

PERIODIC REVIEW REPORT FOR PERIOD ENDING DECEMBER 13, 2025
TARRYTOWN FORMER MGP SITE
BROWNFIELD CLEANUP AGREEMENT NO. C3600064
TARRYTOWN, NEW YORK

by
H & A of New York Engineering and Geology, LLP
White Plains, New York

for
New York State Department of Environmental Conservation
Albany, New York

File No. 134976-003
December 2025





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Attention: Michael Squire
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Subject: Tarrytown Former MGP Site
Periodic Review Report Period Ending December 13, 2025
Brownfield Cleanup Agreement No. C3600064

Ladies and Gentlemen:

On behalf of Ferry Landings, LLC, H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York) has prepared this Periodic Review Report (PRR) for the period ending December 13, 2025. During the period for this PRR, the revised *Site Management Plan - Tarrytown Former MGP Site, Tarrytown, NY*, dated August 2010 and accepted by the New York State Department of Environmental Conservation (NYSDEC) on August 26, 2010, and subsequent Site Management Plan modification requests approved by the NYSDEC, were in force.

Based on ongoing site monitoring data and inspections, the remedial action continues to perform and is effective.

Sincerely yours,
H & A OF NEW YORK ENGINEERING AND GEOLOGY, LLP

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Executive Summary

This Periodic Review Report (PRR) for the period of December 14, 2024, through December 13, 2025, was prepared by H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York) on behalf of Ferry Landings, LLC. During the period covered by this PRR, the revised *Site Management Plan Tarrytown Former MGP Site, Tarrytown, NY*, dated August 2010 and accepted by the New York State Department of Environmental Conservation (NYSDEC) on August 26, 2010 (the SMP), and subsequent SMP modification requests approved by the NYSDEC, were in force.

This PRR provides a summary of the pre-remediation and post-remediation site conditions, and provides a synopsis of site activities conducted under the SMP during the reporting period, as follows:

- Based on monitoring events results and inspections performed during this and prior reporting periods, the remedial action remains functional and is effective as required by the SMP. Site monitoring and inspections, including the groundwater monitoring, underwater cap inspection, and dense non-aqueous phase liquid (DNAPL) recovery events, should continue through the next PRR period per the SMP and recommendations of the 2020 to 2021 period PRR, which was approved by NYSDEC on January 7, 2021, and the 2025 SMP Modification, which was approved by NYSDEC on July 16, 2025.
- Engineering Controls and Institutional Controls for the site are in place and effective.

During this reporting period, the *Site Management Program Modification – Tarrytown Former MGP Site, Tarrytown, NY*, dated July 3, 2025, was submitted to NYSDEC requesting to have the number of DNAPL recovery events reduced from three to two events and to eliminate the recovery of DNAPL from observation wells during recovery events. This request was approved by the NYSDEC on July 16, 2025.

The DNAPL system was monitored and DNAPL extracted during two events: June 25, 2025, and September 17, 2025. The annual site inspection was conducted on September 17, 2025.

The next PRR required to be submitted to NYSDEC, covering the period between December 14, 2025, and December 13, 2026, will be submitted following the closure of that period, and within the time frame required.

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1. Overview

This Periodic Review Summary Report (PRR) for the Tarrytown Former Manufactured Gas Plant (MGP) Site is for the period December 14, 2024, through December 13, 2025. The PRR Form for this period is provided in Appendix A. This report provides:

- A summary of the site and nature of contamination prior to remedial actions;
- A summary of the remedial actions completed;
- A description of the ongoing operations, maintenance, and monitoring;
- A description of site activities during the reporting period;
- Statements regarding satisfactory compliance with the Site Management Plan (SMP) and recommendations for continued future monitoring of site remedy elements; and
- Comments about the information entered on the PRR Form.

2. Introduction

This section presents a brief summary of site history, past and current conditions, remedial actions, and post-remediation operations, maintenance, and monitoring based on the following reports prepared by H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York):

- *Final Engineering Report* Tarrytown Former MGP Site, Tarrytown, NY, 2005.
- *Final Engineering Report Addendum* Tarrytown Former MGP Site, Tarrytown, NY, 2006.
- *Site Management Plan* Tarrytown Former MGP Site, Westchester County, NY, August 2010 (Approved by the New York State Department of Environmental Conservation [NYSDEC] on August 26, 2010).
- *Periodic Review Report* Tarrytown Former MGP site, August 31, 2011.
- *Periodic Review Report* Tarrytown Former MGP site, August 31, 2014.
- *Periodic Review Report* Tarrytown Former MGP site, August 31, 2015.
- *Periodic Review Report* Tarrytown Former MGP site, October 27, 2016.
- *Periodic Review Report* Tarrytown Former MGP site, November 27, 2017.
- *Periodic Review Report* Tarrytown Former MGP site, December 14, 2018.
- *Periodic Review Report* Tarrytown Former MGP site, January 15, 2020¹.
- *Periodic Review Report* Tarrytown Former MGP site, December 23, 2020².
- *Periodic Review Report* Tarrytown Former MGP site, December 21, 2021.
- *Periodic Review Report* Tarrytown Former MGP site, December 12, 2022.
- *Periodic Review Report* Tarrytown Former MGP site, December 13, 2023.
- *Periodic Review Report* Tarrytown Former MGP site, December 13, 2024.
- *Site Management Plan Modification Request* Tarrytown Former MGP Site, July 3, 2025 (Approved by NYSDEC on July 15, 2025).

2.1 SUMMARY OF SITE, NATURE OF CONTAMINATION, AND REMEDIAL ACTIONS

2.1.1 Site

A site locus showing the project location is provided as Figure 1, and site details (historic and current) are shown on plans provided in Figures 2 and 3. The site is located on the east side of the Hudson River, north of the Governor Mario M. Cuomo (Tappan Zee) Bridge in the Village of Tarrytown, New York. The site is bound by Division and River streets on the north, Railroad Avenue to the east, West Main Street on the south, and the Hudson River to the west. The site encompasses approximately 20 acres and was

¹ Note that this PRR report was for the reporting period ending December 13, 2019, and the final PRR report was dated January 2020.

² Note that the PRR reporting periods have tracked the timeframes required by the NYSDEC in its tracking system and annual PRR reminder notice letters. Accordingly, each PRR may cover a different period of time from the prior PRR reporting period.

primarily used for industrial-commercial purposes prior to remediation. Remediation was performed between June 2004 and January 2005.

Prior to remediation, an asphalt plant was in the northwest portion of the site, and a truck terminal and maintenance facility were located in the southeast portion of the site. The central portion of the site included a former MGP, reportedly operated between 1873 and 1938. The MGP was last operated by the Westchester Lighting Company, which was succeeded in ownership by Con Edison.

2.1.2 Nature of Contamination

This section presents a summary of the nature of contamination and objectives of the remedial actions performed for the contamination by area of interest, organized according to four areas of the site (Figure 2):

- Former Holder and Tar Well Area;
- Former Light Non-Aqueous Phase Liquid (LNAPL) Area;
- Northern Dense Non-Aqueous Phase Liquid (DNAPL) Area; and
- Western DNAPL and Former River Sediment Area.

Remedial actions for these areas are described in Section 2.1.3.

2.1.2.1 Former Holder and Tar Well Area

During site investigations in 2003, some flowing MGP DNAPL was present in Holders A, B, and C, but not in Holder D. Soils in the “Tar Well Area,” located south of Holder A, contained zones with MGP DNAPL.

2.1.2.2 Former LNAPL Area

Measurements in 1998 and 1999 by Handex Group, Inc. identified a zone of free-floating LNAPL (primarily diesel fuel) in an approximately triangular-shaped area defined by MW-2, MW-3, and MW-6. Additionally, residual contamination, due to historic LNAPL releases, was evident between the free-floating LNAPL and West Main Street. Investigations in 2003 confirmed previous data regarding residual contamination in that area. No petroleum-related contamination was observed in the top 4 feet (ft) of soil in this area.

