

Re: Summary Report for Passive Diffusion Remediation Program – 2023 Update
Durez Inlet - Durez Division, Occidental Chemical Corporation, Site No. 932018 (Site)
North Tonawanda, Niagara County

1. Purpose and Background

Glenn Springs Holdings, Inc. (GSH) initially completed a three-year passive diffusion remediation program at groundwater monitoring wells MW-16I, MW-20I, and MW-22I at the Durez Inlet Site located in North Tonawanda, New York. This work was conducted in accordance with "Letter Work Plan for Proposed Passive Diffusion Remediation at MW-16I, MW-20I, and MW-22I" for the Site dated July 23, 2019, revised August 9, 2019, and approved by the New York State Department of Environmental Conservation (NYSDEC) via email on August 13, 2019. The purpose of the passive diffusion remediation program was to decrease the concentrations of Targeted Site Compounds (TSCs) in wells MW-16I, MW-20I, and MW-22I over time. The TSCs consist of benzene; toluene; chlorobenzene; 1,2-, 1-3, and 1-4-dichlorobenzene; and 1,2,3- and 1,2,4-trichlorobenzene. A Site plan is included as Figure 1.

The initial three-year passive diffusion remediation program began on October 21, 2019 with the installation of Oxygen Release Compound® (ORC®) socks into wells MW-16I, MW-20I, and MW-22I immediately following the conclusion of the fall 2019 semiannual groundwater sampling event. The intent of the use of ORC® socks was to produce aerobic conditions in the formation, as chlorobenzene and benzene degrade readily in the presence of oxygen. The solid peroxides in the ORC® socks release oxygen as they dissolve slowly over time. The initial program concluded on October 18, 2022 with completion of the fall 2022 semiannual groundwater sampling event. A summary report[1] detailing the methods and results of the initial three-year program was submitted to the NYSDEC on January 30, 2023 (Summary Report). The ORC® socks in MW-16I, MW-20I, and MW-22I had been removed on schedule in September 2022 and were not replaced following the October 2022 semiannual groundwater sampling event, pending evaluation of the results for this initial three-year period.

[1] Summary Report for Passive Diffusion Remediation Program, Durez Inlet – Durez Division, Occidental Chemical Corporation, Site No. 932018, North Tonawanda, Niagara County, dated January 30, 2023, prepared by Glenn Springs Holdings, Inc.

NYSDEC approved GSH's recommendation to continue the passive diffusion remediation program in a letter dated April 4, 2023 but requested that the program be assessed on an annual basis rather than after an additional three-year period as proposed in the Summary Report. Additional program modifications for the upcoming year were also specified as well as a request to provide an updated schedule for the passive diffusion program for the remainder of 2023. GSH submitted the requested proposed schedule for the remainder of 2023 and into early 2024 on May 12, 2023. NYSDEC approved the proposed schedule in a letter dated May 15, 2023 and indicated that it is acceptable to provide the annual assessment of the passive diffusion program with the Periodic Review Report (PRR).

This summary report presents an updated evaluation of the efficacy of the passive diffusion remediation program incorporating the results obtained during the 2023 implementation phase.

2. ORC Sock Installation and Data Collection

2.1 Sock Installation

Following receipt of NYSDEC's April 4, 2023 letter approving continuation of the passive diffusion program, ORC® socks ("socks") were installed into wells MW-20I and MW-22I on April 19, 2023, six days following the conclusion of the spring 2023 semiannual groundwater sampling event. Passive diffusion treatment was discontinued at MW-16I as approved by NYSDEC in the April 4, 2023 letter but monitoring at this well continued in 2023.

As indicated in the Summary Report, groundwater field parameter measurements collected at the time of sock removal and replacement events during a portion of the initial three-year program demonstrated that the life expectancy of each sock is at least 2.5 to 3 months. Therefore, the socks installed in April 2023 were replaced on June 30, 2023. The socks were then removed on September 25, 2023, approximately one month prior to the fall 2023 semiannual groundwater sampling event, to allow the effects of the ORC® to abate prior to sampling. As per NYSDEC's request in its April 4, 2023 letter, immediately following removal of the socks on September 25, 2023, groundwater samples were collected from MW-20I and MW-22I for field parameter measurements as well as volatile organic compound (VOC) analysis to provide data on TSC concentrations in these wells while the groundwater remained super-saturated with dissolved oxygen (DO). These samples were collected and analyzed in the same manner as is currently performed during the semiannual groundwater sampling events at the Site. New socks were then installed on October 31, 2023, immediately following the conclusion of the fall 2023 sampling event, and replaced on December 13, 2023, marking the end of the passive diffusion program in 2023. Refer to the Summary Report and Table 1 for a log of sock installation, removal, and replacement events completed in previous years.

During each sock installation or replacement event, seven feet of ORC® socks were installed at the bottom of each of the wells in the passive diffusion remediation program to cover the five-foot screened interval in each well. Spent ORC® socks were placed into a drum located at the Durez North Tonawanda Site and transported off-site for disposal in accordance with applicable regulations.

2.2 Field Parameter Data Collection

During each semiannual groundwater sampling event, temperature, conductivity, and pH were measured in all monitoring wells following completion of low-flow purging and stabilization of water quality parameters. These parameters were measured using a hand-held water quality meter. As recommended in the 2020 PRR for the Site, beginning with the February 2021 sock replacement event, these three parameters as well as DO and oxidation-reduction potential (ORP) were measured in all monitoring wells during all sock removal, replacement, and installation events to assist in evaluating the performance of the socks in producing the aerobic conditions needed for TSC degradation.

For 2023, field parameters continued to be measured in all wells at the time of semiannual groundwater sampling, and in the passive diffusion wells during sock removal events. However, measurement of field parameters at the time of sock replacement in the passive diffusion wells was discontinued in 2023 due to the life expectancy of each sock being at least 2.5 to 3 months as indicated above. In accordance with GSH's May 12, 2023 schedule, the full set of field parameters were collected at MW-20I and MW-22I during the additional sampling event (at the time of sock removal) and in all wells during the semiannual sampling events (at the time of sock installation), including DO and ORP.

Field water quality parameter data are presented in Table 1. As ORC® socks have never been installed MW-18I or MW-19I, the field parameters measured in these wells represented geochemical conditions in the formation without socks present. Measurements collected during periods of "no sock present" in MW-18I and MW-19I are shaded blue in Table 1. Parameters measured during semiannual groundwater sampling events in MW-16I, MW-20I, and MW-22I represented geochemical conditions in the formation following a period in which these wells had been sock-free for at least one month. It was concluded in the Summary Report that one month following sock removal was sufficient time to allow the effects of the artificially elevated DO caused by the physical presence of the socks to abate and that the groundwater samples collected were representative of concentrations in the formation. As such, measurements collected during periods of "no sock present" at the time of semiannual groundwater sampling in MW-16I, MW-20I, and MW-22I are also shaded blue in Table 1.

Parameters measured during sock replacement and sock removal events in MW-16I, MW-20I, and MW-22I were measured immediately upon removal of the existing socks, and therefore, represented geochemical conditions under the influence of the artificially elevated DO due to the physical presence of the socks. Measurements collected during these times of "sock present" in MW-16I, MW-20I, and MW-22I are shaded orange in Table 1. Prior to 2023, field parameters measured during sock replacement and sock removal events were measured on water bailed from the well casings immediately following removal of the socks, without well purging, and therefore likely represented geochemical conditions immediately adjacent to the well casings under the influence of the artificially elevated DO. Beginning in 2023, measurements of field parameters are no longer made during sock replacement events. During the September 2023 sock removal event, parameters were measured following stabilization during low-flow sampling. Although elevated pH values measured at the time of sock replacement and sock removal events would theoretically be less conductive to microbial degradation of TSCs, it is likely that these elevated pH values, as well as values of other field parameters measured at these times, are limited to the immediate vicinity of the ORC® sock.

3. Results

The results of the semiannual groundwater sampling completed at the Site from implementation of the passive diffusion remediation program in October 2019 to conclusion of the 2023 implementation phase are presented in Table 2. Concentrations are compared to New York State Class GA Ambient Water Quality Standards and Water Guidance's Values (groundwater standards). These results, as well as sampling results for approximately ten years prior to implementation of the program, are shown on Charts 1 through 5. Duplicate sample results are included in Table 2 but are not shown on the charts or included in the trend analysis. An overall comparison of TSC concentrations before and after implementation of the passive diffusion remediation program is presented below.

MW-20I

- **Chlorobenzene (Chart 1a):** The concentration of chlorobenzene decreased from 2,940 micrograms per liter (µg/L) at the beginning of the passive diffusion program to 1,990 µg/L at the most recent semiannual sampling event in October 2023. The concentration had not been below 2,000 µg/L since May 2012, with the exception of an isolated detection less than 2,000 µg/L in May 2016. The chlorobenzene concentration increased initially from October 2019 to October 2020 but then decreased steadily over the next three years. The concentration had been slowly increasing prior to implementation of the program.
- **1,3-Dichlorobenzene (Chart 1b):** The concentration of 1,3-dichlorobenzene decreased from 22.8 µg/L (estimated) at the beginning of the passive diffusion program to 8.18 µg/L (estimated) at the most recent semiannual sampling event in October 2023, with short-term increases in April 2022 and April 2023. The concentration had already been slowly decreasing prior to implementation of the program but had not been below 10 µg/L since two isolated non-detects in February 2014 and August 2014.
- **1,4-Dichlorobenzene (Chart 1c):** The concentration of 1,4-dichlorobenzene decreased from 398 µg/L at the beginning of the passive diffusion program to 123 µg/L at the most recent semiannual sampling event in October 2023. The concentration had not been below 200 µg/L since an isolated detection of 150 µg/L in 2010. The concentration increased initially from October 2019 to October 2020 but then decreased steadily over the next three years, with short-term increases in April 2022 and April 2023.

Although not displayed graphically, the concentration of benzene increased from 12.8 µg/L (estimated) at the beginning of the passive diffusion program to 15.1 µg/L (estimated) at the most recent semiannual sampling event in October 2023 (Table 2). The concentration increased initially from October 2019 to April 2021 (to 20.2 µg/L [estimated]), decreased steadily to April 2023 (to 12.0 µg/L [estimated]), and then increased slightly in October 2023.

As indicated in Table 1, DO was typically less than 5 milligrams per liter (mg/L) during periods in which a sock was not present in MW-20I and was on average approximately 25 to 35 mg/L during periods in which a sock was present in this well, indicating that the ORC® in the sock caused the groundwater to become supersaturated with oxygen. Elevated DO concentrations were sustained during the periods in

which a sock was present. The low DO concentration of 3.54 mg/L during the September 2023 sock removal event is anomalous.

Conductivity was typically less than 3 millisiemens per centimeter (mS/cm) during periods in which a sock was not present in MW-20I and was on average approximately 10 to 15 mS/cm during periods in which a sock was present in this well, as expected. The value of 0.016 mS/cm measured during the September 2022 sock removal event is anomalous.

ORP generally remained negative or was not overly positive during periods in which a sock was present in MW-20I and was similar to values during periods in which a sock was not present in this well.

MW-22I

- **Chlorobenzene (Chart 2a):** The concentration of chlorobenzene increased from 2,220 µg/L at the beginning of the passive diffusion program to 3,000 µg/L at the October 2020 semiannual sampling event, then remained steady in a range of 3,000 µg/L to 3,570 µg/L through October 2022 (two years). The concentration then increased to 4,150 µg/L at the April 2023 semiannual sampling event before decreasing to 761 µg/L at the most recent semiannual sampling event in October 2023. Concentrations were generally higher during the program than prior to the program. Concentrations prior to implementation of the program had been elevated but stable.
- **1,3-Dichlorobenzene (Chart 2b):** The concentration of 1,3-dichlorobenzene increased from 11.4 µg/L (estimated) at the beginning of the passive diffusion program to 21.3 µg/L at the October 2020 semiannnual sampling event, and then remained steady in a range of 21.2 µg/L (estimated) to 28.5 µg/L through April 2023 (2.5 years). The concentration then decreased to 3.76 µg/L (estimated) at the most recent semiannual sampling event in October 2023. Concentrations were generally higher during the program than prior to the program. Concentrations prior to implementation of the program had been elevated but stable.
- **1,4-Dichlorobenzene (Chart 2c):** The concentration of 1,4-dichlorobenzene increased steadily from 160 µg/L at the beginning of the passive diffusion program to 521 µg/L at the April 2023 semiannual sampling event before declining sharply to 23.1 µg/L at the most recent semiannual sampling event in October 2023. Concentrations were generally higher during the program than prior to the program. Concentrations prior to implementation of the program had been slowly increasing.

Although not displayed graphically, the concentration of benzene increased from 29.4 µg/L at the beginning of the passive diffusion program to 72.6 µg/L at the October 2020 semiannual sampling event, then declined steadily to 28.4 µg/L at the most recent semiannual sampling event in October 2023 (Table 2).

As indicated in Table 1, DO was typically less than 5 mg/L during periods in which a sock was not present in MW-22I and was on average approximately 25 to 35 mg/L during periods in which a sock was present in this well, indicating that the ORC® in the sock caused the groundwater to become supersaturated with oxygen. The high DO concentration of 19.63 mg/L during the October 2023 semiannual sampling event is likely anomalous. Elevated DO concentrations were sustained during the periods in which a sock was present.

Conductivity was typically less than 3 mS/cm during periods in which a sock was not present in MW-22I. During periods in which a sock was present in this well, conductivity was generally in the range of approximately 7 to 12 mS/cm but was lower than expected during the February 2021 sock replacement event (5.88 mS/cm) and February 2022 sock replacement event (3 mS/cm) and anomalously low during the September 2022 sock removal event (0.044 mS/cm).

Lastly, ORP generally remained negative or was not overly positive during the periods in which a sock was present in MW-22I and was similar to values during periods in which a sock was not present in this well.

MW-16I

- **Chlorobenzene (Chart 3a):** The concentration of chlorobenzene increased from 1.89 µg/L at the beginning of the passive diffusion program to 2.80 µg/L at the October 2022 semiannual sampling event, which was the end of the passive diffusion program in this well. The concentration then increased to 5.51 µg/L at the April 2023 semiannual sampling event before declining to 0.262 µg/L (estimated) at the most recent semiannual sampling event in October 2023. Concentrations prior to implementation of the program had been slowly increasing. However, all concentrations have been below the groundwater standard of 5 µg/L since 2007 with the exception of the duplicate sample collected in October 2020 (estimated chlorobenzene concentration of 7.04 µg/L) and the sample and duplicate sample collected in April 2023 (chlorobenzene concentrations of 5.51 µg/L and 5.13 µg/L, respectively).
- **1,3-Dichlorobenzene (Chart 3b):** The concentration of 1,3-dichlorobenzene has remained non-detect during implementation of the passive diffusion program.
- **1,4-Dichlorobenzene (Chart 3c):** The concentration of 1,4-dichlorobenzene has remained non-detect during implementation of the passive diffusion program.

Although not displayed graphically, the concentration of benzene has remained either non-detect or at estimated concentrations lower than 1 µg/L during implementation of the passive diffusion program (Table 2).

As indicated in Table 1, DO was typically less than 5 mg/L during periods in which a sock was not present in MW-16I and was on average approximately 25 to 35 mg/L during periods in which a sock was present in this well, indicating that the ORC® in the sock caused the groundwater to become supersaturated with oxygen. Elevated DO concentrations were sustained during the periods in which a sock was present.

Conductivity was typically less than 2 mS/cm during the periods in which a sock was not present in MW-16I and was on average approximately 6 to 10 mS/cm during periods in which a sock was present in this well but was lower than expected during the February 2022 sock replacement event (1.37 mS/cm) and anomalously low during the September 2022 sock removal event (0.034 mS/cm).

ORP generally remained negative or was not overly positive during periods in which a sock was present in MW-16I and was similar to values during periods in which a sock was not present in this well.

MW-18I and MW-19I

Concentrations of TSCs in MW-18I and MW-19I, which have never had socks installed, have remained non-detect during the passive diffusion program (Charts 4 and 5, respectively), with the exception of an estimated concentration of toluene of 0.212 µg/L detected in the MW-18I duplicate sample and an estimated concentration of toluene of 0.349 µg/L detected in the MW-19I sample, both during the October 2023 semiannual sampling event.