2.1.2.3 Northern DNAPL Area

The Northern DNAPL Area is located in the north-central portion of the site, partially underneath an existing office building (former County Asphalt office), and was observed at the time to be about 500 ft long (east-west) and 200 ft wide (north-south). The primary affected medium in this area was observed to be soil containing discrete zones of MGP DNAPL (apparently derived from coal tar), as observed during site investigation prior to remediation. The subject zones are located 12 to 15 ft bgs on the west side of the building and 9 to 13 ft bgs on the east side. The zone was observed during site investigations to be at the bottom of a layer of fill and exhibits limited penetration into the underlying natural soil.

2.1.2.4 Western DNAPL and Former River Sediment Area

The Western DNAPL and Former River Sediment Area is located in the west-central portion of the site. The Western DNAPL Area was observed at the time to be about 240 ft long (east-west) by 40 ft wide (north-south). The primary affected medium in this area was observed to be soil containing discrete zones of DNAPL (apparently derived from coal tar). These soils are located 22 to 26 ft bgs. The zone was observed during site investigations to be at the bottom of the fill and exhibits limited penetration into the underlying natural soil. DNAPL-contaminated river sediment was also identified prior to remediation west of the Western DNAPL Area within the adjacent portion of the Hudson River. Contamination extended about 160 ft along the existing sea wall, and outward into the river at varying distances, up to about 120 ft. DNAPL contamination in the form of blebs and heavy sheens was also identified in river borings. The depth of the observed DNAPL ranged from 1 ft up to 8 ft below the top of sediment.

2.1.3 Remedial Actions

The following is a summary of the remedial actions performed at the site.

2.1.3.1 Former Holder and Tar Well Area

The remediation consisted of removing the contents, walls, and floor of three former MGP holders and excavation of contaminated soils adjacent to the holders, including an area believed to be associated with the former MGP tar wells. Contaminated soil and debris were taken off site to a permitted facility for disposal, and the excavations were backfilled with a combination of on-site and imported fill meeting quality standards established for the project.

2.1.3.2 Former LNAPL Area

The remediation consisted of two parts: excavation of contaminated soil and installation of a recovery trench and skimmer system for residual floating petroleum product. Contaminated soil was taken off site to a permitted facility for disposal, and the excavation was backfilled with a combination of on-site and imported fill meeting quality standards established for the project. The LNAPL recovery system was operated from April 2005 through September 2007. The monitoring results through August 2007 supported a request to NYSDEC for approval to discontinue operation and to dismantle the system. In response, the NYSDEC agreed with the recommendation to discontinue operation of the LNAPL recovery system in its letter dated September 10, 2007. The system was subsequently dismantled.

2.1.3.3 Northern DNAPL Area

The remediation consisted of installing a 360-ft-long sheet pile barrier extending from about 3 ft bgs, downward through the fill soils into the native clayey soils to a depth of about 22 ft bgs. The barrier prevents westward migration of residual DNAPL contained in a 2- to 3-ft-thick zone generally found at the bottom of fill (9 to 15 ft bgs). Underlying clay soils impede downward migration of the DNAPL. The Northern DNAPL Area recovery trench is 360 ft long, located adjacent to the sheet pile barrier, and contains six DNAPL recovery wells. An observation well is located near each end of the recovery trench.

During remediation, contaminated soil at the south end of the barrier was excavated and taken off site for disposal. The excavation was backfilled with a combination of on-site and imported fill meeting quality standards established for the project.

The recovery trench allows removal of DNAPL to the extent it accumulates on the east (upgradient) side of the barrier.

As reported in the 2017 PRR, in conjunction with the construction of the Lighthouse Building and Garage, two of the six recovery wells (RW-4N and RW-5N) were closed per an NYSDEC approval letter dated May 17, 2017. Since the system began operation in 2005, DNAPL had not been observed in either well.

In addition, the well head for RW-6N was modified by adding lateral riser piping connected to a new offset well head located outside the Lighthouse Building perimeter to facilitate future extraction operations.

2.1.3.4 Western DNAPL and Former River Sediment Area

The remediation consisted of installing a 160-ft-long sheet pile barrier extending from the river bottom at the face of the relieving platform down to bedrock. The barrier prevents westward migration of residual DNAPL contained in a 2- to 3-ft-thick zone generally found at the bottom of fill (22 to 26 ft bgs).

The Western DNAPL Area recovery trench is 60 ft long, about 26 to 28 ft deep, and is situated about 65 ft inland (east) from the sheet pile barrier and contains two DNAPL recovery wells (RW-1 and RW-2). An observation well is located near each end of the recovery trench.

The Former River Sediment Area included the area beneath the relieving platform (about 160 ft by 20 ft by 4 ft deep) and an area of the river bottom along the sheet pile barrier and extending into the river, with a maximum extent of about 120 ft. Sediment was removed to depths ranging from about 3 to 8 ft below the river bottom.

Containment of residual DNAPL was completed with the construction of a 4-ft-thick, 20-ft-wide underwater cap over the sediments found under the relieving platform. The underwater cap is located between the steel sheet pile barrier at the western side of the relieving platform and the timber retaining wall at the eastern side of the relieving platform.

2.1.3.5 Cover System

A clean soil cover was placed in areas that are not beneath structures, roads, paved walks, etc. The clean soil cover is a minimum of 2 ft thick and was placed over a demarcation layer, consisting of an orange geotextile, or equivalent. The cover system was completed in December 2006. NYSDEC's January 9, 2007, letter stated that NYSDEC had performed a site inspection on December 28, 2006, and found that "the clean soil cover was installed as required in the approved Work Plan." The cover system was disturbed between January 2010 and August 2014 for site development; cover was restored with the development by a new combination of cover elements (i.e., in places, soil cover was replaced by new building and/or pavement, and otherwise restored by replacement of the demarcation layer, soil cover, and landscaping that meet cover thickness and material criteria). The cover system remained in place except for the minor cover disturbances for development activities between August 2014 and

March 2016 and between April 2017 and July 2017. Those cover disturbances were restored as reported to NYSDEC in previous PRRs.

During the current reporting period, the cover was not disturbed to the extent underlying soils were exposed – see Section 3 of this report for more information.

2.1.3.6 Sub-Slab Soil Vapor Intrusion Management Systems

Per the SMP, new buildings have been and will be constructed with passive sub-slab soil vapor intrusion management systems (VIMS), which are designed to be converted to active systems, if required by the NYSDEC or New York State Department of Health (NYSDOH). Refer to Sections 6.3.4 and 6.3.5 for the summary of VIMS activities performed.

2.2 EFFECTIVENESS OF THE REMEDIAL PROGRAM

The remedial action, with the exception of periodically required replacement of site cover following construction activities, was completed in January 2005. Site cover placement was originally completed in October 2006. The 2005 Final Engineering Report and 2006 Final Engineering Report Addendum concluded that the remedial actions were performed in accordance with the Work Plans (and approved deviations). The Final Engineering Report was accepted by NYSDEC in its letter dated May 25, 2005, and the Final Engineering Report Addendum was accepted by NYSDEC in its letter dated January 9, 2007.

2.3 COMPLIANCE

The Engineering Controls are in place and effective.

2.4 RECOMMENDATIONS

The use of the SMP, NYSDEC-approved modifications, and PRRs should continue. The SMP was revised during 2010; the August 2010 Revised SMP was accepted by the NYSDEC on August 26, 2010. A request for modification to the SMP was submitted to the NYSDEC to reduce the number of DNAPL recovery events from three to two events annually and to eliminate the recovery of DNAPL from observation wells during recovery events. This request was approved by the NYSDEC on July 16, 2025, and as per correspondence, implemented for this reporting period. The request and approval are included in Appendix B. The SMP and this modification remain applicable to the site during the next reporting period. The next PRR reporting period will be December 14, 2025, through December 13, 2026, during which a revised SMP will be submitted for approval to NYSDEC.

3. Site Overview

3.1 SITE LOCATION AND SIGNIFICANT FEATURES

Refer to Section 2.1, above.

3.2 CHRONOLOGY, CLEANUP GOALS, AND MAIN FEATURES OF THE REMEDIAL PROGRAMS

For chronology of the remedial program, refer to Section 2.1, above. In terms of cleanup goals, as given in the August 2010 SMP, the criteria for soil to remain on site and be reused (if excavated) below site cover are:

- Total benzene, toluene, ethylbenzene, and xylenes (BTEX) at less than 10 parts per million (ppm); and
- Total polycyclic aromatic hydrocarbons (PAHs) at less than 500 ppm.

Criteria for clean soil cover are presented in Title 6 of the New York Code, Rules, and Regulations (6 NYCRR) Part 375 Table 367-6.8(b) for Restricted Residential use.

The main features of the remedial program are provided in Section 2.1, above. The only change to the site remedy since the remedy was selected in the approved Work Plans is the closure of the LNAPL recovery system. Refer to Section 2.1.3, above.

3.3 SITE ACTIVITIES DURING THE REPORTING PERIOD

During the reporting period, the DNAPL recovery system was monitored and operated. Further details are summarized in Section 6.3.2. An annual site inspection was conducted on September 17, 2025.

4. Remedy Performance, Effectiveness, and Protectiveness

The remedy performance and effectiveness have been previously reported to NYSDEC in annual reports and PRRs. The most recent prior PRR was for the period ending December 13, 2024. During the current reporting period, the remedy continued to perform effectively and be protective of human health and the environment. A synopsis of the remedy performance follows:

- The LNAPL system successfully removed practically recoverable floating product. The system was dismantled, following NYSDEC approval on September 10, 2007.
- The DNAPL recovery systems continue to operate as intended. Thickness of DNAPL in the recovery wells continues to be monitored, and recovery is ongoing. The thickness of DNAPL in recovery wells continued to decrease through the monitoring period, as described in Section 6.
- The underwater cap in the Hudson River was inspected in December 2019. The condition of the cap was satisfactory. Cap integrity has remained stable over the last approximately 15 years and three intervals of inspection.

Sub-slab VIMS are in place and functional, as reported in previous PRRs. The site VIMS may be summarized as follows:

- Lookout Building South – one VIMS with seven risers for the entire building.
- Lookout Building North – a separate VIMS for each of two ground-floor residential units, and one VIMS with nine risers for the garage space occupying the rest of the ground floor.
- Carriage Houses South – a separate VIMS for each of the 14 residential units.
- Carriage Houses North – a separate VIMS for each of the 13 residential units.
- Clubhouse – one VIMS with four risers for the entire building.
- Lighthouse Building and Garage – a separate VIMS for each of the nine ground-level residential units and one VIMS with six risers for the area encompassed by the Garage and lobby of the Lighthouse Building.

VIMS post-installation testing (i.e., indoor air quality and sub-slab soil vapor sampling) was completed during prior reporting periods. The results were submitted to NYSDEC and NYSDOH.

5. Institutional Controls/Engineering Controls Plan Compliance Report

5.1 INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS REQUIREMENTS AND COMPLIANCE

The Institutional Controls and Engineering Controls are listed and described in tabular format in Box 3 and Box 4 of the attached Institutional and Engineering Controls Certification Form (Appendix A).

5.2 INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS CERTIFICATION

Based on the data collected, the remedial actions are effective. Please refer to Section 6 for additional details.

5.3 COVER DISTURBANCE

NYSDEC will be notified of future construction that disturbs the site cover per the SMP.

6. Monitoring Plan Compliance Report

6.1 COMPONENTS OF THE MONITORING PLAN

Monitoring requirements under the SMP and NYSDEC-approved modifications include:

- Groundwater monitoring at intervals of once every three years.
- Monitoring of DNAPL in observation and recovery wells, and extraction of DNAPL from recovery wells during DNAPL extraction events, currently at a frequency of two events per year.
- Inspection of the underwater cap at intervals of once every seven years.
- Annual site inspection.

The previous list incorporates modifications to the frequency for groundwater monitoring, underwater cap inspection, and DNAPL recovery events which were recommended in the PRR for the period ending November 30, 2020, which was approved by NYSDEC on January 7, 2021, and the Site Management Program Modification Request – Tarrytown Former MGP Site, Tarrytown, NY, dated July 3, 2025, which was approved by the NYSDEC on July 16, 2025. (see Appendix B for pertinent correspondence).

6.2 SUMMARY OF MONITORING

Monitoring was performed per the SMP during the reporting period, as described below.

6.3 COMPARISON WITH REMEDIAL OBJECTIVES

6.3.1 Groundwater

Groundwater monitoring was performed in 2018, 2020, and 2023 in accordance with the previously implemented triennial schedule. The current frequency monitoring schedule would require the next round of groundwater monitoring to take place in 2026.

Results of the most recent groundwater monitoring are presented in the report: *Tarrytown Former MGP Site Post-Remediation Groundwater Monitoring 2023 Data Tarrytown, Site No. C360069 Brownfield Cleanup*, dated November 16, 2023 (Appendix C). The report concluded that results over the period of monitoring were consistent with past monitoring, and the comparison of downgradient versus upgradient water quality also remained consistent, indicating the remedy continues to be effective.

6.3.1.1 MW-29 (upgradient)

Iron and manganese concentrations were greater than the comparison criteria; however, these concentrations were consistent with previous results. Three PAH compounds were detected at concentrations greater than the comparison criteria. Compared to historical data, the levels measured for the three PAHs appear to be greater than the previous sampling event. Because both metals and PAHs are elevated, this is believed to be attributed to a higher turbidity in the sample than historically observed. No volatile organic compounds (VOCs) were detected at concentrations greater than the comparison criteria.

6.3.1.2 MW-12 (upgradient)

Iron concentration was greater than the comparison criteria; however, the concentration was consistent with previous results. Manganese was detected at a concentration less than the comparison criterion. Two VOCs were detected above the method detection limit but at concentrations less than the comparison criteria. Two PAH compounds were detected at concentrations greater than the comparison criteria; these PAH concentrations were consistent with previous results. Six PAH compounds were detected at concentrations above method detection limits but less than the comparison criteria.

6.3.1.3 MW-20 (downgradient)

Iron concentration was greater than the comparison criteria; however, the concentration was lower than previous results. Manganese was detected at a concentration above the method detection limit but less than the comparison criterion. No VOCs or PAH compounds were detected.

6.3.1.4 MW-21 (downgradient)

Iron and manganese were detected at concentrations greater than the comparison criterion; however, the iron concentration was higher than previous results, while the manganese concentration was consistent with previous results. No VOCs were detected at concentrations greater than the comparison criteria. Three PAH compounds were detected at a concentration greater than the comparison criteria; however, the PAH concentrations were consistent with previous results.

6.3.1.5 MW-24 (downgradient)

Iron and manganese were detected at concentrations above the method detection limits but less than the comparison criterion. No VOCs or PAH compounds were detected.

6.3.1.6 Comparison of Upgradient to Downgradient Wells

In general, concentrations of parameters in the downgradient wells were less than or equal to the upgradient concentrations, specifically:

- BTEX compound concentrations were not detected above the comparison criterion in upgradient or downgradient wells.
- Concentrations of detected PAH compounds in upgradient wells were equivalent to downgradient wells for all locations except MW-12, where naphthalene was detected at concentrations greater than the comparison criteria, but consistent with previous results.
- Iron and manganese concentrations in upgradient wells were greater than or equivalent to downgradient wells except MW-24, which is believed to have had greater turbidity than past sampling events.

6.3.1.7 GROUNDWATER DATA SUMMARY

Based on the results, while there were some exceedances of groundwater standards and guidance values in the sample data, the consistency of results over the period of monitoring and consistency of down-gradient versus up-gradient water quality indicate the remedy continues to be effective. There

continues to be no groundwater use at the site. Given the monitoring results to date, and without the potential exposure pathway of groundwater use, the remedy at the site remains protective of human health with respect to groundwater quality. Groundwater monitoring at this site has now accumulated a database spanning 17 years, and results in both upgradient and downgradient wells have remained consistent over that period.

6.3.2 DNAPL

6.3.2.1 DNAPL System Operation

Vacuum Enhanced Fluid Recovery (VEFR) is used during extraction events to remove DNAPL from wells in the Northern and Western DNAPL Recovery Systems. During extraction, both DNAPL and water are removed; the amount of DNAPL removed is quantified using visual observation of DNAPL through a transparent section in the extraction line and calculating the volume based on extraction time and volume per second of the VEFR system. During the reporting period, a total of 564 gallons of DNAPL and water were extracted by Safety-Kleen Systems, Inc., and transported to their facility in Mahopac, New York. DNAPL monitoring and extraction forms and copies of the non-hazardous waste manifests are provided in Appendix D.