As indicated in Table 1, following installation of the socks in the passive diffusion wells each April and October from October 2020 through April 2022, DO concentrations in MW-18I and MW-19I increased slightly, from less than 5 mg/L to approximately 8 to 15 mg/L, indicating that the ORC® in the socks was oxygenating groundwater throughout the formation proximate to the well field. Conductivity in MW-18I and MW-19I was not observably impacted by the introduction of the socks in the passive diffusion wells during this time period, but ORP in these two wells did increase following installation of the socks in the passive diffusion wells. ORP in MW-18I and MW-19I was very positive throughout implementation of the program. ORP is positive in these wells because these wells are less impacted with organic compounds and therefore the carbon source that is causing the microbes to consume oxygen and other electron acceptors and naturally create reducing conditions is not present in these wells.

Other

At the request of the NYSDEC, immediately following removal of the socks in September 2023, samples were collected for VOC analysis from MW-20I and MW-22I, as described in Section 2. Results are shown in Table 3. The April and October semiannual sampling results are also shown in Table 3 for comparison. Concentrations of TSCs detected during the September 2023 event immediately following sock removal were lower than detected during the April 2023 semiannual sampling events but were similar to concentrations detected during the October 2023 semiannual sampling event. Results from this September 2023 sampling event are not included with the data from the semiannual sampling events in Table 2 or on Charts 1 through 5, as the semiannual sampling results reflect concentrations in the formation after the effects of the artificially elevated DO caused by the physical presence of the socks had abated.

4. Discussion

As indication in Section 3, concentrations of TSCs in MW-20I (Chart 1) have decreased since the beginning of the passive diffusion program and are currently lower than prior to implementation of the program. Socks were not present in this well from September 2022 through April 2023 while the results of the initial three-year program were being evaluated. The concentrations detected during the April 2023 semiannual sampling event were slightly higher than those detected in October 2022, which may have been the result of a minor rebound following the absence of the socks for seven months. However, the April 2023 concentrations were still lower than those detected prior to implementation of the program. Continued implementation of the passive diffusion program at MW-20I in 2024 is recommended. The results of future semiannual groundwater sampling events will demonstrate if continued program implementation will result in further concentration decreases in this well.

Concentrations of TSCs in MW-22I (Chart 2) increased almost immediately following implementation of the passive diffusion program to concentrations higher than those present prior to program implementation, but the rate of increase slowed in 2021 and 2022 and concentrations dropped significantly at the most recent semiannual sampling event in October 2023. The increases in concentration following implementation of the program, characterized by a relatively sharp increase, then a period of relative stability, followed by a relatively sharp decrease, lacked the natural variability observed in the long-term data set and were also of a relatively large magnitude and duration compared with historical concentration increases and decreases. This pattern was also observed in MW-20I and MW-16I, albeit to a lesser degree. This pattern suggests a response triggered by a sudden change in conditions, most likely the sudden change in geochemical conditions induced by introduction of the socks in the fall of 2019. The sustained concentration increases observed in MW-22I may have been due to the release of organic compounds bound to organic carbon in the soil as the organic carbon was degraded under the aerobic conditions induced by the socks.

Concentrations in MW-22I declined significantly between April 2023 and October 2023. Concentrations in MW-22I may continue to show fluctuations as organic compounds continue to be released from soil to groundwater, temporarily increasing concentrations in groundwater, and then as the organic compounds released to groundwater are degraded, which would decrease concentrations in groundwater. Similar to MW-20I, the concentrations detected in MW-22I during the April 2023 semiannual sampling event were higher than those detected in October 2022, and may have been the result of a minor rebound following the absence of the socks for seven months. Continued implementation of the passive diffusion program at MW-22I in 2024 is recommended.

Similar to MW-20I and MW-22I, the concentration of chlorobenzene MW-16I (Chart 3) increased slightly at the April 2023 semiannual sampling event to a concentration marginally above the groundwater standard of 5 µg/L. However, the concentration then dropped at the October 2023 semiannual sampling event, despite the removal of this well from the passive diffusion program in October 2022. The pattern of slowly increasing chlorobenzene concentration observed in this well prior to implementation of the passive diffusion program has not reoccurred. As such, continued monitoring of MW-16I through semiannual groundwater sampling events is recommended to determine if concentrations remain sustained at values lower than those observed prior to implementation of the program.

Although groundwater in the passive diffusion wells became supersaturated with oxygen following installation of the socks, and this supersaturation was maintained throughout the periods in which the socks were present, the generally negative or only slightly positive ORP values and elevated conductivity that was not always maintained during these time periods indicates that the ORP and conductivity values were out of step with the DO values. The data suggest that ORP, which is a general measurement of oxidizing versus reducing conditions in the formation, was not strongly affected by the high DO values. This does not mean that the passive diffusion program is not effective. This only suggests that the oxygen from the socks may have been quickly consumed by aerobic bacteria using oxygen as a terminal electron acceptor for contaminant oxidation, contaminant oxidation being the goal of the program, before it could cause a sustained change from anaerobic conditions to aerobic conditions in the formation. This quick consumption of the oxygen introduced by the socks is likely to continue as long as degradable compounds are present in the groundwater. Therefore, a large, sustained increase in ORP would not be

expected until concentrations of chlorobenzenes and other organic compounds in the groundwater have been reduced to low concentrations. Higher ORP values are already observed in wells MW-18I and MW-19I where concentrations of organic compounds are low. Provided that oxygen continues to be provided to the formation by the socks, the passive diffusion program will continue to be effective in causing the desorption and biodegradation of TSCs, despite the fact that the oxygen is being consumed by bacteria that are degrading the TSCs and other organic matter before it can cause sustained changes in geochemical conditions in the formation.

In summary, based on the data collected since the beginning of the passive diffusion remediation program in October 2019, it appears that TSCs in MW-20I and MW-22I have begun to desorb from soil, causing temporary increases in TSC concentrations in groundwater, and that the TSC concentrations in groundwater are currently degrading. Additional temporary increases in TSC concentrations may occur, especially in MW-22I, if additional TSC mass is desorbed from soil. The data indicate that implementation of passive diffusion using ORC® socks will likely be effective in reducing or stabilizing TSC concentrations over time.

5. Recommendations

GSH recommends that the passive diffusion program in MW-20I and MW-22I be continued in 2024, after which, an evaluation will be performed to determine future action. GSH does not recommend any changes to the program except for the following:

- Starting with the September 2024 ORC® sock removal event, discontinue the additional VOC sampling event at MW-20I and MW-22I that was requested by the NYSDEC. Results have demonstrated that the presence of the ORC® socks in these wells immediately prior to sampling creates a decrease in VOC concentrations in the sampled groundwater due to artificially elevated DO caused by the physical presence of the socks. As such, these results do not provide significant value in evaluating remedial efficacy.

The proposed schedule for implementation of the program through mid-April 2024 was approved in NYSDEC's May 15, 2023 letter. The approved schedule, along with the proposed schedule for the remainder of 2024 and early 2025, is as follows:

<u>2024</u>

- **Mid-March 2024:** Removal of ORC® socks from MW-20I and MW-22I. Sample MW-20I and MW-22I for VOCs immediately following sock removal (previously approved by NYSDEC).
- **Mid-April 2024:** Semiannual groundwater sampling of MW-16I, MW-18I, MW-19I, MW-20I, and MW-22I. Install ORC® socks in MW-20I and MW-22I immediately following end of sampling event (approved).
- **Late June 2024:** Replacement of ORC® socks in MW-20I and MW-22I.
- **Mid-September 2024:** Removal of ORC® socks from MW-20I and MW-22I.
- **Mid-October 2024:** Semiannual groundwater sampling of MW-16I, MW-18I, MW-19I, MW-20I, and MW-22I. Install ORC® socks in MW-20I and MW-22I immediately following end of sampling event.
- **Late December 2024:** Replacement of ORC® socks in MW-20I and MW-22I.

2025

- **Late January 2025:** Submittal of annual assessment of passive diffusion program with PRR, incorporating 2024 results.
- **Mid-March 2025:** Removal of ORC® socks from MW-20I and MW-22I.
- **Mid-April 2025:** Semiannual groundwater sampling of MW-16I, MW-18I, MW-19I, MW-20I, and MW-22I. Install ORC® socks in MW-20I and MW-22I immediately following end of sampling event if passive diffusion program is to be continued in 2025.

The NYSDEC would continue to be notified prior to each of the events listed above.

If you have any questions regarding this submittal, please feel free to contact me at 231-670-6809 or by email at joseph_branch@oxy.com.

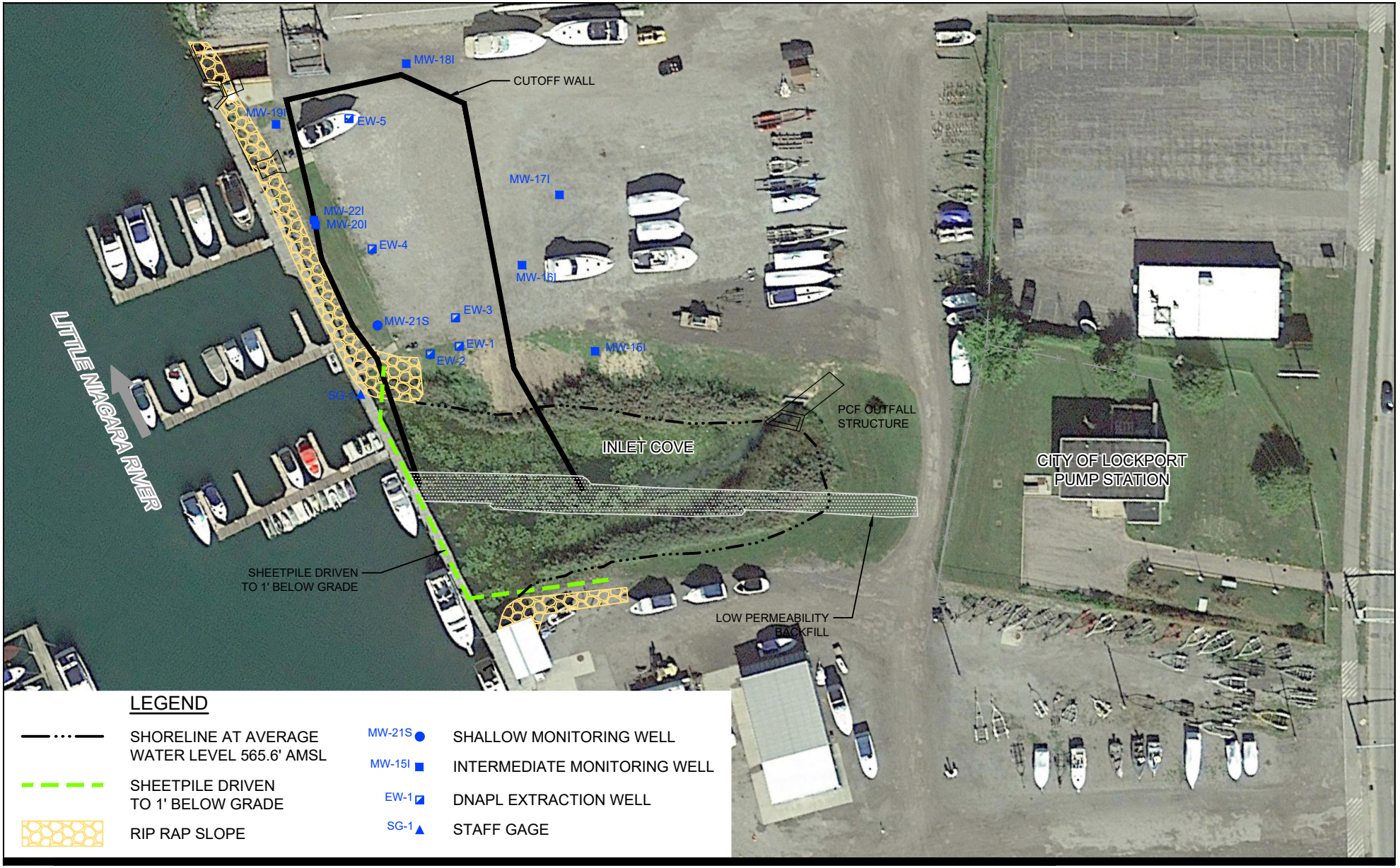
Very truly yours,

GLENN SPRINGS HOLDINGS, INC.

Joseph Branch
Project Manager

MP
Encl.

cc: John Pentilchuk, GHD
Margaret Popek, GHD
Dennis Hoyt, Geosyntec
Christa Bucior, Geosyntec
Robert J. Kunkel, Jr., Oar Marina LLC



0 40 80 ft

1" = 80 ft

N

GHD

GLENN SPRINGS HOLDINGS, INC.
DUREZ INLET SITE
NORTH TONAWANDA, NEW YORK

Project No. **11230176**
Date **January 2024**

SITE PLAN

FIGURE 1

Filename: \\ghdnet\ghd\US\Niagara Falls\Projects\564\11230176\Digital_Design\ACAD\Figures\LTR-McPherson002\11230176-GHD-00-00-LTR-EN-D102_WA-McPherson002.dwg
Plot Date: 25 January 2024 5:17 PM

SOURCE: IMAGE © 2020 GOOGLE EARTH (IMAGERY DATE 9-2018), ACCESSED: 2020.

Table 1

Water Quality Parameters
Durez Inlet Site
North Tonawanda, New York

MW-16I

Parameter	October 2019	May 2020	October 2020	February 2021	March 2021	April 2021	June 2021	August 2021	September 2021	October 2021	December 2021	February 2022	March 2022	April 2022	July 2022	September 2022	October 2022	April 2023	September 2023	October 2023
Event	GW Sampling and Sock Installation	GW Sampling and Sock Installation	GW Sampling and Sock Installation	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Removal	GW Sampling***	GW Sampling	NA	GW Sampling
Data Reflects:	no sock present	no sock present	no sock present	sock present	sock present	no sock present	sock present	sock present	sock present	no sock present	sock present	sock present	sock present	no sock present	sock present	sock present	no sock present	no sock present	no sock present	no sock present
Temperature (°C)	13.3	12.7	14.3	10.7	10.2	12.2	12.5	15.9	18.15	13.2	12.0	9.7	9.0	10.5	14.3	18.8	12.0	13.9	NM	10.5
Conductivity (mS/cm)	1.16	0.8	1.56	5.87	10.11	0.99	9.42	9.49	7.85	0.77	8.85	1.37	9.01	0.615	17.84	0.034	0.73	0.80	NM	1.05
Dissolved Oxygen (mg/L)	NM	3.37	2.4	43.14	45.30	2.37	28.90	30.07	24.88	3.40	26.86	24.56	32.40	5.02	37.53	15.14	NM	6.45	NM	6.19
pH	7.07	8.59	7.81	12.45	12.75	9.44	11.69	12.11	12.75	9.52	12.56	12.02	13.8	9.85	12.63	5.01	9.33	8.31	NM	11.09
ORP (mV)	NM	-140.9	-122	30.4	-100.3	-60.4	-64.9	-29.6	-62.1	-84.6	5.8	26.2	-28.4	-8.2	-96.6	-264.7	NM	-23.6	NM	-25.6

MW-19I

Parameter	October 2019	May 2020	October 2020	February 2021	March 2021	April 2021	June 2021	August 2021	September 2021	October 2021	December 2021	February 2022	March 2022	April 2022	July 2022	September 2022	October 2022	April 2023	September 2023	October 2023
Event	GW Sampling	GW Sampling	GW Sampling	NA	NA	GW Sampling	NA	NA	NA	GW Sampling	NA	NA	NA	GW Sampling	NA	NA	GW Sampling	GW Sampling	NA	GW Sampling
	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present
Temperature (°C)	13.91	11.8	12.4	9.1	10.7	12.2	13.4	17.7	20.4	12.8	11.5	8.7	8.6	11.4	15	18.3	11.9	13.4	NM	10.4
Conductivity (mS/cm)	1.17	1.09	1.08	1.34	0.94	0.92	0.95	0.96	0.95	0.96	0.95	0.95	0.96	0.98	1.93	1.07	1.06	1.03	NM	1.180
Dissolved Oxygen (mg/L)	NM	2.98	4.57	5.83	10.03	5.06	5.97	10.18	2.53	1.37	7.35	7.12	6.13	2.71	7.56	9.25	NM	3.96	NM	0.31
pH	7.25	7.41	6.58	9.15	7.07	7.48	7.15	7.13	7.38	7.49	7.72	7.04	7.16	7.98	7.26	8.22	7.52	7.39	NM	7.27
ORP (mV)	NM	-50	0.3	46.5	118.8	72.5	155.5	157.8	201.6	183.7	142.1	185	165.8	150.9	90.2	152.1	NM	68.5	NM	39.1