Midway through 2025, the NYSDEC approved the Site Management Program Modification Request for the Tarrytown Former MGP Site, Tarrytown, NY (submitted July 3, 2025, and approved by the NYSDEC on July 16, 2025). The approved modifications consisted of reducing the number of DNAPL extraction events from three to two per year and removing well OW-1 from the DNAPL extraction list.

The following table presents the estimated amounts (gallons) of DNAPL extracted per well and per event. These results are consistent with past extraction events.

Area	Well ID	06/25/2025 (gallons)	09/17/2025 (gallons)	Totals (gallons)
Western Wells	OW-1	106.1	Not Applicable	106.1
	RW-1	25.2	85.5	110.7
	RW-2	32.6	63.7	96.3
Northern Wells	RW-3N	31.6	0	31.6
	RW-6N	26.3	30.2	56.5
Totals (gallons)		221.8	179.4	401.2

Figures showing DNAPL thickness and fluid recovery volume over time are provided in Appendix D. Least-squares linear regression was used to determine the trend lines for the DNAPL thickness over time. The trend lines show that DNAPL thickness continues to decrease over time. Trend lines may not, on their own, predict future DNAPL thickness.

6.3.2.2 DNAPL DATA SUMMARY

System operation is summarized as follows:

- The thickness of DNAPL in wells RW-1 and RW-2 in the Western DNAPL Recovery System shows a consistent decreasing trend from the system’s inception of operation (2005) to the present.

- The thickness of DNAPL in wells RW-3N and RW-6N in the Northern DNAPL Recovery System shows a consistent decreasing trend from the system's inception of operation (2005) to the present.
- During the September 17, 2025, DNAPL extraction event, RW-3N exhibited no DNAPL recovery and yielded only water during the extraction event.
- Data continues to show that DNAPL is not migrating around the DNAPL barriers.
- The DNAPL systems are being operated in general accordance with the approved SMP, continue to be effective in containing DNAPL, and the systems remain protective of human health and the environment.

6.3.3 Underwater Cap

Past underwater cap inspections were in 2007, 2014, and 2019. The current frequency of monitoring is seven years, which would require the next underwater cap inspection to take place in 2026.

Results of the most recent underwater cap inspection are presented in the *Periodic Review Report Tarrytown Former MGP site*, dated January 15, 2020. The report concluded the cap was found to be in satisfactory condition and performing its intended function, and has done so over the 14 years represented by the three inspections to date.

6.3.4 Indoor Air Quality and Sub-slab Vapor Sampling

The indoor air quality and sub-slab soil vapor sampling for newly constructed buildings was completed in previous reporting periods.

6.3.5 VIMS

VIMS have been installed for the newly constructed buildings on the site, as summarized in Section 4. Post-installation testing required by the SMP for the VIMS on the site is complete and has been previously reported to NYSDEC and NYSDOH.

No new VIMS construction was performed during this reporting period.

6.3.6 Soil Management

There were no soil disturbance activities performed during this reporting period.

6.3.7 Site Inspection

Overall annual inspection was completed and documented (see Appendix E). As a result of the inspection and other site documentation reviewed and provided herein, we have determined that the Engineering Controls are in place and operating as intended. We recommend that site inspections continue on an annual basis.

6.4 MONITORING DEFICIENCIES

No deficiencies in the monitoring program were identified during the reporting period.

6.5 CONCLUSIONS AND RECOMMENDATIONS FOR CHANGES

Based on the site monitoring data collected, the remedial actions are effective, and the controls (DNAPL system, underwater cap) appear to be maintaining integrity over several years of accumulated data; therefore, no changes in the monitoring program are recommended at this time.

7. Operation and Maintenance Plan Compliance Report

With the closure of the LNAPL recovery system, there are no mechanical systems operated or maintained at the site. Recovery of DNAPL is performed using a vacuum truck.

8. Overall PRR Conclusions and Recommendations

8.1 COMPLIANCE WITH THE SMP

Site Engineering and Institutional Controls are in place and effective, as described in this report. Site monitoring and construction activities have been performed in conformance with the SMP.

8.2 PERFORMANCE AND EFFECTIVENESS OF THE REMEDY

Based on site monitoring data and our annual inspection, the remedial action continues to perform and is effective as required by the SMP.

8.3 FUTURE PRR SUBMITTALS

The current annual schedule for submitting the PRR is satisfactory. The next PRR will cover the year between December 14, 2025, and December 13, 2026, assuming the same PRR ending date is maintained by NYSDEC.

9. Commentary for the Periodic Review Report Form

The PRR Form is contained in Appendix A to this report. The following commentary is organized according to the PRR Form.

9.1 BOX 1 SITE DETAILS

1. The site information is correct; however, the Reporting Period should be December 14, 2024, through December 13, 2025.
2. Property ownership for the subject site did not change during the reporting period.
3. There was no change of use during the reporting period.

9.2 BOX 2

1. The site use (residential, commercial, and park) is consistent with restricted residential, commercial, and industrial uses.
2. The Institutional Controls and Engineering Controls are in place.

9.3 BOX 2A

1. The validity of the Qualitative Exposure Assessment remains uncompromised.
2. The assumptions in the Qualitative Exposure Assessment remain valid.

9.4 BOX 3 DESCRIPTION OF INSTITUTIONAL CONTROLS

The Institutional Controls for each of the seven parcels in Box 3 are in place.

9.5 BOX 4 DESCRIPTION OF ENGINEERING CONTROLS

A summary of the status of the Engineering Controls at the site is presented in this report. Note that for Parcel 1-P-20, the LNAPL recovery system was dismantled with NYSDEC approval in 2007 (see Section 4 of this report).

9.6 ENGINEERING CONTROL – COVER SYSTEM

Site cover, as required by the SMP, is currently in place.

9.7 ENGINEERING CONTROL – VAPOR MITIGATION

This Engineering Control refers to the soil VIMS for buildings required in the SMP. The buildings constructed on this site under the SMP have VIMS installed.

9.8 ENGINEERING CONTROL – “LEACHATE COLLECTION”

For parcels 1-P-22, 1-P-23, and 1-P-24, “Leachate Collection” refers to the Northern DNAPL Recovery System. For parcel 1-P-21, “Leachate Collection” refers to the Western DNAPL Recovery System. Both of these systems are in place and functioning per the SMP.

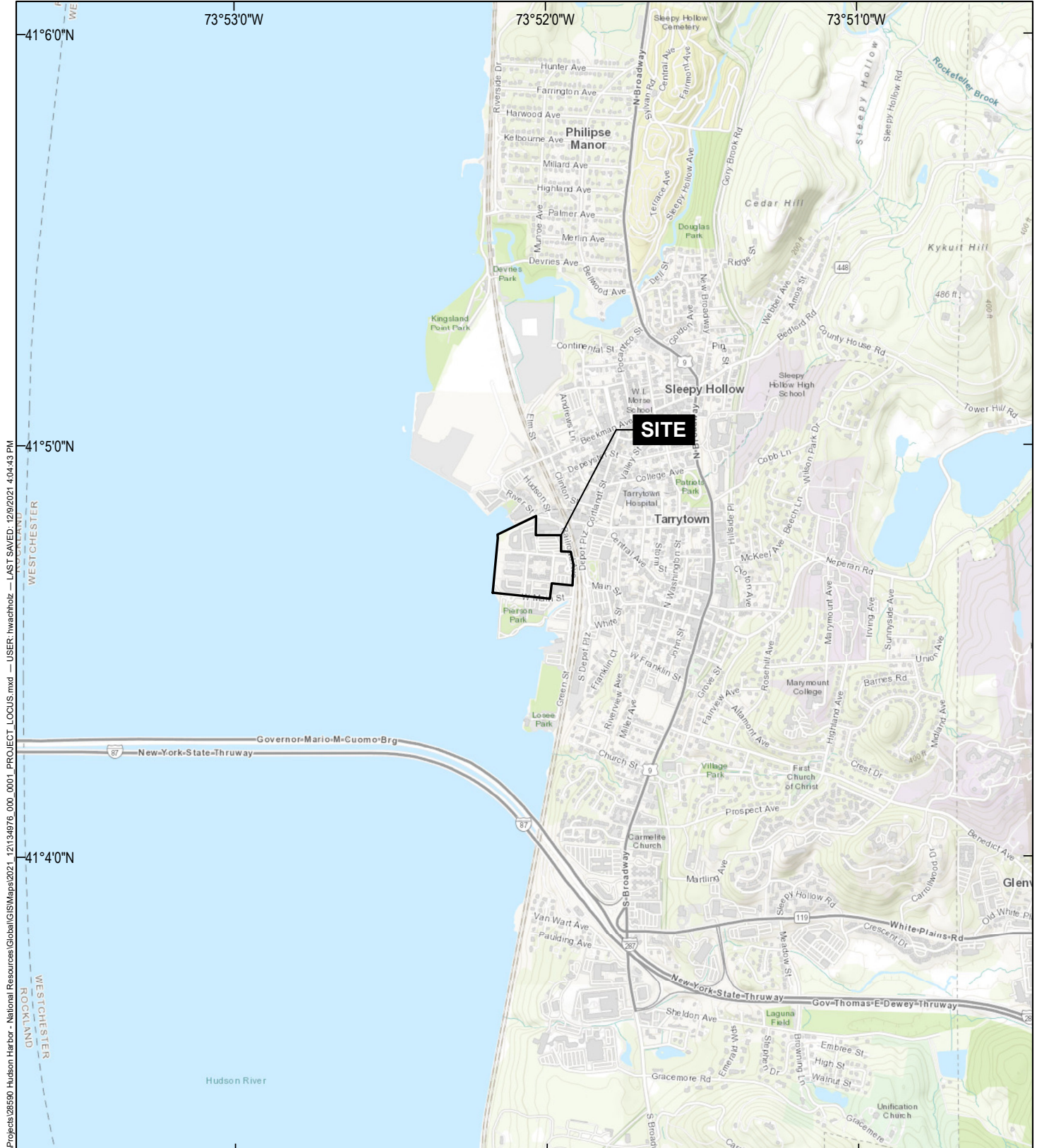
9.9 BOX 5 PERIODIC REVIEW REPORT (PRR) CERTIFICATION STATEMENTS

1. The response is “Yes.” Both statements are true.
2. The response is “Yes.” Statement “e” does not apply; there is no financial assurance mechanism required.

9.10 BOXES 6 AND 7 IC/EC CERTIFICATIONS

Signatures are provided for the certifications.

FIGURES



GIS FILE PATH: \\haleyaldrich.com\share\loc_common\Projects\265590_Hudson_Harbor - National Resources\Global\GIS\Maps\2021_121134976_000_0001_PROJECT_LOCUS.mxd — USER: hwachholz — LAST SAVED: 12/9/2021 4:04:43 PM



MAP SOURCE: ESRI
 SITE COORDINATES: 73°52'2"N, 41°4'42"W

**HALEY
ALDRICH**

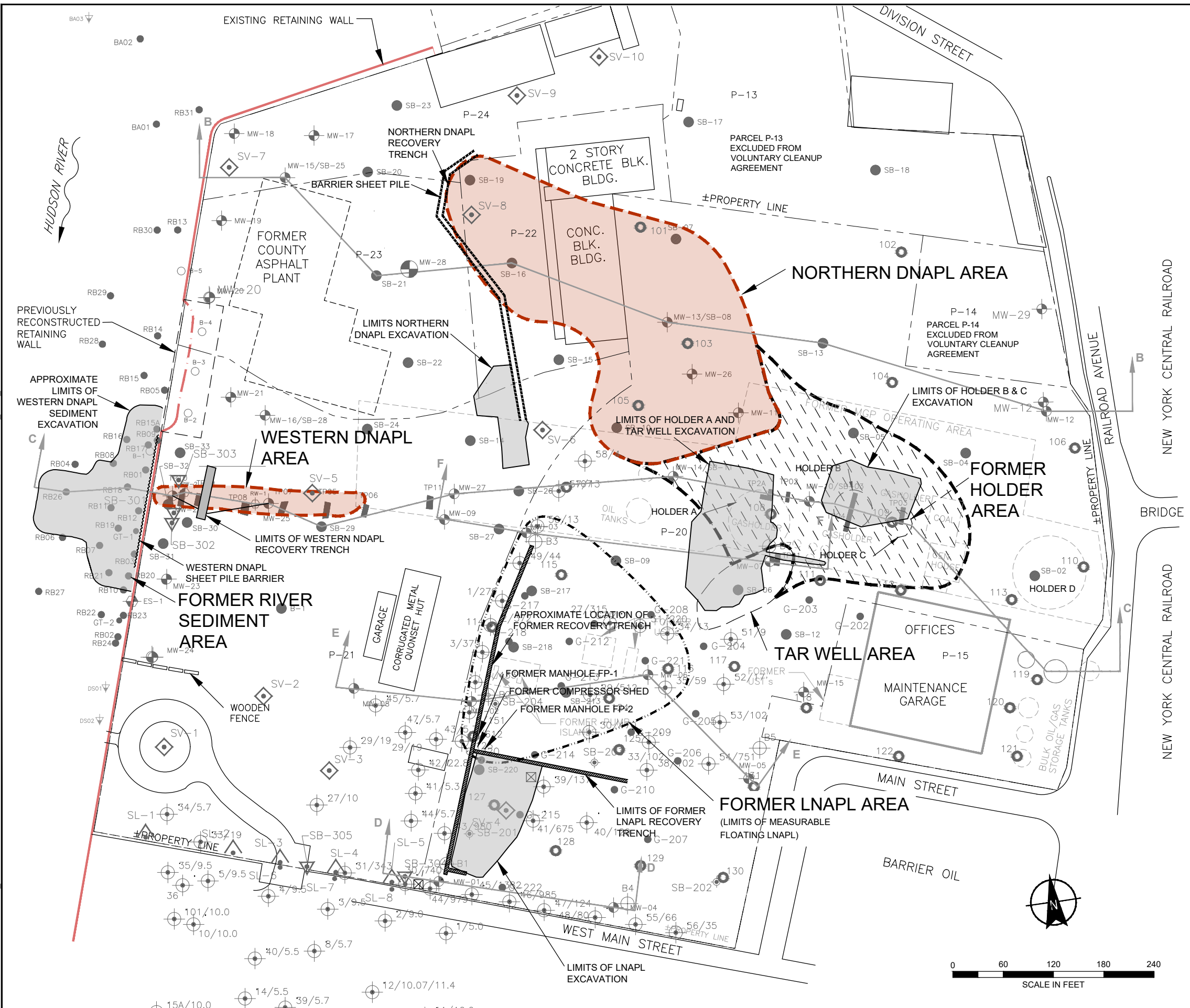
TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
 DECEMBER 2021

FIGURE 1

HENSEN, KRISTIN
 \HALEY\ALDRICH\HAREIROC_COMMON\PROJECTS\28590 HUDSON HARBOR - NATIONAL RESOURCES\GLOBAL\CAD\DRAWINGS\28590-250-0005 SITE PLAN 2016.DWG
 Layout: 12/9/2021 11:30 AM
 Printed: 12/9/2021 11:30 AM



- LEGEND**
- MW-28 MONITORING WELL
 - SV-1 SOIL VAPOR PROBE
 - SB-301 BORING TO CHECK DNAPL LIMITS - 28'
 - SL-4 SLAM BAR SOIL VAPOR SAMPLE LOCATION
 - MW-01 MONITORING WELL LOCATIONS
 - SB-01 SOIL BORING LOCATIONS
 - RB06 RIVER BORING LOCATION
 - GT-2 GEOTECHNICAL BORING LOCATION
 - ES-1 RIVER MEASURING POINT
 - TP03 TEST PIT LOCATIONS
 - G-207 GEOPROBE BORINGS CONDUCTED BY RETEC IN OCTOBER 1996
 - SB-202 SOIL BORINGS CONDUCTED BY RETEC IN OCTOBER 1996
 - B-2 GEOTECHNICAL BORINGS CONDUCTED BY COUNTY ASPHALT IN MARCH 1998
 - FORMER STRUCTURES
 - BUILDINGS
 - LNAPL AREA - LIMITS OF MEASURABLE FLOATING LNAPL
 - LIMITS OF EXCAVATION
 - AREAS CONTAINING ZONES OF RESIDUAL MGP DNAPL
 - LENSES SATURATED WITH MGP DNAPL
 - RETAINING WALL
 - APPROX. LOCATIONS OF SOIL GAS SAMPLES PERFORMED BY METCALF & EDDY, DATED DECEMBER 1990. 58/4=SAMPLE#/PID RESULTS IN PPM.
 - APPROX. LOCATIONS OF SOIL SAMPLE BORINGS PERFORMED BY METCALF & EDDY, DATED DECEMBER 1990. B5=PROBE NO.
 - APPROX. LOCATIONS OF SOIL PROBES PERFORMED BY METCALF & EDDY, DATED DECEMBER 1994. 120=PROBE NO.