MW-22I

Parameter	October 2019	May 2020	October 2020	February 2021	March 2021	April 2021	June 2021	August 2021	September 2021	October 2021	December 2021	February 2022	March 2022	April 2022	July 2022	September 2022	October 2022	April 2023	September 2023	October 2023
Event	GW Sampling and Sock Installation	GW Sampling and Sock Installation	GW Sampling and Sock Installation	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Removal	GW Sampling***	GW Sampling and Sock Installation	Sock Removal	GW Sampling and Sock Installation
	no sock present	no sock present	no sock present	sock present	sock present	no sock present	sock present	sock present	sock present	no sock present	sock present	sock present	sock present	no sock present	sock present	sock present	no sock present	no sock present	sock present	no sock present
Temperature (°C)	13.4	9.9	11.8	7.1	8.3	11.3	13.6	18.1	19.5	13.3	9.8	7.6	7.2	9.9	15.2	18.8	11.8	12.9	15.8	10.4
Conductivity (mS/cm)	2.02	NM	2.45	5.88	12.16	2.16	10.49	7.66	7.78	2.15	10.55	3	38.29	1.99	16.31	0.044	2.02	2.02	8.11	7.420
Dissolved Oxygen (mg/L)	NM	5.41	1.74	42.83	54.90	3.38	26.28	25.46	22.20	2.38	30.34	30.95	38.07	2.81	30.17	12.75	NM	4.64	21.77	19.63
pH	7.46	11.45	8.27	13.23	12.28	10.02	11.92	12.43	12.79	10.59	13.07	12.7	12.95	10.35	12.77	8.83	10.15	9.29	12.01	12.59
ORP (mV)	NM	-74.8	-125.3	8.5	-82.9	21.1	-55.6	6.7	-46.5	-36.4	-0.1	-12.4	-21.6	74.9	-93.5	146.7	NM	12	-111.6	-90.1

Notes:

GW Sampling	- Well part of passive diffusion remediation program.
	- Semiannual groundwater sampling event. The ORC socks are removed approximately one month prior to this sampling event and are not replaced. Field parameters are measured in all wells at the time of semiannual sampling (following purging), and then new ORC socks are installed in the designated wells.
***	- Initial 3-year passive diffusion remediation program concluded in October 2022. New ORC socks are not installed during evaluation of initial program results.
Sock Replacement	- Sock replacement event. New ORC socks are installed in the designated wells and the existing socks are disposed. From February 2021 through July 2022, field parameters are measured immediately upon sock removal on water bailed from the well casing, prior to sock replacement. Starting in 2023, field parameters are not measured prior to sock replacement.
Sock Removal	- Sock removal event. The ORC socks in the designated wells are removed and are not replaced. From March 2021 through September 2022, field parameters are measured immediately upon sock removal on water bailed from the well casing. Starting in 2023, field parameters are measured at the time of VOC sampling (following purging) immediately following sock removal.
	- Field parameter measurement represents groundwater without ORC sock present.
	- Field parameter measurement represents groundwater with ORC sock present.
NA	- Not Applicable. Well not part of passive diffusion remedial program. From February 2021 through September 2022, field parameters are still measured for comparison to wells that have ORC socks installed during sock removal and replacement events.
NM	- Not Measured
°C	- Degrees Celsius
mS/cm	- Millisiemens per centimeter
mg/L	- Milligrams per liter
mV	- Millivolts

Table 1

Water Quality Parameters
Durez Inlet Site
North Tonawanda, New York

MW-18I

Parameter	October 2019	May 2020	October 2020	February 2021	March 2021	April 2021	June 2021	August 2021	September 2021	October 2021	December 2021	February 2022	March 2022	April 2022	July 2022	September 2022	October 2022	April 2023	September 2023	October 2023
Event	GW Sampling	GW Sampling	GW Sampling	NA	NA	GW Sampling	NA	NA	NA	GW Sampling	NA	NA	NA	NA	NA	NA	GW Sampling	GW Sampling	NA	GW Sampling
Data Reflects:	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present	no sock present
Temperature (°C)	13.5	11.6	14	8.2	9.7	12.2	13.7	17.8	19.8	13.4	13.3	9.3	9.3	10.5	15.6	18.5	12.2	12.6	NM	10.1
Conductivity (mS/cm)	1.18	0.95	0.702	0.410	0.276	1.24	0.348	0.261	0.295	0.95	0.252	0.21	0.32	0.89	0.81	0.539	0.94	0.89	NM	1.07
Dissolved Oxygen (mg/L)	NM	3.3	4.06	8.10	11.77	1.84	7.61	9.34	2.49	2.63	9.39	12.83	8.28	2.58	15.45	7.61	NM	4.22	NM	0.60
pH	6.95	7.4	10.36	10.79	8.20	7.46	6.55	6.42	6.74	7.45	6.90	7.10	6.31	7.94	6.83	8.59	7.44	7.47	NM	7.25
ORP (mV)	NM	-103.9	-44	-15.9	-13.8	-80.3	136.8	150.8	215.5	-83.4	144.7	150.6	206.6	72.7	97.3	142.6	NM	-33.3	NM	-111.2

MW-20I

Parameter	October 2019	May 2020	October 2020	February 2021	March 2021	April 2021	June 2021	August 2021	September 2021	October 2021	December 2021	February 2022	March 2022	April 2022	July 2022	September 2022	October 2022	April 2023	September 2023	October 2023
Event	GW Sampling and Sock Installation	GW Sampling and Sock Installation	GW Sampling and Sock Installation	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Replacement	Sock Removal	GW Sampling and Sock Installation	Sock Replacement	Sock Removal	GW Sampling***	GW Sampling and Sock Installation	Sock Removal	GW Sampling and Sock Installation
	no sock present	no sock present	no sock present	sock present	sock present	no sock present	sock present	sock present	sock present	no sock present	sock present	sock present	sock present	no sock present	sock present	sock present	no sock present	no sock present	sock present	no sock present
Temperature (°C)	13.36	11.7	11.2	8.2	7.9	11.4	13.7	17.9	19.2	13.5	9.5	7.6	7.4	10.3	16.5	18.9	12.1	12.9	14.4	10.6
Conductivity (mS/cm)	2.67	2.28	2.42	12.91	15.59	2.01	10.06	11.53	12.11	2.01	10.20	2.69	9.76	1.92	18.57	0.016	1.90	1.89	5.40	5.65
Dissolved Oxygen (mg/L)	NM	4.85	1.14	41.04	52.18	4.45	27.09	25.51	23.86	2.50	30.33	29.19	37.76	3.15	31.37	13.54	NM	7.42	3.54	1.78
pH	7.61	8.84	7.82	12.59	12.73	9.63	12.04	12.33	12.89	9.97	13.12	12.34	12.69	10.4	12.69	7.92	9.86	9.09	11.61	11.85
ORP (mV)	NM	-21.2	-120.6	125.4	-94.3	-49.2	-48.9	-23.2	-58.4	-111.5	-2.3	9.6	-14.3	51.7	-96.4	75.9	NM	-22.6	-151.7	-98.6

Parameter	
Event	
Temperature (°C)	
Conductivity (mS/cm)	
Dissolved Oxygen (mg/L)	
pH	
ORP (mV)	

Notes:

GW Sampling

*** Sock Replacement

Sock Removal

NA

NM
°C
mS/cm
mg/L
mV

Notes:

GW Sampling

*** Sock Replacement

Sock Removal

NA

NM
°C
mS/cm
mg/L
mV

- Well part of passive diffusion remediation program.
- Semiannual groundwater sampling event. The ORC socks are removed approximately one month prior to this sampling event and are not replaced. Field parameters are measured in all wells at the time of semiannual sampling (following purging), and then new ORC socks are installed in the designated wells.
- Initial 3-year passive diffusion remediation program concluded in October 2022. New ORC socks are not installed during evaluation of initial program results.
- Sock replacement event. New ORC socks are installed in the designated wells and the existing socks are disposed. From February 2021 through July 2022, field parameters are measured immediately upon sock removal on water bailed from the well casing, prior to sock replacement. Starting in 2023, field parameters are not measured prior to sock replacement.
- Sock removal event. The ORC socks in the designated wells are removed and are not replaced. From March 2021 through September 2022, field parameters are measured immediately upon sock removal on water bailed from the well casing. Starting in 2023, field parameters are measured at the time of VOC sampling (following purging) immediately following sock removal.
- Field parameter measurement represents groundwater without ORC sock present.
- Field parameter measurement represents groundwater with ORC sock present.
- Not Applicable. Well not part of passive diffusion remedial program. From February 2021 through September 2022, field parameters are still measured for comparison to wells that have ORC socks installed during sock removal and replacement events.
- Not Measured
- Degrees Celsius
- Millisiemens per centimeter
- Milligrams per liter
- Millivolts

Table 2

Groundwater Chemistry Monitoring Analytical Results
Durez Inlet Site
North Tonawanda, New York

Sample Location:				MW-16I	MW-16I	MW-16I	MW-16I	MW-16I	MW-16I	MW-16I	MW-16I	MW-16I	MW-16I	MW-16I	MW-16I
Sample ID:				MW-16I-1019	MW-9I-1019	MW-16I-0420	MW-9I-0420	MW-16I-1020	MW-9I-1020	MW-16I-0421	MW-9I-0421	MW-16I-1021	MW-9I-1021	MW16I-0422	MW-16I-1022
Sample Date:				10/21/2019	10/21/2019 Duplicate	5/6/2020	5/6/2020 Duplicate	10/19/2020	10/19/2020 Duplicate	4/13/2021	4/13/2021 Duplicate	10/19/2021	10/19/2021 Duplicate	4/27/2022	10/18/2022
Compound/Parameter	**Units**	**GW Standard***	**Reporting Limit**												
1,2,3-Trichlorobenzene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.82	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Benzene	ug/L	1	1	0.510 J	0.520 J	0.886 J	0.949 J	0.595 J	1.00 U	0.622 J	0.673 J	0.222 J	0.295 J	0.236 J	0.254 J
Chlorobenzene	ug/L	5	1	1.89	1.76	2.80	3.07	2.79 J	7.04 J	2.88	3.01	1.73	2.04	1.63	2.80
Toluene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Notes:

U -Not detected at the associated reporting limit.
J -Estimated concentration.
µg/L -Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Table 2

Groundwater Chemistry Monitoring Analytical Results
Durez Inlet Site
North Tonawanda, New York

Sample Location:				MW-16I	MW-16I	MW-16I	MW-18I	MW-18I	MW-18I	MW-18I	MW-18I	MW-18I	MW-18I	MW-18I	MW-18I
Sample ID:				MW-16I-0423	MW-9I-0423	MW-16I-1023	MW-18I-1019	MW-18I-0420	MW-18I-1020	MW-18I-0421	MW-18I-1021	MW18I-0422	MW-18I-1022	MW-9I-1022	MW-18I-0423
Sample Date:				4/13/2023	4/13/2023 Duplicate	10/31/2023	10/21/2019	5/6/2020	10/19/2020	4/13/2021	10/19/2021	4/27/2022	10/18/2022	10/18/2022 Duplicate	4/13/2023
Compound/Parameter	**Units**	**GW Standard***	**Reporting Limit**												
1,2,3-Trichlorobenzene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Benzene	ug/L	1	1	0.260 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	ug/L	5	1	5.51	5.13	0.262 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.350 J
Toluene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Notes:

U -Not detected at the associated reporting limit.
J -Estimated concentration.
µg/L -Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Gui
- Exceeds New York State Ambient Water Quality Standards and V

Table 2

Groundwater Chemistry Monitoring Analytical Results
Durez Inlet Site
North Tonawanda, New York

Sample Location:				MW-18I	MW-18I	MW-19I	MW-19I	MW-19I	MW-19I	MW-19I	MW-19I	MW-19I	MW-19I	MW-20I
Sample ID:				MW-18I-1023	MW-9I-1023	MW-19I-1019	MW-19I-0420	MW-19I-1020	MW-19I-0421	MW19I-1021	MW19I-0422	MW-19I-1022	MW-19I-0423	MW-19I-1023	MW-20I-1019
Sample Date:				10/31/2023	10/31/2023 Duplicate	10/21/2019	5/6/2020	10/19/2020	4/13/2021	10/19/2021	4/27/2022	10/18/2022	4/13/2023	10/31/2023	10/21/2019
Compound/Parameter	**Units**	**GW Standard***	**Reporting Limit**												
1,2,3-Trichlorobenzene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U
1,2,4-Trichlorobenzene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U
1,2-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	25.0 U
1,3-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	22.8 J
1,4-Dichlorobenzene	ug/L	3	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	398
Benzene	ug/L	1	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	12.8 J
Chlorobenzene	ug/L	5	1	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2940
Toluene	ug/L	5	1	1.00 U	0.212 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.349 J	25.0 U

Notes:

U -Not detected at the associated reporting limit.
J -Estimated concentration.
µg/L -Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Gui
- Exceeds New York State Ambient Water Quality Standards and V

Table 2

Groundwater Chemistry Monitoring Analytical Results
Durez Inlet Site
North Tonawanda, New York

Sample Location:				MW-20I	MW-20I	MW-20I	MW-20I	MW-20I	MW-20I	MW-20I	MW-20I	MW-20I	MW-20I	MW-22I	MW-22I	MW-22I
Sample ID:				MW-20I-0420	MW-20I-1020	MW-20I-0421	MW-20I-1021	MW20I-0422	MW9I-0422	MW-20I-1022	MW-20I-0423	MW-20I-1023	MW-22I-1019	MW-22I-0420	MW-22I-1020
Sample Date:				5/6/2020	10/19/2020	4/13/2021	10/19/2021	4/27/2022	4/27/2022 Duplicate	10/18/2022	4/13/2023	10/31/2023	10/21/2019	5/6/2020	10/19/2020
Compound/Parameter	**Units**	**GW Standard***	**Reporting Limit**												
1,2,3-Trichlorobenzene	ug/L	5	1	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	20.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	ug/L	5	1	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	20.0 U	1.00 U	1.00 U
1,2-Dichlorobenzene	ug/L	3	1	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	20.0 U	1.00 U	2.47
1,3-Dichlorobenzene	ug/L	3	1	23.5 J	22.9 J	19.9 J	19.2 J	22.0 J	21.7 J	14.9 J	22.5 J	8.18 J	11.4 J	0.460 J	21.3
1,4-Dichlorobenzene	ug/L	3	1	421	441	376	341	367	295	254	322	123	160	4.80	314
Benzene	ug/L	1	1	17.4 J	17.8 J	20.2 J	18.3 J	15.6 J	14.9 J	12.1 J	12.0 J	15.1 J	29.4	0.824 J	72.6
Chlorobenzene	ug/L	5	1	2910	3340	3130	2850	2650	2340	2230	2380	1990	2220	88.8	3000
Toluene	ug/L	5	1	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	20.0 U	1.00 U	1.00 U

Notes:

U -Not detected at the associated reporting limit.
J -Estimated concentration.
µg/L -Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Gui
- Exceeds New York State Ambient Water Quality Standards and V

Table 2

Groundwater Chemistry Monitoring Analytical Results
Durez Inlet Site
North Tonawanda, New York

Sample Location:				MW-22I	MW-22I	MW-22I	MW-22I	MW-22I	MW-22I
Sample ID:				MW-22I-0421	MW22I-1021	MW22I-0422	MW-22I-1022	MW-22I-0423	MW-22I-1023
Sample Date:				4/13/2021	10/19/2021	4/27/2022	10/18/2022	4/13/2023	10/31/2023
Compound/Parameter	**Units**	**GW Standard***	**Reporting Limit**						
1,2,3-Trichlorobenzene	ug/L	5	1	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	5.00 U
1,2,4-Trichlorobenzene	ug/L	5	1	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	5.00 U
1,2-Dichlorobenzene	ug/L	3	1	25.0 U	25.0 U	25.0 U	25.0 U	5.25 J	1.58 J
1,3-Dichlorobenzene	ug/L	3	1	23.7 J	23.8 J	28.5	21.2 J	27.5	3.76 J
1,4-Dichlorobenzene	ug/L	3	1	392	428	458	386	521	23.1
Benzene	ug/L	1	1	54.7	58.7	47.7	32.9	29.3	28.4
Chlorobenzene	ug/L	5	1	3400	3540	3570	3110	4150	761
Toluene	ug/L	5	1	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	5.00 U