NOTES

BASE PLAN ILLUSTRATING EXISTING SITE STRUCTURES, FEATURES, EXISTING EXPLORATIONS AND EXTENT OF IMPACTED AREAS DERIVED FROM PARSONS ENGINEERING SCIENCE, INC., FIGURE 3-1, ENTITLED "TOTAL BTX CONCENTRATIONS IN SOIL SAMPLES, SUPPLEMENTAL INVESTIGATION TARRYTOWN SITE," DATED 28 SEPTEMBER 2000.

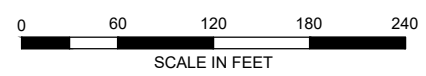
HALEY ALDRICH

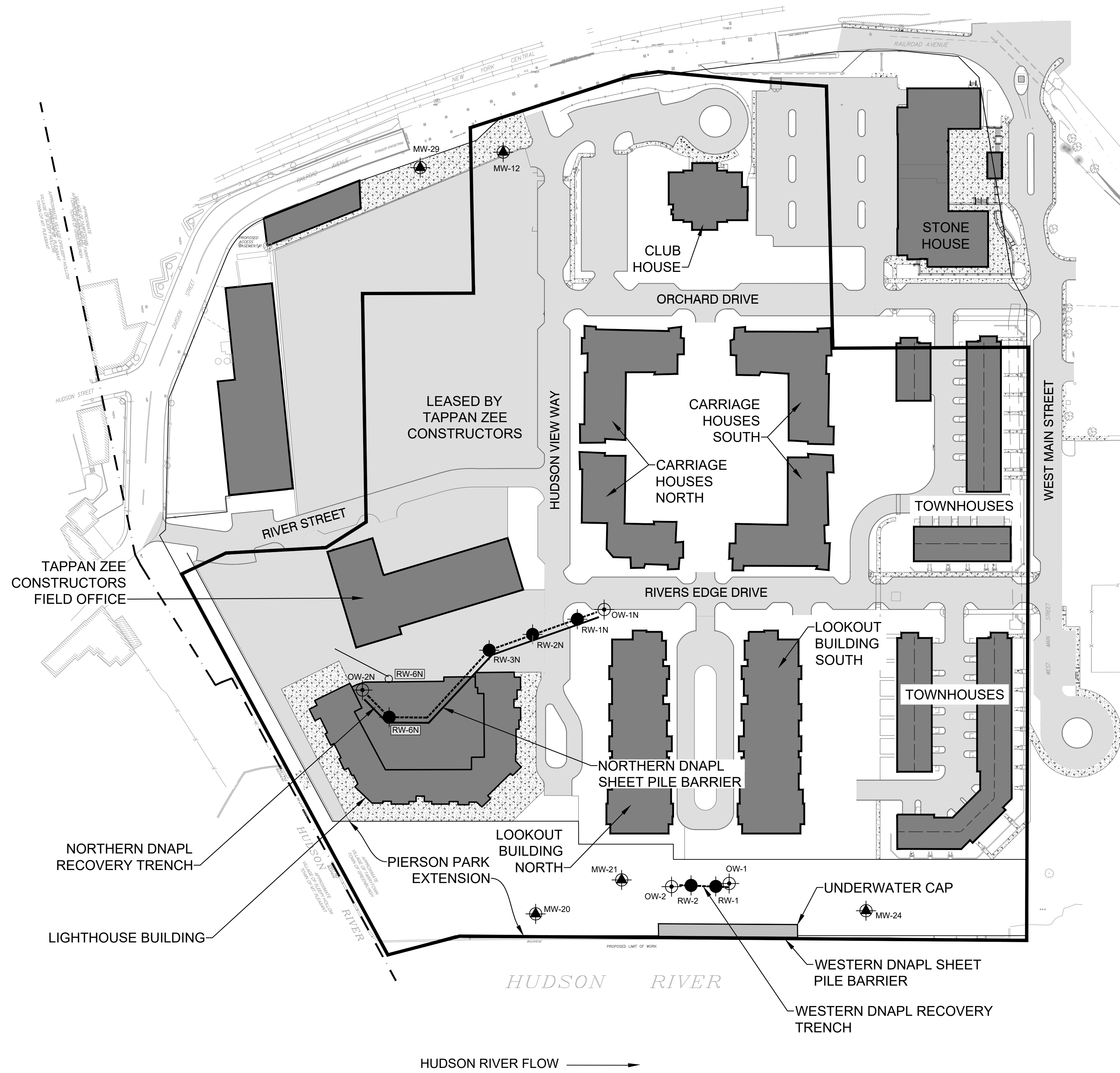
TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

SITE PLAN - REMEDIAL WORK AND HISTORIC EXTENT OF RESIDUAL CONTAMINATION





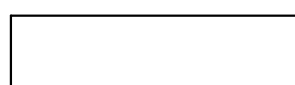



SCALE: AS SHOWN
 DECEMBER 2021

FIGURE 2



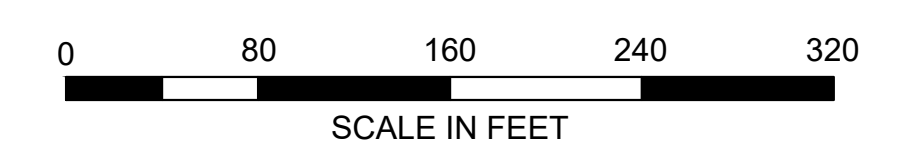
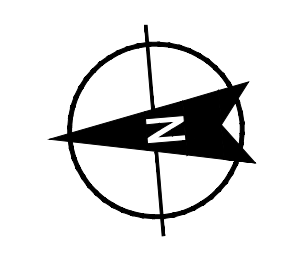


LEGEND

-  GROUNDWATER MONITORING WELL
-  DNAPL RECOVERY WELL
-  DNAPL OBSERVATION WELL
-  APPROXIMATE AREA ENCOMPASSED BY THE BROWNFIELD CLEAN-UP AGREEMENT #C360064
-  LANDSCAPED AREAS (THESE AREAS CONTAIN DEMARCATION LAYER BELOW CLEAN FILL AND LANDSCAPING)
-  PAVED WALKS, PATIOS, OR COURTYARDS
-  EXISTING BUILDINGS
-  ROADS AND PARKING AREAS

NOTES

1. BASE MAP IS BASED ON CAD DRAWING ENTITLED "PH1_10399-08_PHASE.DWG," DATED 1 JULY 2009 FROM CHAZEN COMPANIES OF GLENN FALLS, NEW YORK AND "PARKING ALLOCATION DIAGRAM," DATED 7 MARCH 2013 FROM LESSARD GROUP, INC., VIENNA, VIRGINIA.



TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

SITE COVER PLAN

SCALE: AS SHOWN
 DECEMBER 2021

APPENDIX A
Periodic Review Report 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.	C360064		
Site Name CE - Tarrytown MGP			
Site Address: 129 West Main Street Zip Code: 10591			
City/Town: Tarrytown			
County: Westchester			
Site Acreage: 20.000			
Reporting Period: November 30, 2024 to November 30, 2025			
December 14, 2024 to December 13, 2025			
		YES	NO
1.	Is the information above correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Box 2	
		YES	NO
6.	Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.	Are all ICs in place and functioning as designed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	

Box 2A

YES NO

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid?
(The Qualitative Exposure Assessment must be certified every five years)

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C360064

Box 3

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
1-P-20	Ferry Investments, LLC	Ground Water Use Restriction Landuse Restriction O&M Plan Site Management Plan
<p>Inst. Controls:(i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.</p>		
1-P-22	Westchester Industries, Inc.	O&M Plan Site Management Plan Ground Water Use Restriction Landuse Restriction
<p>Inst. Controls:(i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.</p>		
1-P-23	Westchester Industries	Site Management Plan O&M Plan Ground Water Use Restriction Landuse Restriction
<p>Inst. Controls:(i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.</p>		
1-P-24	Ferry Landings, LLC	Site Management Plan O&M Plan Ground Water Use Restriction Landuse Restriction
<p>Inst. Controls:(i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.</p>		
1-P15	Ferry Investments, LLC	O&M Plan Site Management Plan Ground Water Use Restriction Landuse Restriction

Inst. Controls: (i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance.

(ii) The use of untreated groundwater for any purpose is not permitted.

1-P21

Westchester Industries

Site Management Plan
Ground Water Use Restriction
O&M Plan
Landuse Restriction

Inst. Controls: (i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.

1-P24A

Ferry Landings, LLC

Site Management Plan
O&M Plan
Ground Water Use Restriction
Landuse Restriction

Inst. Controls: (i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.

Box 4

Description of Engineering Controls

Parcel

Engineering Control

1-P-20

Cover System
Vapor Mitigation

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the LNAPL Recovery System depicted in Figure 2 as set forth in Section 3 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P-22

Vapor Mitigation
Cover System
Leachate Collection
Subsurface Barriers

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected

Parcel

Engineering Control

within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the Northern DNAPL Recovery System depicted in Figure 2 as set forth in Section 2 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P-23

Vapor Mitigation
Cover System
Leachate Collection

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the Northern DNAPL Recovery System depicted on Figure 2 as set forth in Section 2 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P-24

Vapor Mitigation
Cover System
Leachate Collection
Subsurface Barriers

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the Northern DNAPL Recovery System depicted on Figure 2 as set forth in Section 2 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P15

Vapor Mitigation
Cover System

Eng. Controls: i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained.

1-P21

Vapor Mitigation
Cover System
Leachate Collection

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering,

Parcel

Engineering Control

residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained.

(iii) Operate and maintain the Western DNAPL Recovery System depicted on Figure 2 as set forth in Section 2 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P24A

Vapor Mitigation
Cover System

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained.

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 complete.

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. C360064**

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 Carl Monheit at 485 West Putnam Avenue, Greenwich, CT 06830,
print name print business address

am certifying as Designated Representative (Owner or Remedial Party)

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

Carl Monheit Director
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

12/19/2025
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.

H & A of New York Engineering and Geology, LLP
213 West 35th Street, 7th Floor

I Scott Underhill at New York, NY 10001,
print name print business address

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

Scott A. Underhill
Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification



12/16/25
Date

APPENDIX B
NYSDEC Correspondence



H & A OF NEW YORK ENGINEERING
AND GEOLOGY, LLP
213 W. 35th St
7th Floor
New York, NY 10001
646.277.5685

July 3, 2025
File No. 134976-003

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, New York 12233-7014

Attention: Michael Squire
Project Manager

Subject: Site Management Program Modification Request
Tarrytown Former MGP Site
Brownfield Cleanup Agreement No. C360064

Ladies and Gentlemen:

On behalf of Ferry Landings, LLC, H & A of New York Engineering and Geology, LLP (Haley & Aldrich of New York) has prepared this memo requesting modification to the existing requirements under the Site Management Plan (SMP) for the Tarrytown Former Manufactured Gas Plant (MGP) Site – Brownfield Cleanup Program (BCP) Site C360064 (herby referred to as the “Site”). On behalf of the remedial party, Ferry Landings, LLC, this memo requests a reduction of dense non-aqueous phase liquid (DNAPL) recovery events from three events per year to two events per year and requests to eliminate the use of observation wells for DNAPL recovery. As per the requirements under the SMP, the New York State Department of Environmental Conservation (NYSDEC) must approve any modifications to the existing SMP requirements prior to implementation. The following memo discusses the rationale for the reduction in DNAPL recovery events. If the NYSDEC agrees with these modifications, the SMP will be revised accordingly.

Site Summary

The Site is located on the east side of the Hudson River, north of the Governor Mario M. Cuomo (Tappan Zee) Bridge, in the Village of Tarrytown, New York. The Site is bound by Division and River Streets to the north, Railroad Avenue to the east, West Main Street to the south, and the Hudson River to the west. The Site encompasses approximately 20 acres and was primarily used for industrial-commercial purposes prior to remediation. Remediation was performed between June 2004 and January 2005. A Site Locus showing the project location is provided as Figure 1, and a Site Plan is provided in Figure 2.

Prior to remediation, an asphalt plant was in the northwest portion of the Site, and a truck terminal and maintenance facility were located in the southeast portion of the Site. The central portion of the Site included a former MGP, remotely operated between 1873 and 1938. The MGP was last operated by the Westchester Lighting Company, which was succeeded in ownership by Con Edison.

Current Site Management Requirements

The current version of the SMP is dated August 2010 and was accepted by the NYSDEC on August 26, 2010; the current SMP supersedes the 2006 SMP, updated January 2007, previously approved by NYSDEC.

The SMP was prepared to manage remaining contamination at the Site until the Environmental Easement is extinguished in accordance with the New York Environmental Conservation Law (ECL) Article 71, Title 36. As of the reporting period ending December 13, 2024, ongoing monitoring requirements under the SMP include:

- groundwater monitoring and sampling events at intervals of once every three years;
- three DNAPL recovery events per year, including the monitoring of DNAPL in observation and recovery wells;
- inspection of the underwater cap at intervals of once every seven years; and
- an annual Site inspection.

This list incorporates modifications to the frequency for groundwater monitoring, underwater cap inspection, and DNAPL recovery events, which were recommended in the Periodic Review Report (PRR) for the reporting period ending November 30, 2020, which was approved by NYSDEC on January 7, 2021.

Monitoring requirements under the SMP for the reporting period ending December 2025 currently include:

- three DNAPL recovery events, including the monitoring of DNAPL in observation and recovery wells; and
- an annual Site inspection.

The next groundwater monitoring event and underwater cap inspection are scheduled for the 2026 reporting period.

This memo includes requests to reduce the current DNAPL recovery and observation events from three events to two events, to remove observation wells (specifically OW-1) from the DNAPL recovery scope, and to modify the recovery methodology. If approved, these modifications would be implemented for the current reporting period ending in December 2025, and the SMP would be revised to reflect this change.

PROPOSED MODIFICATION #1: DNAPL EXTRACTION FREQUENCY REDUCTION

Overall, the thicknesses of DNAPL measured during inspection events dating back to 2005 indicate an overall reduction of the measurable product thickness, a result of the DNAPL removal. Since the inception of DNAPL recovery operations in 2005, the average DNAPL thickness data from 2005 to 2024 across four recovery wells (RW-1, RW-2, RW-3N, and RW-6N) has decreased over time, as shown in the graph in Attachment 1. In general, the DNAPL thicknesses in the recovery wells have decreased more than 80 percent between 2005 and 2024, as shown in the table below.

Table 1: Recovery Well DNAPL Thickness Summary			
Recovery Well	Average thickness in 2005 (ft)	Average thickness in 2024 (ft)	Percent reduction between 2005 and 2024
RW-1	2.41	0.47	80%
RW-2	2.41	0.26	89%
RW-3N	3.52	0.28	92%
RW-6N	1.77	0.76	57%
Note: <i>ft = feet</i>			

Furthermore, the trend graphs presented in the PRR for the period ending December 13, 2024 (Attachment 2) illustrate a decline in DNAPL thickness across the associated recovery wells. This downward trend supports the conclusion that there has been a reduction of DNAPL.

The overall decreasing trend in DNAPL thickness measurements, with consistent observations reported in the recent PRRs, indicates that current recovery procedures have achieved mass source reduction and are approaching the limit of their effectiveness, with remaining DNAPL being either residual or inaccessible.

Haley & Aldrich of New York proposes a modification to the existing DNAPL extraction frequency, reducing the frequency of extraction events from three events per year to two events per year and continuing to evaluate the DNAPL thickness prior to each recovery event.