Notes:

U -Not detected at the associated reporting limit.
J -Estimated concentration.
µg/L -Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Gui
- Exceeds New York State Ambient Water Quality Standards and V

Table 3

Post-ORC Sock Removal Analytical Results
Durez Inlet Site
North Tonawanda, New York

					Shown for Comparison:			Shown for Comparison:	
Sample Location:				MW-20I	MW-20I	MW-20I	MW-22I	MW-22I	MW-22I
Sample ID:				MW-20I-0923	MW-20I-0423	MW-20I-1023	MW-22I-0923	MW-22I-0423	MW-22I-1023
Sample Date:				9/25/2023	4/13/2023	10/31/2023	9/25/2023	4/13/2023	10/31/2023
Compound/Parameter	**Units**	**GW Standard***	**Reporting Limit**						
1,2,3-Trichlorobenzene	ug/L	5	1	10.0 U	25.0 U	25.0 U	5.00 U	25.0 U	5.00 U
1,2,4-Trichlorobenzene	ug/L	5	1	10.0 U	25.0 U	25.0 U	5.00 U	25.0 U	5.00 U
1,2-Dichlorobenzene	ug/L	3	1	10.0 U	25.0 U	25.0 U	5.00 U	5.25 J	1.58 J
1,3-Dichlorobenzene	ug/L	3	1	10.0 U	22.5 J	8.18 J	5.00 U	27.5	3.76 J
1,4-Dichlorobenzene	ug/L	3	1	74.0	322	123	34.9	521	23.1
Benzene	ug/L	1	1	12.9	12.0 J	15.1 J	24.3	29.3	28.4
Chlorobenzene	ug/L	5	1	1450	2380	1990	723	4150	761
Toluene	ug/L	5	1	10.0 U	25.0 U	25.0 U	5.00 U	25.0 U	5.00 U

Notes:

U -Not detected at the associated reporting limit.
µg/L -Micrograms per liter
* - New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)
- Exceeds New York State Ambient Water Quality Standards and Water Guidance's Values (GA Water Class)

Groundwater Concentration Versus Time: MW-20I
Durez Inlet Site
North Tonawanda, New York

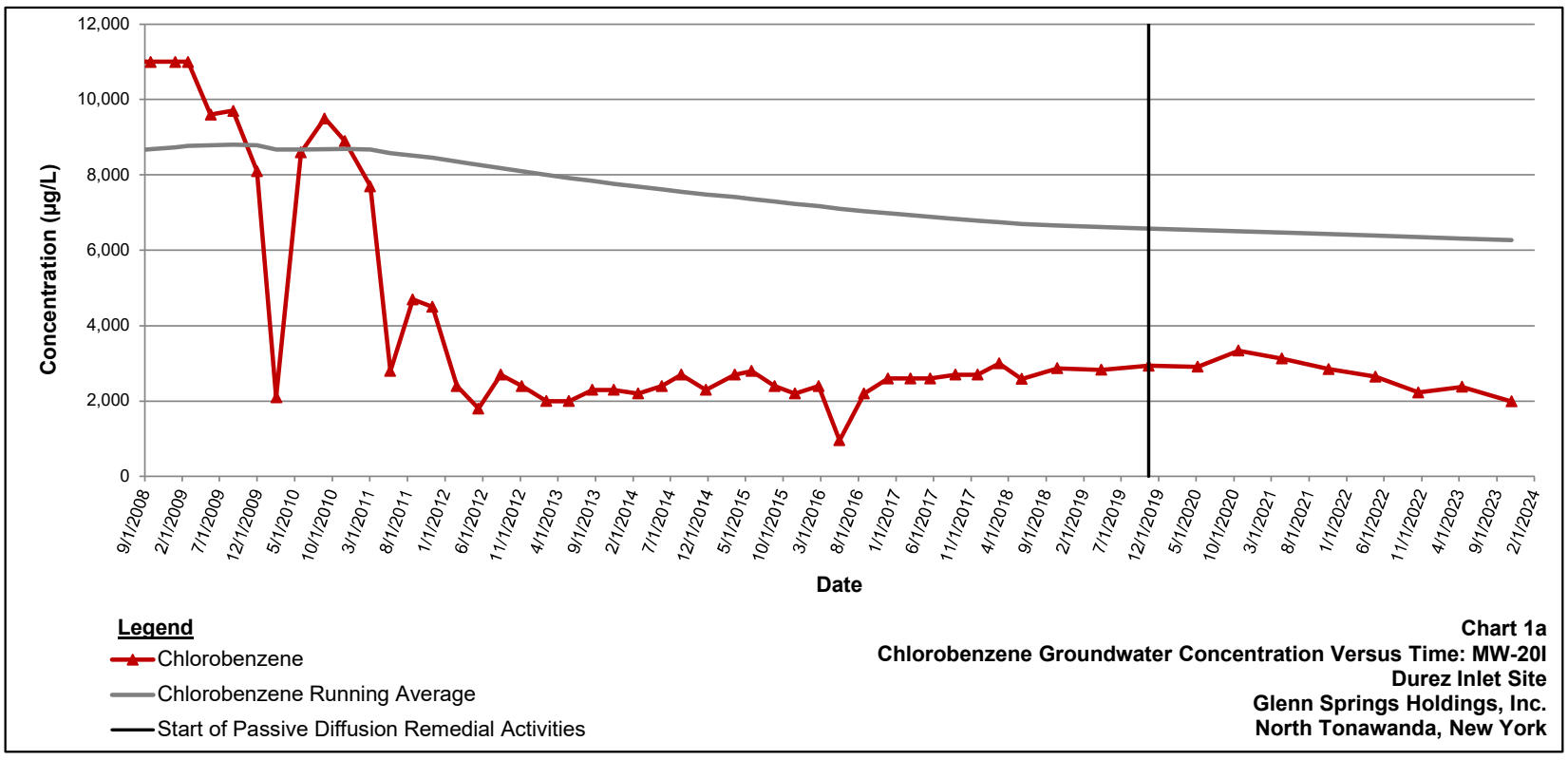


Chart 1a
Chlorobenzene Groundwater Concentration Versus Time: MW-20I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

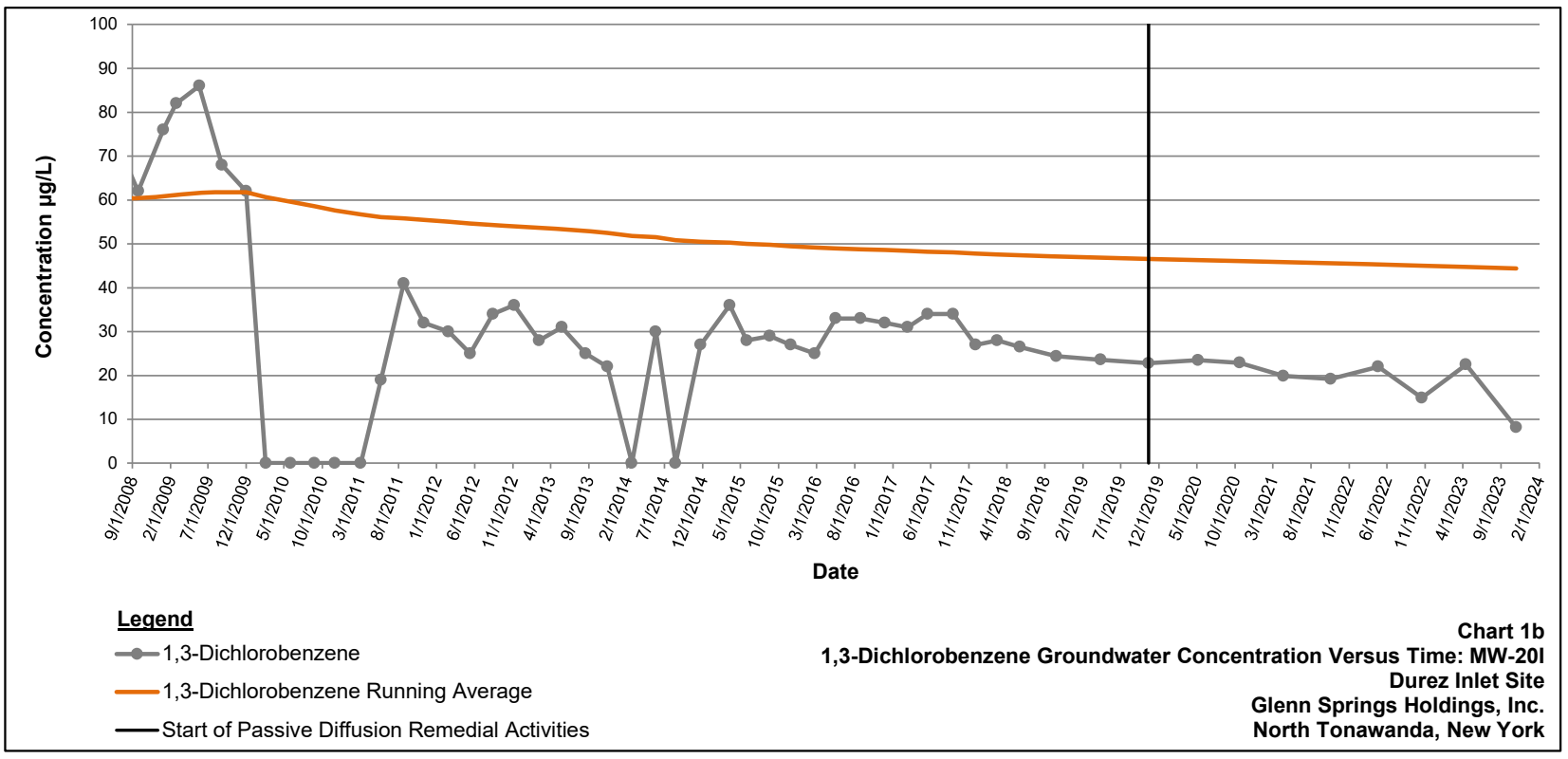


Chart 1b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-20I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

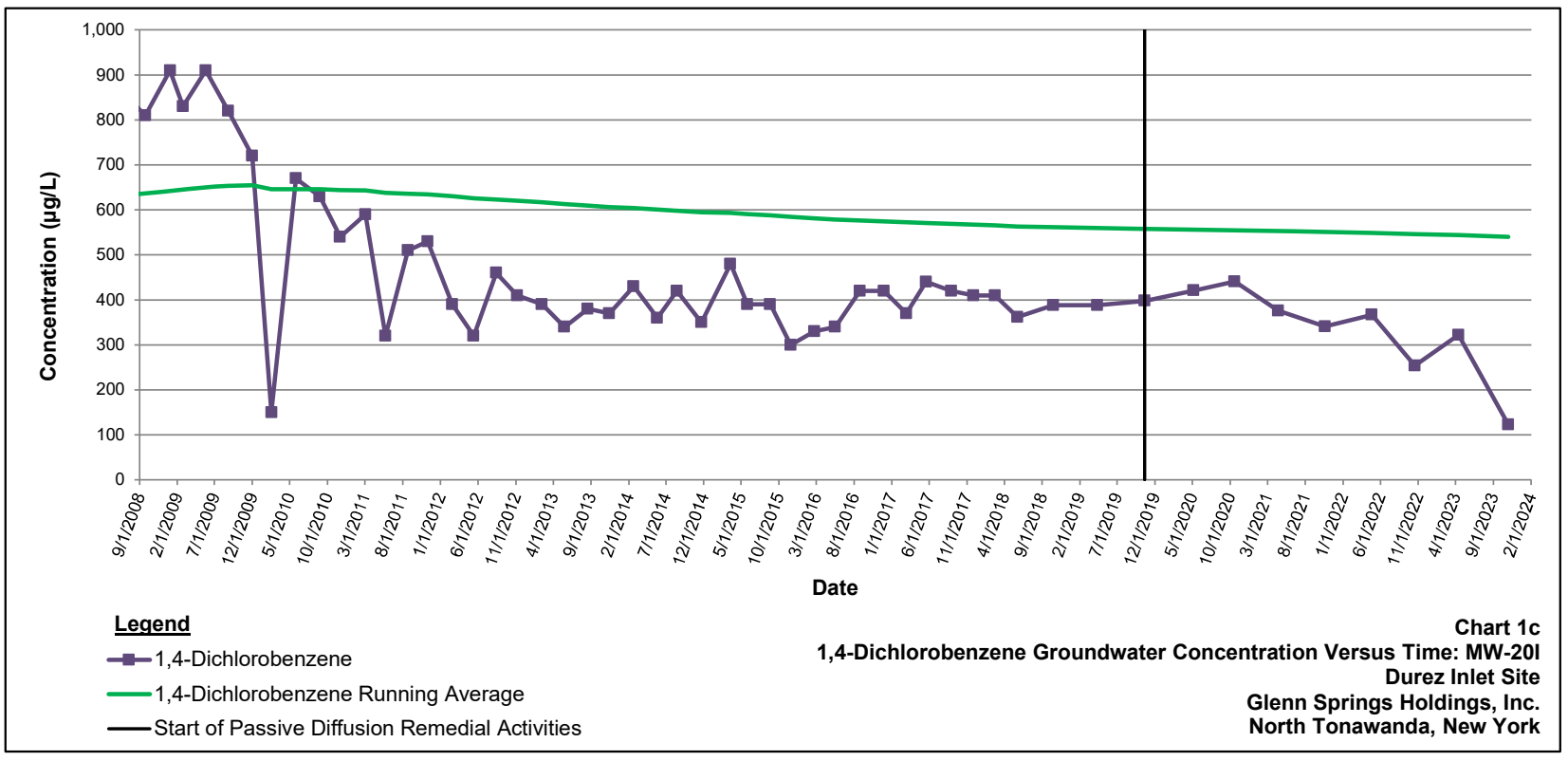


Chart 1c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-20I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Groundwater Concentration Versus Time: MW-22I
Durez Inlet Site
North Tonawanda, New York

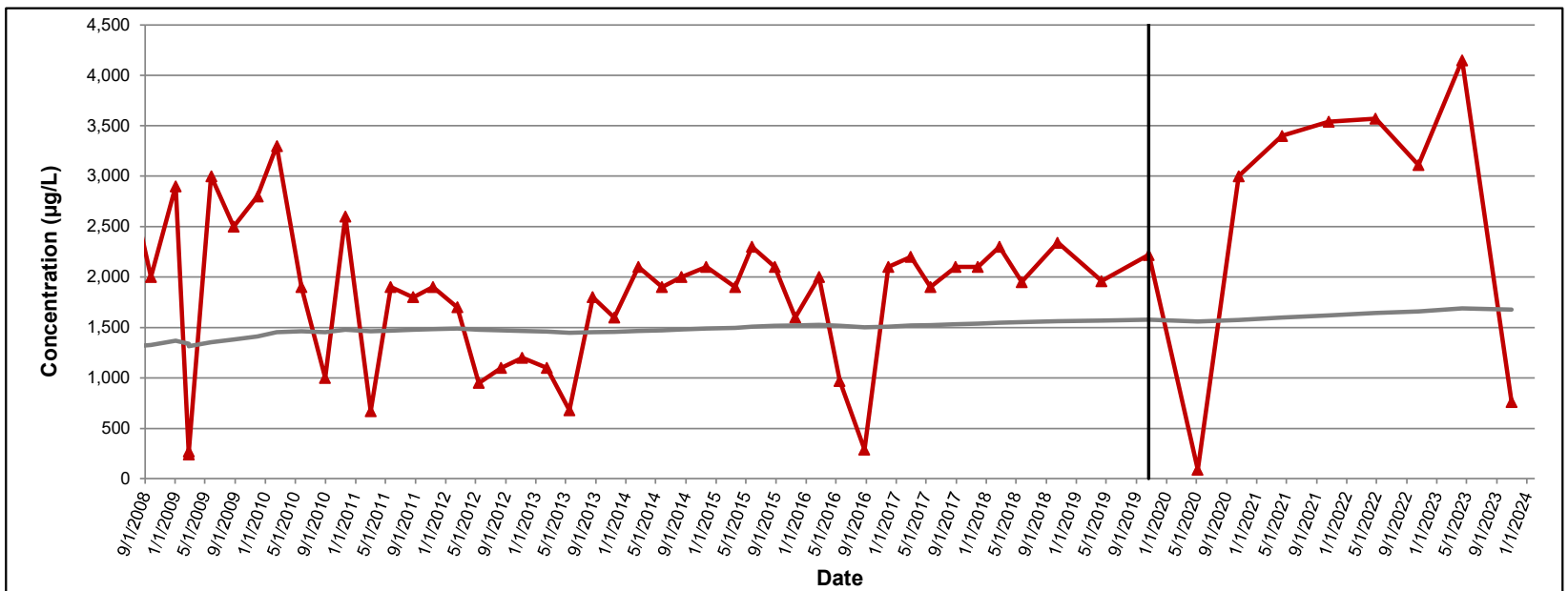


Chart 2a
Chlorobenzene Groundwater Concentration Versus Time: MW-22I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

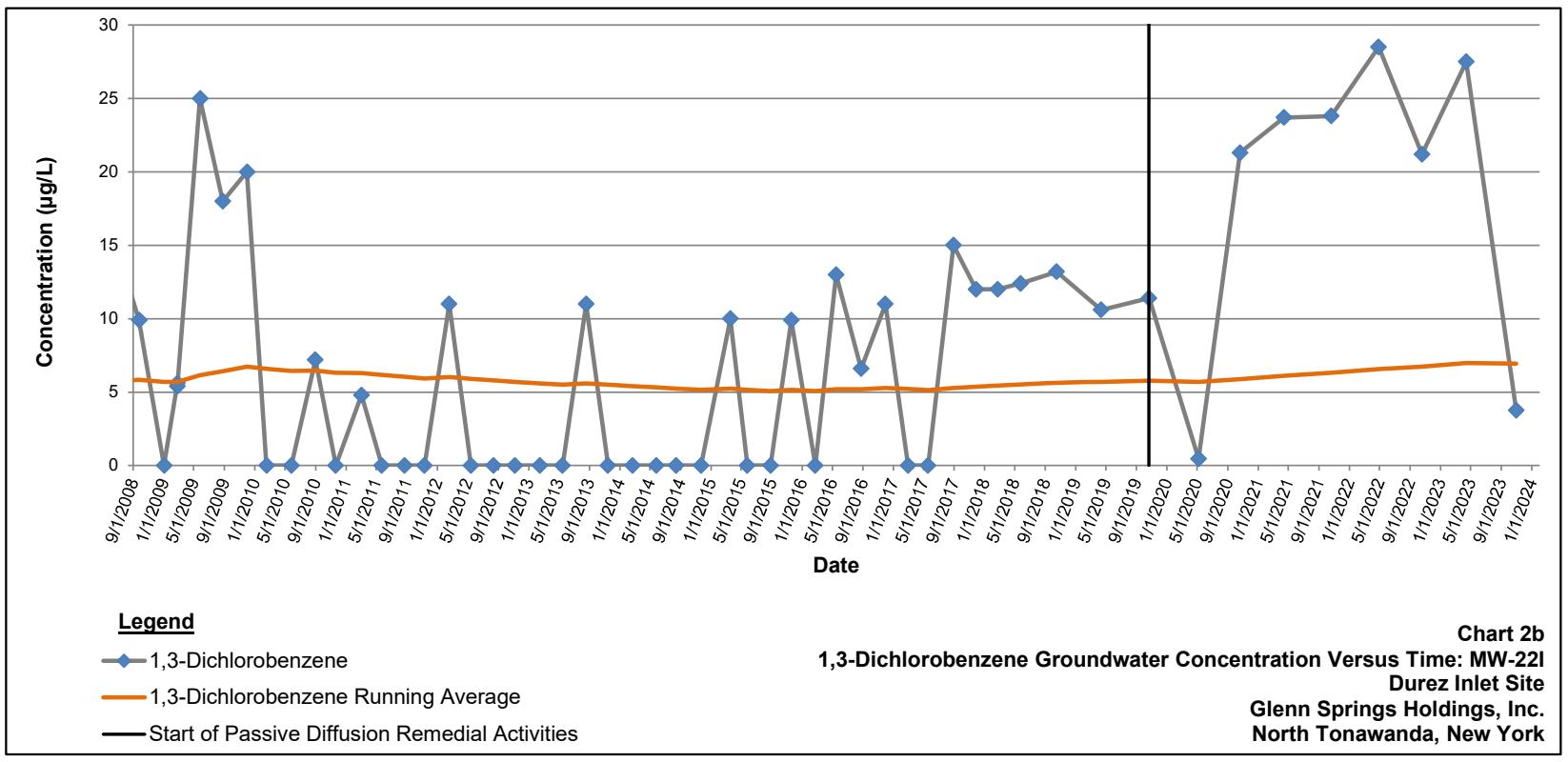


Chart 2b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-22I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

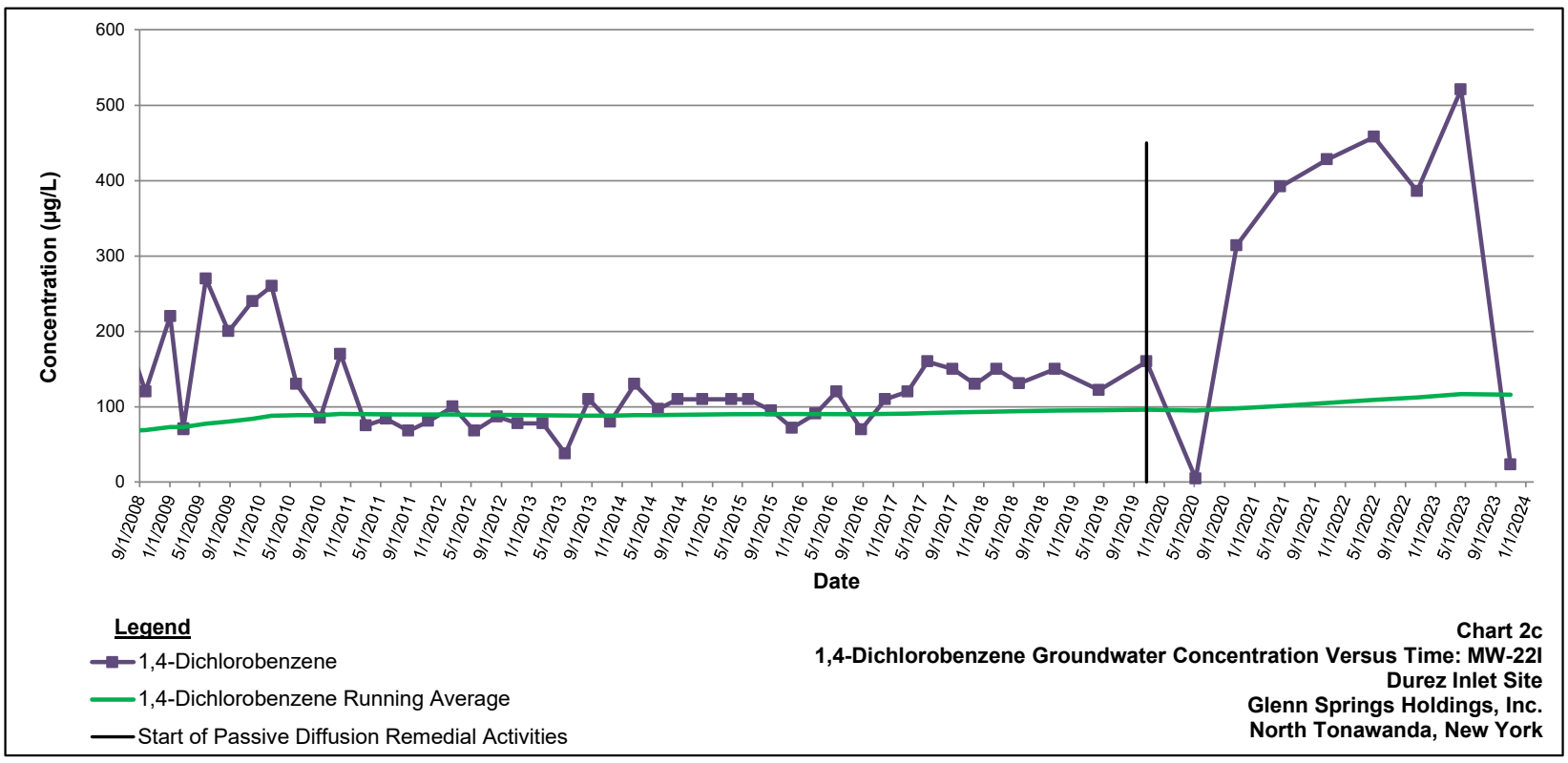


Chart 2c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-22I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Groundwater Concentration Versus Time: MW-16I
Durez Inlet Site
North Tonawanda, New York

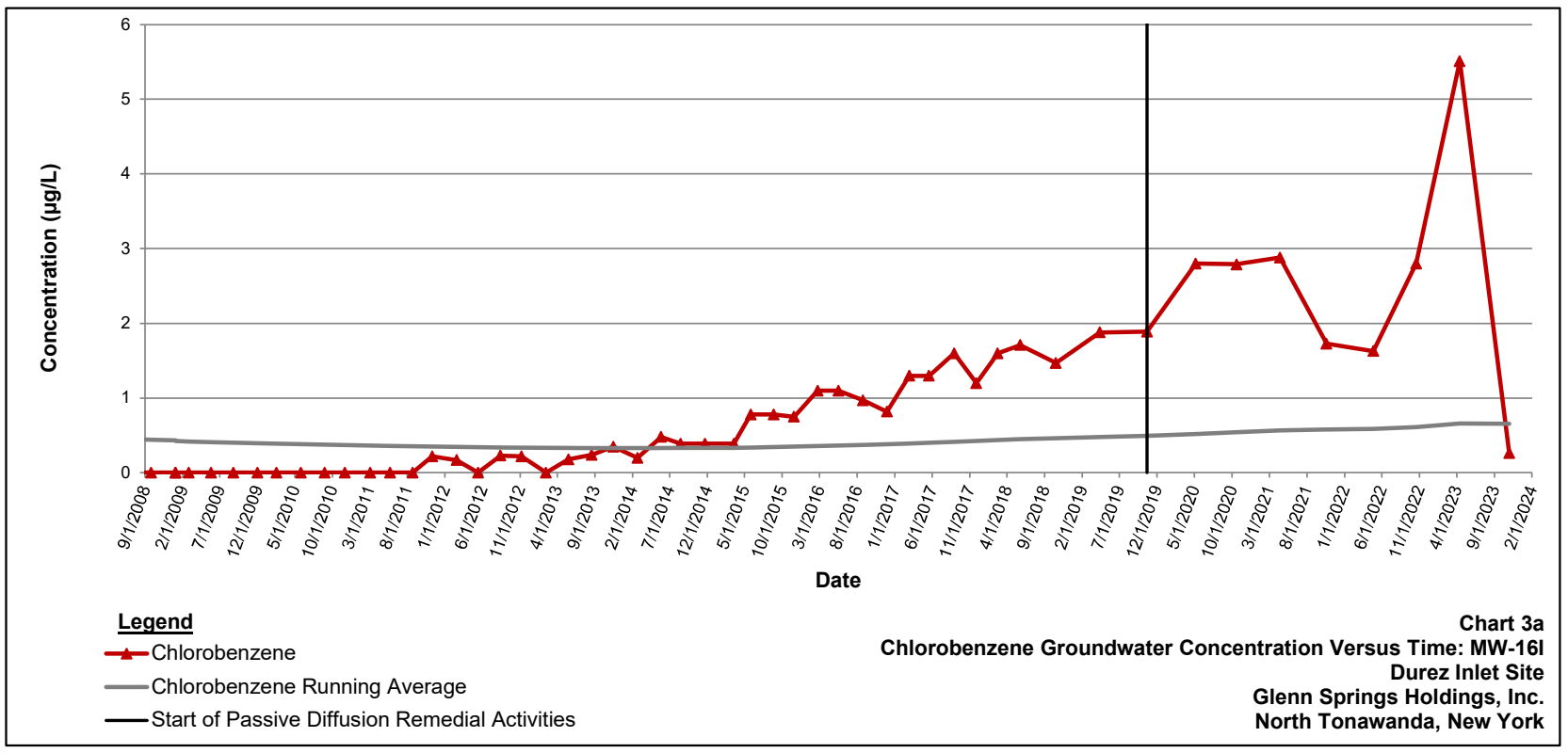


Chart 3a
Chlorobenzene Groundwater Concentration Versus Time: MW-16I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

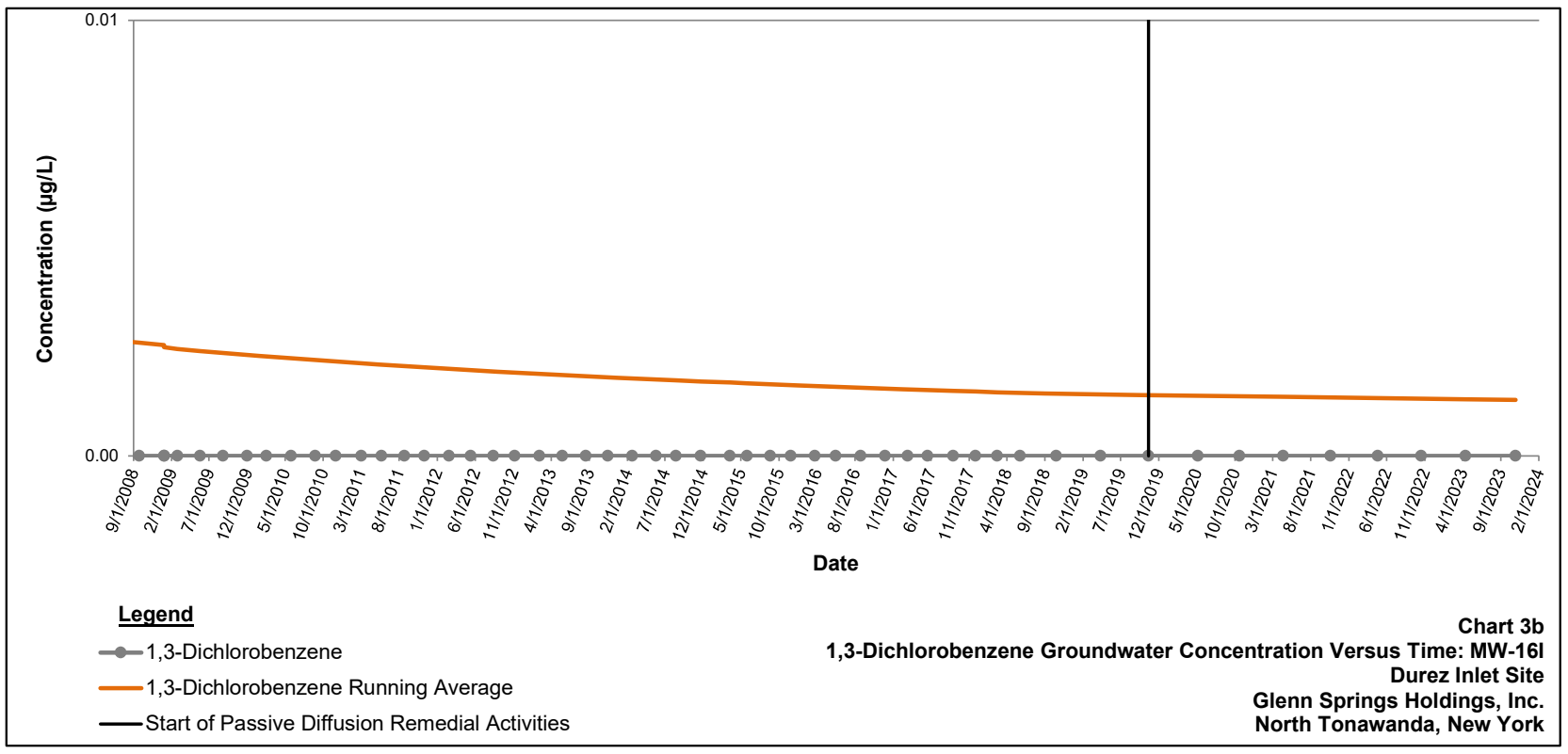


Chart 3b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-16I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

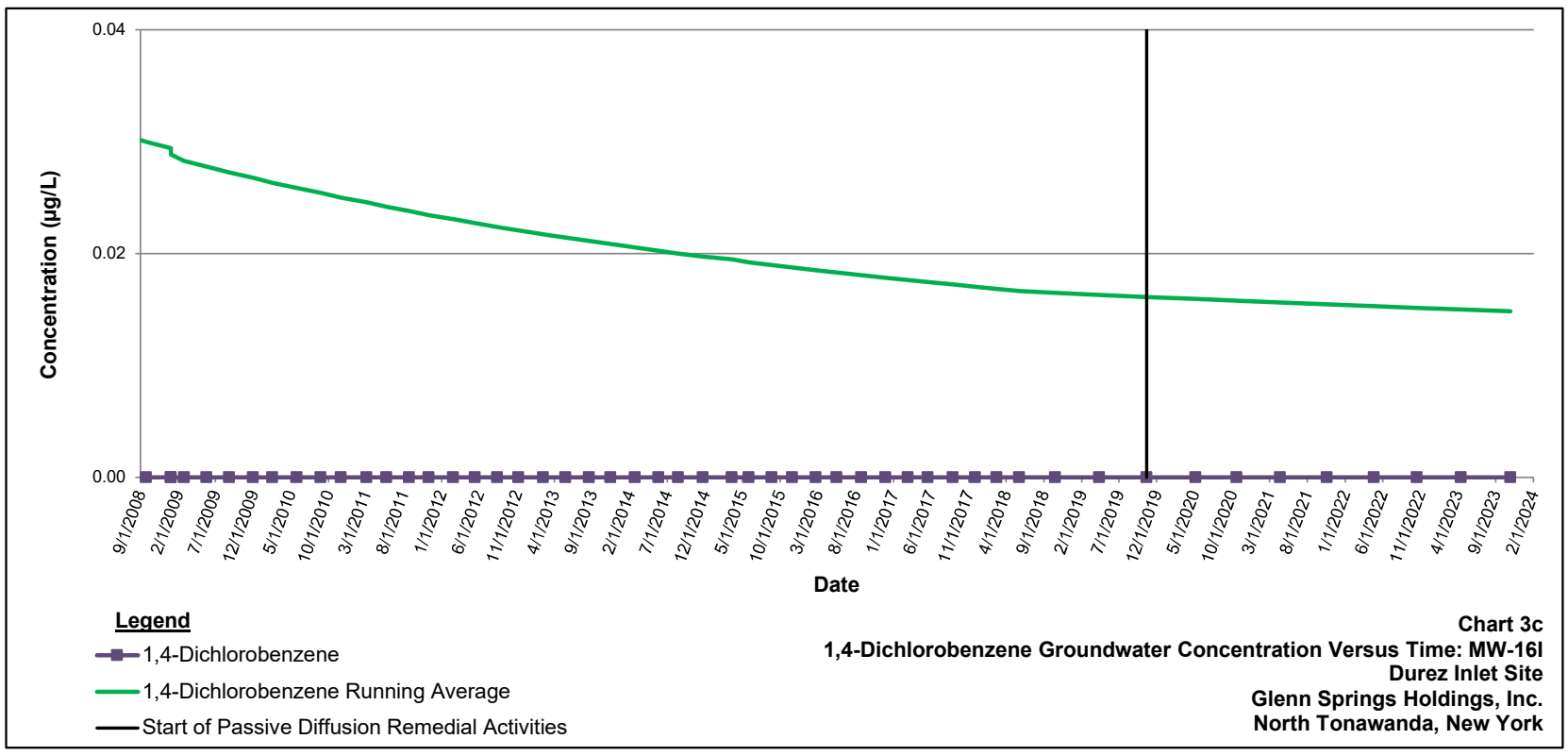


Chart 3c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-16I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Groundwater Concentration Versus Time: MW-18I
Durez Inlet Site
North Tonawanda, New York

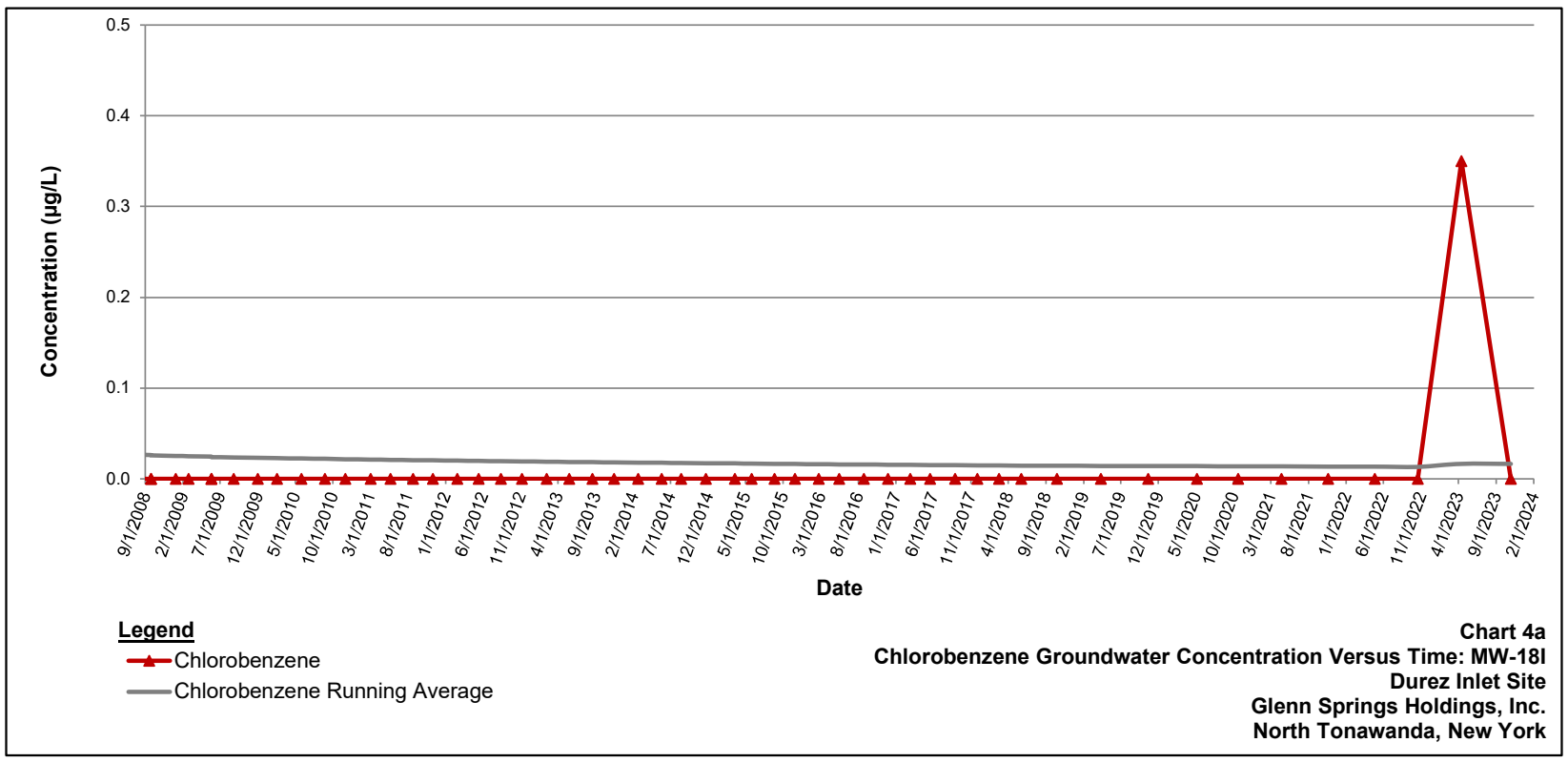


Chart 4a
Chlorobenzene Groundwater Concentration Versus Time: MW-18I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

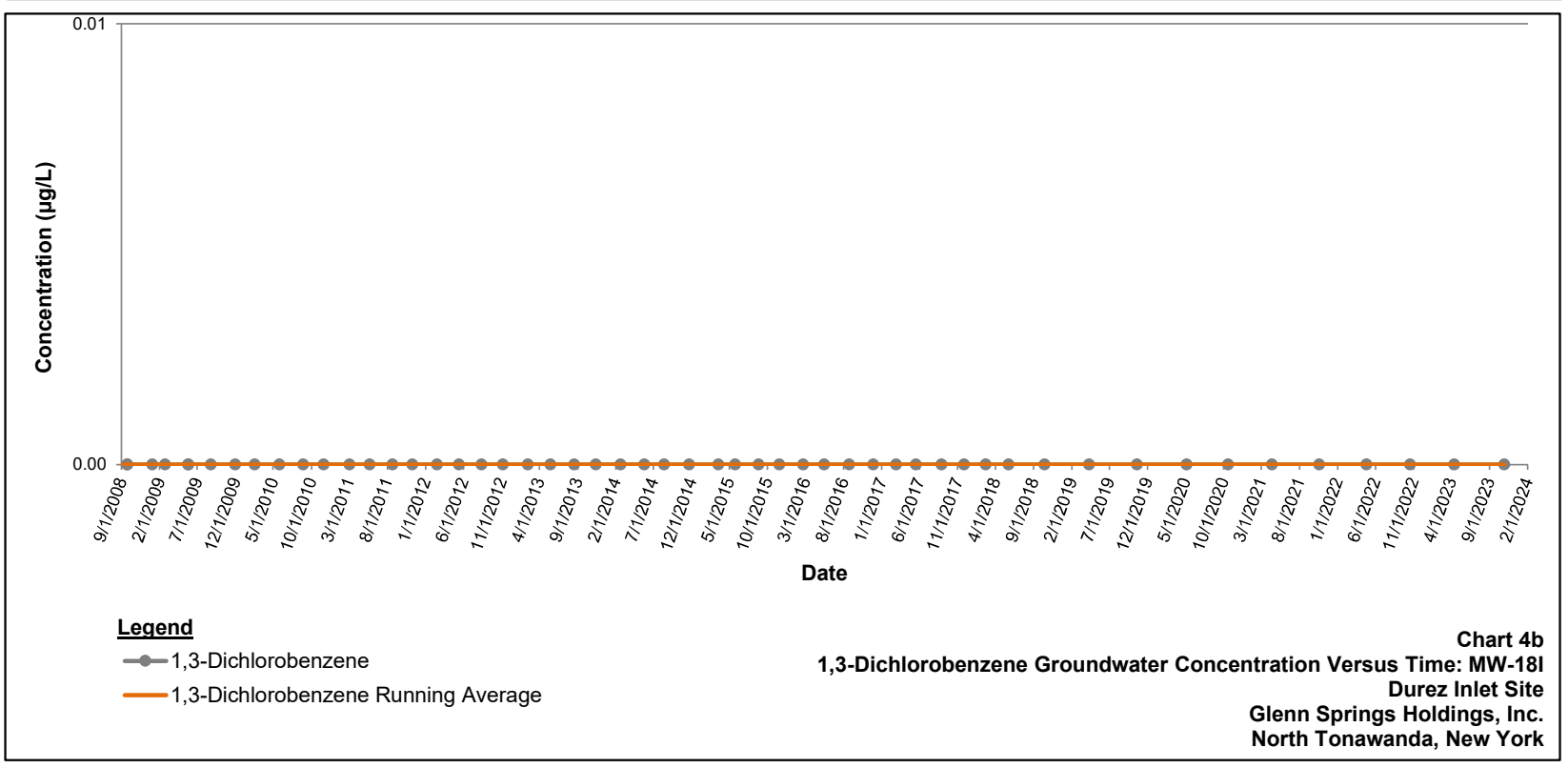


Chart 4b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-18I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

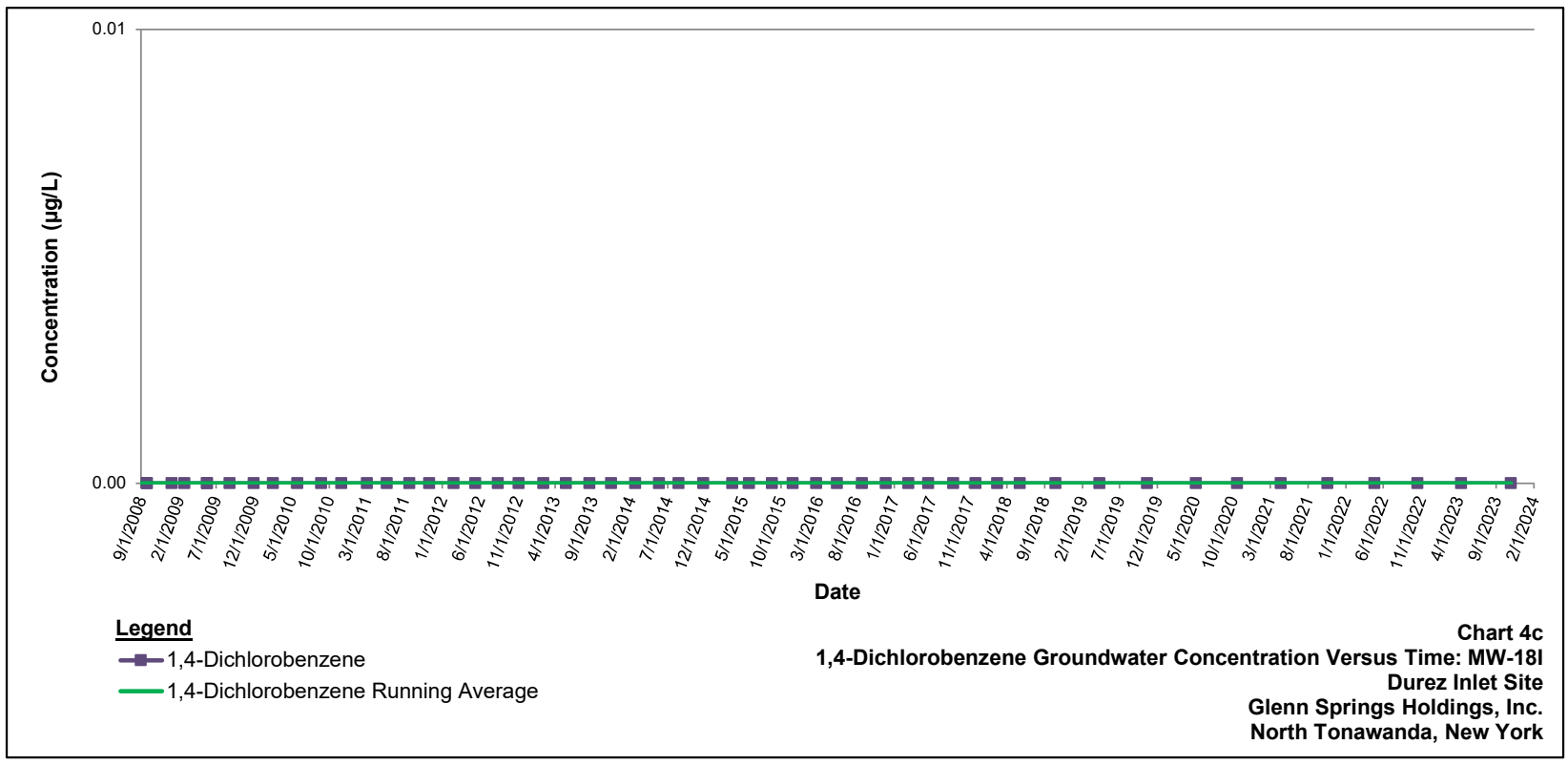


Chart 4c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-18I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Groundwater Concentration Versus Time: MW-19I
Durez Inlet Site
North Tonawanda, New York

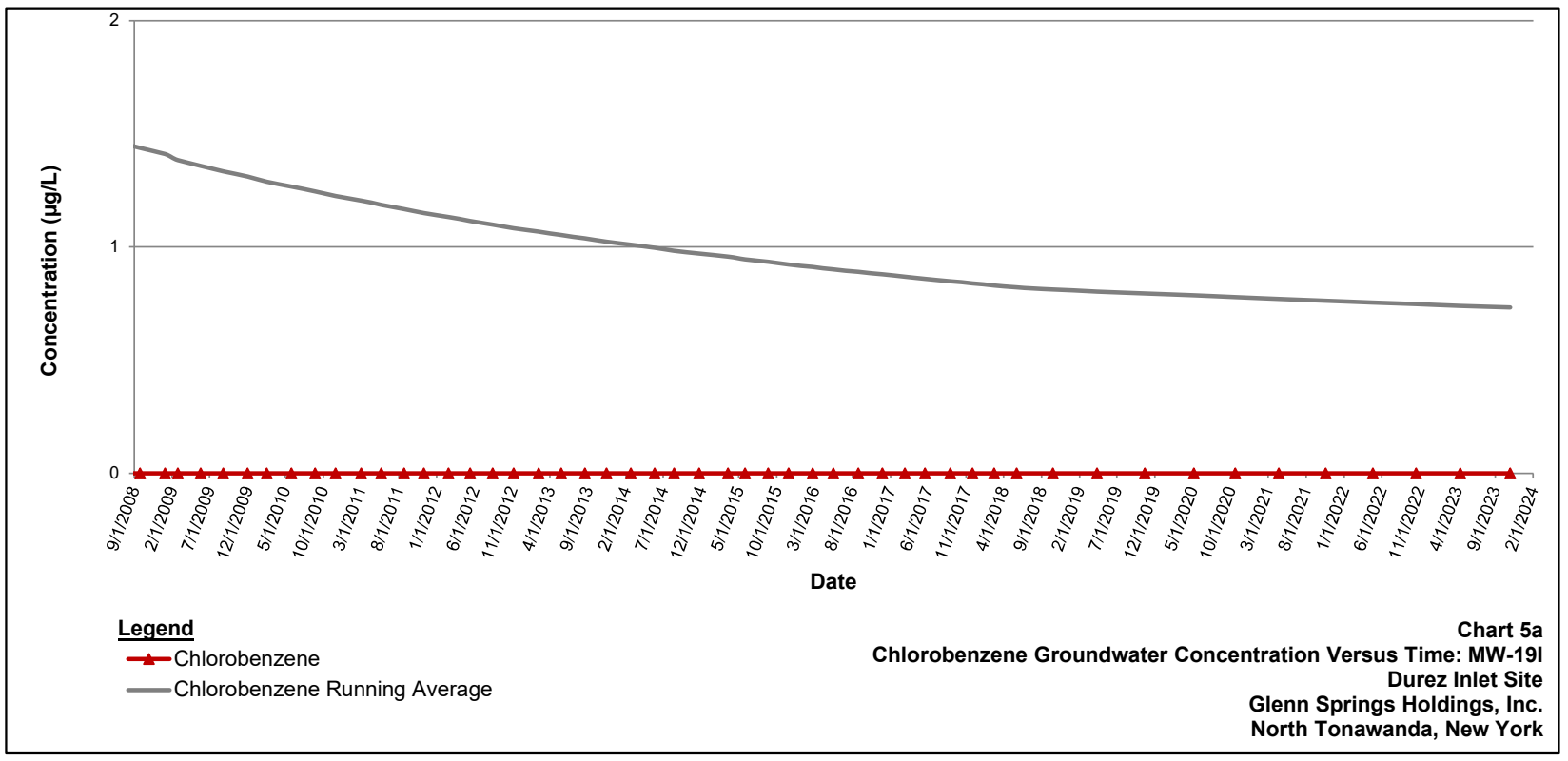


Chart 5a
Chlorobenzene Groundwater Concentration Versus Time: MW-19I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

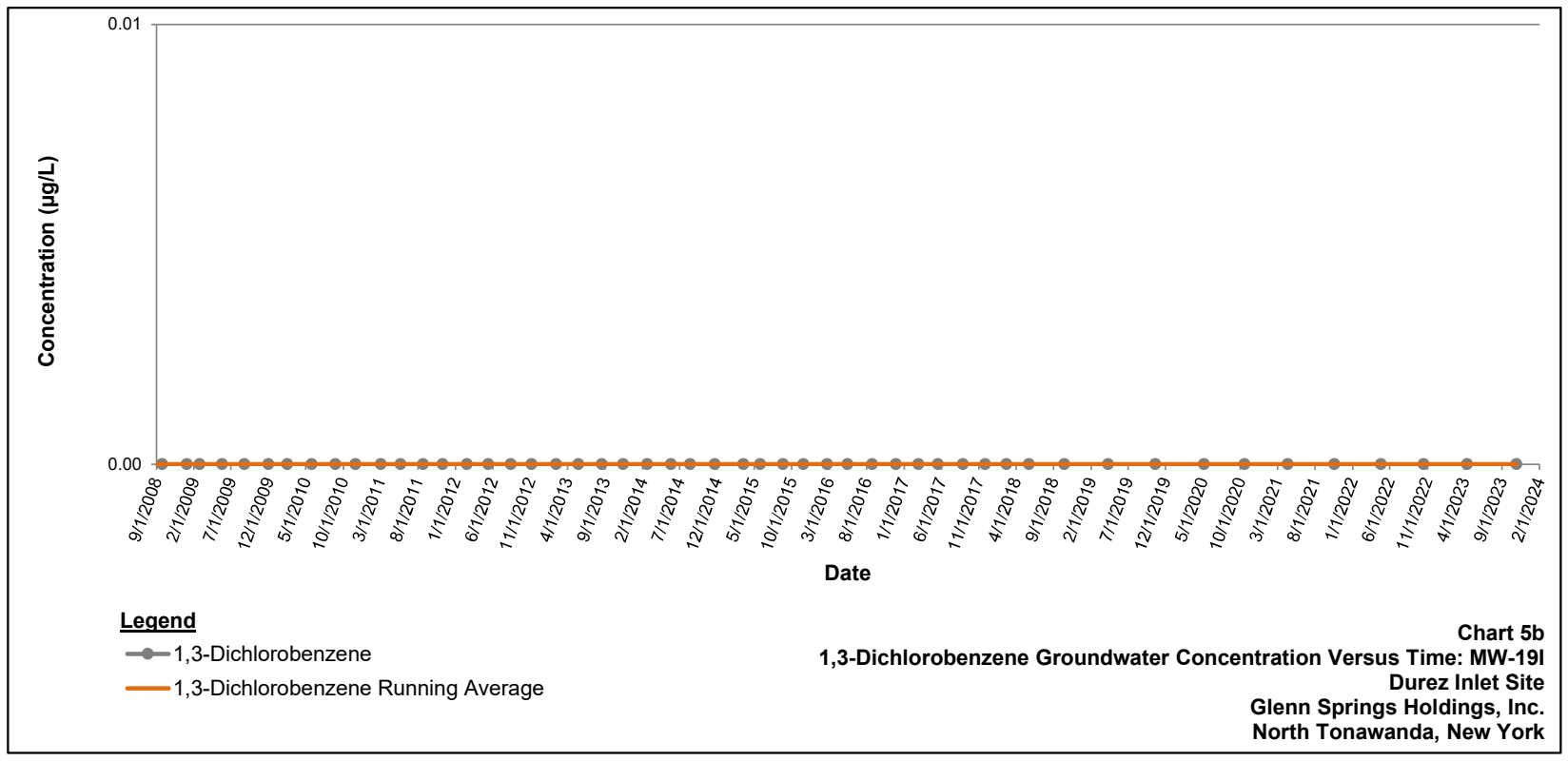


Chart 5b
1,3-Dichlorobenzene Groundwater Concentration Versus Time: MW-19I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

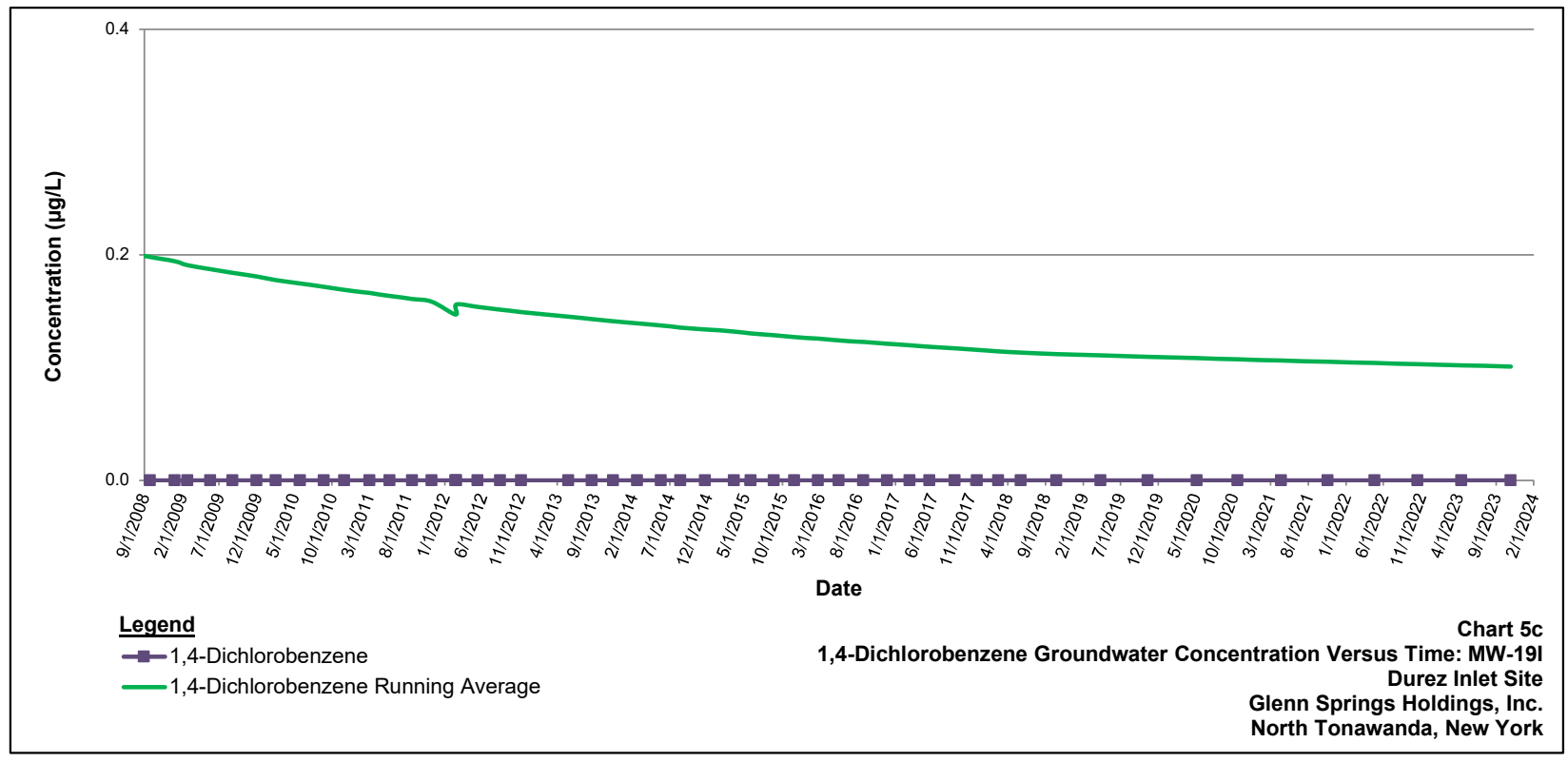


Chart 5c
1,4-Dichlorobenzene Groundwater Concentration Versus Time: MW-19I
Durez Inlet Site
Glenn Springs Holdings, Inc.
North Tonawanda, New York

Appendix F
Monitoring Well Purge Records

B&B Engineers & Geologists of new york, p.c.
an affiliate of Geosyntec Consultants

Durez Inlet Groundwater
Field Sample/Purge Record

Well # 18I

Weather Notes: SUNNY 55°F WINDS SW 5-15MPH
Date: 4/13/23 **Well Depth:** 34.9 **Ft.** **Water Depth:** 7.85 **Ft.**
Well Volume: 4.3 **Gal.** **Total Volume Purged:** 19 **Gal.**

Zone Monitored: Overburden **Well Diameter:** 2 "

Sample Purge Data:

	Start – Gal.	Start 4.3 Gal.	DO – 6.58
DO – 19.84	Temp. 10.9 °C	Temp. 12.5 °C DO – 6.87	Temp. 12.6 °C
	SPCON 0.270 mS/cm	SPCON 0.92 mS/cm	SPCON 0.91 mS/cm
	TURBID 99.3 NTU's	TURBID 32.1 NTU's	TURBID 8.07 NTU's
	pH 7.73	pH 7.13	pH 7.35
ORP – 78.8	Time 0856	Time 0903 ORP – 39.9	Time 0911 ORP – 11.0
	HR/MIN –	HR/MIN 7	HR/MIN 15
	Total Vol. – Gal.	Total Vol. 4.3 Gal.	Total Vol. 8.6 Gal.

	Start 8.6 Gal.	Start 12.9 Gal.	Start – Gal.
DO – 5.14	Temp. 12.6 °C	Temp. 12.6 °C DO – 4.22	Temp. 12.2 °C DO – 4.29
	SPCON 0.90 mS/cm	SPCON 0.89 mS/cm	SPCON 0.89 mS/cm
	TURBID 4.07 NTU's	TURBID 3.11 NTU's	TURBID 12.3 NTU's
	pH 7.46	pH 7.47	pH 7.50
ORP – -22.1	Time 0919	Time 0927 ORP – -33.3	Time ORP – -45.1
	HR/MIN	HR/MIN	HR/MIN
	Total Vol. 12.9 Gal.	Total Vol. 17.2 Gal.	Total Vol. – Gal.

Remarks/Observations CLEAR, COLORLESS
34.9-7.85=27.05x.16=4.3 GAL

Sample Number MW-18I-0423 **Time Sampled** 0935 **Date** 4/13/23

QA/QC **Y/N** **MS/MSD** **Duplicate** **Duplicate ID# and Time**

Technician S GARDNER

Shawn Gardner

DUP

B&B Engineers & Geologists of new york, p.c.
an affiliate of Geosyntec Consultants

Durez Inlet Groundwater
Field Sample/Purge Record

Well # 16I

Weather Notes: SUNNY 60°F WINDS SW. 5-15MPH
Date: 4/13/23 **Well Depth:** 32.5 **Ft.** **Water Depth:** 8.04 **Ft.**
Well Volume: 3.9 **Gal.** **Total Volume Purged:** 20 **Gal.**

Zone Monitored: Overburden **Well Diameter:** 2 "

Sample Purge Data:

	Start — Gal.	Start 3.9 Gal.	
Temp. H4 °C	Temp. 13.5 °C	Temp. 13.5 °C	DO —
SPCON 0.568 mS/cm	SPCON 1.05 mS/cm	SPCON 0.74 mS/cm	
DO 15.11 TURBID 49.8 NTU's	TURBID 407 NTU's	DO 10.49 TURBID 30.9 NTU's	
pH 9.91	pH 11.20	pH 9.34	
Time 0958	Time 1008	Time 1019	
ORP — HR/MIN —	ORP — HR/MIN 10	HR/MIN 21	ORP —
160 Total Vol. — Gal.	Total Vol. 3.9 Gal.	-54.0 Total Vol. 7.8 Gal.	
Start 7.8 Gal.	Start 11.7 Gal.	Start 15.6 Gal.	DO —
Temp. 13.6 °C	Temp. 13.8 °C	Temp. 13.9 °C	
DO 7.59 SPCON 0.716 mS/cm	SPCON 0.79 mS/cm	DO — SPCON 0.80 mS/cm	6.45
TURBID 8.33 NTU's	TURBID 7.75 NTU's	6.09 TURBID 3.44 NTU's	
pH 8.83	pH 8.53	pH 8.31	ORP —
ORP — Time 1032	ORP — Time 1045	Time 1057	
HR/MIN 34	HR/MIN -20.4	HR/MIN	-23.6
-29.8 Total Vol. 11.7 Gal.	Total Vol. 15.6 Gal.	Total Vol. 19.5 Gal.	

Remarks/Observations
32.5 - 8.04 = 24.46 x .16 = 3.9 GAL

Sample Number MW-16I-0423 **Time Sampled** 1105 **Date**

QA/QC (Y)/N **MS/MSD** (Duplicate) **Duplicate ID# and Time** MW-9I-0423 1105

SAMPLE **Technician** S GARDNER

TEMP - 13.3
SPCON - 0.81
TURB - 3.73
PH - 8.27
DO - 4.59
ORP - -35.8

W/ P
CLEAR - COLORLESS

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Durez Inlet Groundwater
Field Sample/Purge Record

Well # 19I

Weather Notes: SUNNY 63°F WINDS SW 5-15MPH
Date: 4/13/23 **Well Depth:** 35.4 **Ft.** **Water Depth:** 6.90 **Ft.**
Well Volume: 4.6 **Gal.** **Total Volume Purged:** 14 **Gal.**

Zone Monitored: Overburden **Well Diameter:** 2 "

Sample Purge Data:

		Start – Gal.			Start 4.6 Gal.			
	Temp. 13.3 °C		Temp. 13.2 °C			Temp. 13.4 °C		DO 4.04
DO 7.28	SPCON 0.84 mS/cm		SPCON 1.02 mS/cm	DO 4.33		SPCON 1.03 mS/cm		
	TURBID 8.99 NTU's		TURBID 2.68 NTU's			TURBID 1.72 NTU's		
	pH 7.57		pH 7.35			pH 7.39		ORP 69.1
	Time 1121		Time 1130	ORP -72.3		Time 1138		
ORP -83.9	HR/MIN –		HR/MIN 9			HR/MIN 17		
	Total Vol. – Gal.		Total Vol. 4.6 Gal.			Total Vol. 9.2 Gal.		
	Start 9.2 Gal.		Start Gal.			Start – Gal.		
	Temp. 13.4 °C		Temp. °C	DO		Temp. 12.6 °C		DO 4.40
DO 3.96	SPCON 1.03 mS/cm		SPCON mS/cm			SPCON 1.03 mS/cm		
	TURBID 1.84 NTU's		TURBID NTU's			TURBID 2.65 NTU's		
	pH 7.39		pH	ORP		pH 7.39		ORP -68.0
ORP -68.5	Time 1147		Time			Time		
	HR/MIN		HR/MIN			HR/MIN –		
	Total Vol. 13.8 Gal.		Total Vol. Gal.			Total Vol. – Gal.		

Remarks/Observations CLEAR, COLORLESS
35.4 - 6.90 = 28.5 x .16 = 4.6 GAL

Sample Number MW-19I-0423 **Time Sampled** 1155 **Date** 4/13/23

QA/QC Y(N) **MS/MSD** **Duplicate** **Duplicate ID# and Time**

Technician S GARDNER

MS/MSD

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Durez Inlet Groundwater
Field Sample/Purge Record

Well # 20I

Weather Notes: SUNNY 68°F WINDS SW 5-15MPH
Date: 4/13/23 **Well Depth:** 34.5 **Ft.** **Water Depth:** 6.96 **Ft.**
Well Volume: 4.4 **Gal.** **Total Volume Purged:** _____ **Gal.**

Zone Monitored: Overburden **Well Diameter:** 2 "

Sample Purge Data:

	Start – Gal.			Start 4.4 Gal.				
Temp.	11.8 °C		Temp.	12.8 °C		Temp.	12.8 °C	
DO – 11.90	SPCON	1.85 mS/cm	DO – 5.83	SPCON	5.68 mS/cm	SPCON	2.29 mS/cm	DO – 3.84
	TURBID	23.8 NTU's		TURBID	178 NTU's	TURBID	25.6 NTU's	
	pH	9.37		pH	11.13	pH	9.59	
	Time	1216		Time	1227	Time	1238	ORP – -31.2
ORP – 28.5	HR/MIN	–	ORP – -20.7	HR/MIN		HR/MIN		
	Total Vol.	– Gal.		Total Vol.	4.4 Gal.	Total Vol.	8.8 Gal.	
	Start	8.8 Gal.		Start	13.2 Gal.	Start	17.6 Gal.	
Temp.	12.9 °C		Temp.	12.7 °C		Temp.	12.9 °C	
DO – 5.90	SPCON	2.09 mS/cm	DO – 6.08	SPCON	1.98 mS/cm	SPCON	1.89 mS/cm	DO – 7.42
	TURBID	14.7 NTU's		TURBID	9.74 NTU's	TURBID	7.33 NTU's	
	pH	9.37		pH	9.24	pH	~~13126~~ 9.09	
ORP – -23.9	Time	1250	ORP – -21.0	Time	1302	Time	1312	ORP – -22.6
	HR/MIN			HR/MIN		HR/MIN		
	Total Vol.	13.2 Gal.		Total Vol.	17.6 Gal.	Total Vol.	22 Gal.	

Remarks/Observations
34.5 - 6.96 = 27.54 x .16 = 4.4 GAL

Sample Number MW-20I-0423 **Time Sampled** 1320 **Date** 4/13/23

QA/QC (Y)N (MS/MSD) **Duplicate** **Duplicate ID# and Time** _____

SAMPLE – **Technician** S GARDNER

TEMP - 12.1
SPCON - 1.89
PH - 9.11
TURB - 9.33
DO - 15.69
ORP - -10.5

W/D
CLEAR, LT YELLOW TINT

Shawn Gardner

B&B Engineers & Geologists of new york, p.c.
an affiliate of Geosyntec Consultants

Durez Inlet Groundwater
Field Sample/Purge Record

Well# 22I

Weather Notes: SUNNY 65°F WINDS SW 5-15MPH
Date: 4/13/23 **Well Depth:** 32.0 **Ft.** **Water Depth:** 7.02 **Ft.**
Well Volume: 4 **Gal.** **Total Volume Purged:** 20 **Gal.**

Zone Monitored: Overburden **Well Diameter:** 2 "

Sample Purge Data:

	Start – Gal.		Start 4 Gal.		
Temp. 12.3 °C	Temp. 12.6 °C		Temp. 12.7 °C		DO 7.45
DO 16.73	SPCON 0.474 mS/cm	SPCON 3.32 mS/cm	DO 12.05	SPCON 2.57 mS/cm	
TURBID 123 NTU's	TURBID 314 NTU's		TURBID 155 NTU's		
pH 10.93	pH 11.71		pH 10.08		ORP -15.2
Time 1342	Time 1402	ORP -40.3	Time 1413		
ORP -2.1	HR/MIN –		HR/MIN		
Total Vol. – Gal.	Total Vol. 4 Gal.		Total Vol. 8 Gal.		
Start 8 Gal.	Start 12 Gal.		Start 16 Gal.		
Temp. 12.7 °C	Temp. 12.7 °C	DO 5.16	Temp. 12.9 °C		DO 4.64
DO 6.90	SPCON 2.28 mS/cm	SPCON 2.15 mS/cm		SPCON 2.02 mS/cm	
TURBID 27.0 NTU's	TURBID 12.3 NTU's		TURBID 8.19 NTU's		
pH 9.59	pH 9.42		pH 9.29		ORP 12.0
ORP -13.1 Time 1425	Time 1436	ORP 11.4	Time 1450		
HR/MIN	HR/MIN		HR/MIN		
Total Vol. 12 Gal.	Total Vol. 16 Gal.		Total Vol. 20 Gal.		

Remarks/Observations
32 - 7.02 - 24.98 x .16 = 4 GAL

Sample Number MW-22I-0423 **Time Sampled** 1455 **Date** 4/13/23

QA/QC Y/(N) **MS/MSD** **Duplicate** **Duplicate ID# and Time**

Technician S GARDNER

SAMPLE –
TEMP - 12.4
SPCON - 2.00
TURB - 14.1
PH - 9.25
DO - 7.83
ORP - 14.6

W/Q - CLEAR, LT YELLOW TINT

B&B Engineers & Geologists of new york, p.c.

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Monitoring Well Record for Low-Flow Purging

Project Data: **Project Name:** DUREZ INLET SEMI-ANNUAL GW
Project Number: JR1045-09A-A10

Well Data: **Well No.:** MW-16I
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 31.60

Date: 10/31/2023
Personal: S GARDNER
Well Diameter, D (cm/in): 2"
Initial Depth to Water (m/ft): 7.76
Start Purge Time: 1038

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temp (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mV)
			Precision regular[5]:	±3%	±3%	±10%	±10%	±0.1	±10
1044	100	8.30	0.54	10.7	0.77	59.9	9.10	10.08	45.0
1049	100	8.35	0.59	10.6	0.81	54.1	8.23	10.34	35.8
1054		8.40	0.64	10.5	0.88	54.3	7.92	10.74	20.1
1059	100	8.45	0.69	10.5	1.05	56.7	7.85	11.09	-1.2
1104		8.45	0.69	10.6	1.14	53.1	7.25	11.20	-14.4
1109	100	8.45	0.69	10.5	1.15	35.9	6.62	11.22	-20.6
1114	100	8.48	0.72	10.5	1.06	26.2	6.99	11.14	-22.3
1119		8.52	0.76	10.5	1.06	15.7	6.31	11.11	-23.6
1124	100	8.55	0.79	10.5	1.05	9.33	6.19	11.09	-25.6

Sample ID: MW-16I-1023 **Sample Time:** 1130

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2ft) above any sediment accumulated at the well bottom.
(2) The wall screen volume will be based on a 1.52 m (5ft) screen length (L). For metric units $V_a=n*(r^2)*L$ in mL, where (r=D/2) and L are in cm. For Imperial units, $V_a=n*(r^2)*L)(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = Vp/Vs.
(5) For conductivity, the average value of three readings ±3%

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Monitoring Well Record for Low-Flow Purging DUP

Project Data: **Project Name:** DUREZ INLET SEMI-ANNUAL GW
Project Number: TR0415-09A-A10
Well Data: **Well No.:** MW-18I
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 34.64

Date: 10/31/2023
Personal: S GARDNER
Well Diameter, D (cm/in): 2"
Initial Depth to Water (m/ft): 8.28
Start Purge Time: 0821

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temp (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mV)
			Precision regular[5]:	±3%	±3%	±10%	±10%	±0.1	±10
0825	140	8.34	0.06	10.4	1.19	59.5	0.77	7.10	-67.8
0830	140	8.34	0.06	10.4	1.13	27.4	0.62	7.19	-91.6
0835		8.34	0.06	10.3	1.10	20.8	0.61	7.21	-100.4
0840	140	8.34	0.06	9.8	1.09	11.7	0.61	7.24	-104.6
0845		8.34	0.06	10.0	1.08	8.16	0.61	7.24	-107.5
0850	136	8.34	0.06	10.1	1.07	7.76	0.60	7.25	-111.2

Sample ID: MW-18I-1023
Sample Time: 0855

Notes: BLIND DUPLICATE - MW-9I-1023
TIME 0855

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2ft) above any sediment accumulated at the well bottom.
(2) The wall screen volume will be based on a 1.52 m (5ft) screen length (L). For metric units $V_a=n*(r^2)*L$ in mL, where (r=D/2) and L are in cm. For Imperial units, $V_a=n*(r^2)*L)(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = Vp/Vs.
(5) For conductivity, the average value of three readings ±3%

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Monitoring Well Record for Low-Flow Purging

Project Data: **Project Name:** DUREZ INLET SEMI-ANNUAL GW
Project Number: TRIDAS-09A-410

Well Data: **Well No.:** MW-19I
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 35.48

Date: 10/31/2023
Personal: S GARDNER
Well Diameter, D (cm/in): 2"
Initial Depth to Water (m/ft): 7.26
Start Purge Time: 0921

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temp (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mV)
			Precision regular[5]:	±3%	±3%	±10%	±10%	±0.1	±10
0923	144	7.35	0.09	10.6	1.10	6.46	0.98	7.27	55.7
0928	144	7.36	0.10	10.7	1.19	4.67	0.69	7.25	48.0
0933		7.36	0.10	10.5	1.23	2.71	0.51	7.29	42.4
0938	144	7.36	0.10	10.5	1.22	2.06	0.42	7.29	39.4
0943		7.36	0.10	10.5	1.21	2.33	0.37	7.29	38.7
0948		7.36	0.10	10.5	1.20	1.85	0.32	7.28	38.1
0953	144	7.36	0.10	10.5	1.19	1.19	0.31	7.28	38.4
0958		7.36	0.10	10.4	1.18	1.29	0.31	7.27	39.1

Sample ID: MW-19I-1023 **Sample Time:** 1005

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2ft) above any sediment accumulated at the well bottom.
(2) The wall screen volume will be based on a 1.52 m (5ft) screen length (L). For metric units $V_a=n*(r^2)*L$ in mL, where (r=D/2) and L are in cm. For Imperial units, $V_a=n*(r^2)*L)(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = Vp/Vs.
(5) For conductivity, the average value of three readings ±3%

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MS/MSD

Monitoring Well Record for Low-Flow Purging

Project Data: **Project Name:** DUREZ INLET SEMI-ANNUAL GW
Project Number: TRI045-09A-410

Well Data: **Well No.:** MW-20I
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 33.45

Date: 10/31/2023
Personal: S GARDNER
Well Diameter, D (cm/in): 2"
Initial Depth to Water (m/ft): 7.45
Start Purge Time: 1150

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temp (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units	ORP (mV)
			Precision regular[5]:	±3%	±3%	±10%	±10%	±0.1	±10
1155	100	7.54	0.09	10.5	10.15	102	27.60	12.58	-79.4
1200	140	7.62	0.17	10.3	9.96	334	30.02	12.69	-86.4
1205		7.66	0.21	10.3	8.68	418	25.02	12.65	-86.9
1210	140	7.66	0.21	10.3	7.17	168	10.19	12.42	-86.8
1215	140	7.67	0.22	10.3	6.87	97.4	5.66	12.31	-91.0
1220		7.67	0.22	10.4	6.40	64.4	3.58	12.21	-94.3
1225	138	7.68	0.23	10.4	6.15	48.7	2.60	11.98	-96.5
1230		7.68	0.23	10.5	5.91	41.4	2.12	11.89	-98.0
1235	138	7.68	0.23	10.5	5.67	40.6	1.88	11.82	-99.3
1240	138	7.68	0.23	10.6	5.55	40.1	1.84	11.79	-99.9
1245		7.68	0.23	10.6	5.65	41.3	1.78	11.85	-98.6

Sample ID: MW-20I-1023 **Sample Time:** 1250

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2ft) above any sediment accumulated at the well bottom.
(2) The wall screen volume will be based on a 1.52 m (5ft) screen length (L). For metric units $V_a=n*(r^2)*L$ in mL, where (r=D/2) and L are in cm. For Imperial units, $V_a=n*(r^2)*L)(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = Vp/Vs.
(5) For conductivity, the average value of three readings ±3%

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Monitoring Well Record for Low-Flow Purging

Project Data: **Project Name:** DUREZ INLET SEMI-ANNUAL GW
Project Number: TR1045-09A-410

Well Data: **Well No.:** MW-22I
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft): 31.21

Date: 10/31/2023
Personal: S GARDNER
Well Diameter, D (cm/in): 2"
Initial Depth to Water (m/ft): 7.20
Start Purge Time: 1315

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temp (°C)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	pH (Units)	ORP (mV)
			Precision regular[5]:	±3%	±3%	±10%	±10%	±0.1	±10
1325	100	8.15	0.95	10.3	8.72	106	25.62	12.64	-87.0
1330	100	8.15	0.95	10.3	8.88	141	29.62	12.72	-86.9
1335	100	8.20	1.00	10.2	8.37	110	26.58	12.68	-87.1
1340		8.36	1.16	10.3	8.28	89.2	25.69	12.68	-86.3
1345	100	8.55	1.35	10.3	8.02	78.7	24.80	12.67	-85.9
1350		8.65	1.45	10.2	7.71	71.9	22.58	12.66	-86.4
1355	100	8.67	1.47	10.3	7.76	64.6	21.97	12.64	-85.7
1400		8.70	1.50	10.3	7.67	59.8	20.85	12.63	-86.5
1405		8.70	1.50	10.3	7.61	34.2	20.69	12.61	-88.4
1410	100	8.70	1.50	10.4	7.55	31.4	19.91	12.60	-89.6
1415		8.70	1.50	10.4	7.42	29.1	19.63	12.59	-90.1

Sample ID: MW-22I-1023 **Sample Time:** 1420

Notes:
(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2ft) above any sediment accumulated at the well bottom.
(2) The wall screen volume will be based on a 1.52 m (5ft) screen length (L). For metric units $V_a=n*(r^2)*L$ in mL, where (r=D/2) and L are in cm. For Imperial units, $V_a=n*(r^2)*L)(2.54)^3$, where r and L are in inches
(3) The drawdown from the initial water level should not exceed 0.1 m (0.3ft). The pumping rate should not exceed 500 mL/min.
(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be stabilizing), No. of Well Screen Volumes Purged = Vp/Vs.
(5) For conductivity, the average value of three readings ±3%

Shawn Gardner