PROPOSED MODIFICATION #2: ELIMINATION OF OBSERVATION WELLS FROM DNAPL EXTRACTION EVENTS

The continued recovery of DNAPL from observation well OW-1 is no longer aligned with the intended design and may be counterproductive to the overall remedial strategy. The observation wells, OW-1 and OW-2, were installed in native soil for observation purposes and are located outside the western DNAPL recovery trench, which was engineered and backfilled with gravel to enhance DNAPL collection via dedicated recovery wells RW-1 and RW-2. Actively removing significant volumes of fluids from OW-1, particularly during peak recovery periods (e.g., 820.1 gallons in 2016), has likely drawn DNAPL toward these wells and away from the trench system, undermining the hydraulic capture zone.

Furthermore, while OW-1 has shown persistent DNAPL presence, the fluctuating levels and sporadic rebounds observed over time (e.g., peaks in 2007, 2016, and 2024) are more indicative of tidal influence or residual source material rather than a sustained recoverable mass. Since 2017, DNAPL recovery volumes at OW-1 have stabilized at lower levels, averaging between 124 and 188 gallons annually. These trends, combined with the well’s location and design intent, support discontinuing active DNAPL recovery from OW-1 and reverting to passive observation. This modification will allow the western DNAPL recovery trench to function as designed, optimize capture efficiency, and better reflect plume dynamics.

Haley & Aldrich of New York proposes a modification to the existing DNAPL extraction well scope, removing observation wells from the DNAPL extraction well list and reverting to intended use through passive observation.

OW-1 is located outside the western DNAPL recovery trench, which was specifically designed to enhance DNAPL capture through dedicated recovery wells RW-1 and RW-2. Active recovery from the observation well has likely redirected DNAPL away from the trench system, reducing its overall effectiveness. Based on this rationale, discontinuing active extraction from observation wells will optimize the trench's performance and preserve the observation wells for monitoring purposes. Maintaining OW-1 solely for passive monitoring will preserve its value in assessing long-term trends, verifying plume stability, and capturing potential tidal influences, without disrupting the natural DNAPL migration toward the trench. This adjustment aligns with the Site's remedial objectives and promotes a more efficient and technically sound recovery strategy.

Closing

Continued monitoring will remain necessary to confirm Site conditions and the continued decreasing and asymptotic trends to the DNAPL source recovery; however, the following modifications will increase the efficiency of the Site management program.

- Two extraction/inspection events per year will continue to maintain sufficient data collection for tracking long-term Site management.
- Removal of observation wells from DNAPL extraction events will optimize the western DNAPL recovery trench's performance and preserve the observation wells for monitoring purposes.

Should these modifications to the Site management program be approved, the reduction will begin in the current reporting period, and the 2025 PRR will append this request and NYSDEC approval.

July 3, 2025

Page 5

Please do not hesitate to contact the undersigned if you have any questions or comments.

Sincerely yours,

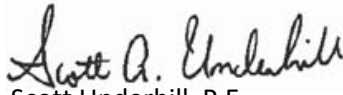
H & A OF NEW YORK ENGINEERING AND GEOLOGY, LLP



Sebastian Sotomayor
Project Engineer



Matthew Levy
Senior Project Manager



Scott Underhill, P.E.
Remedial Engineer



Mari Cate Conlon, P.G.
Senior Associate

Enclosures:

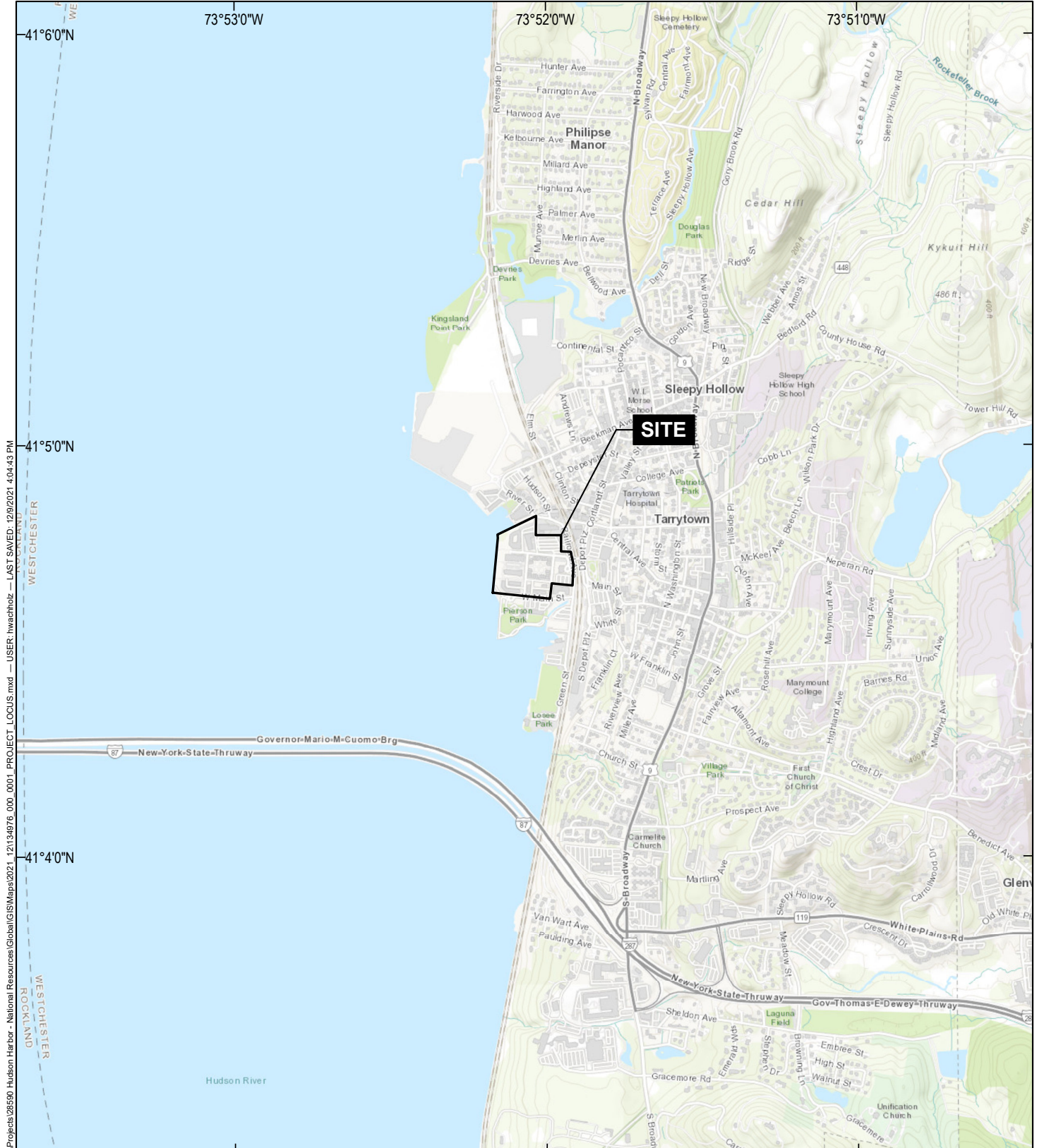
C: NYSDEC; Attn: Amen Omorogbe
Ferry Landings, LLC, Attn: Carl Monheit
Con Edison: Attn: Yelena Skorobogatov

Attachments:

Figure 1 – Site Locus
Figure 2 – Site Plan
Attachment 1 – DNAPL Thickness Table and Graph
Attachment 2 – 2024 PRR DNAPL Trend Graphs

\\haleyaldrich.com\share\roc_common\Projects\28590 Hudson Harbor - National Resources\125x 2025 Services\0. Reduction Letter\2025_0703_HANY_Tarrytown SMP Reduction Letter_F.docx

FIGURES



GIS FILE PATH: \\haleyaldrich.com\share\loc_common\Projects\265590_Hudson_Harbor - National Resources\Global\GIS\Maps\2021_1213\4976_000_0001_PROJECT_LOCUS.mxd — USER: hwachholz — LAST SAVED: 12/9/2021 4:04:43 PM



MAP SOURCE: ESRI
 SITE COORDINATES: 73°52'2"N, 41°4'42"W

**HALEY
ALDRICH**

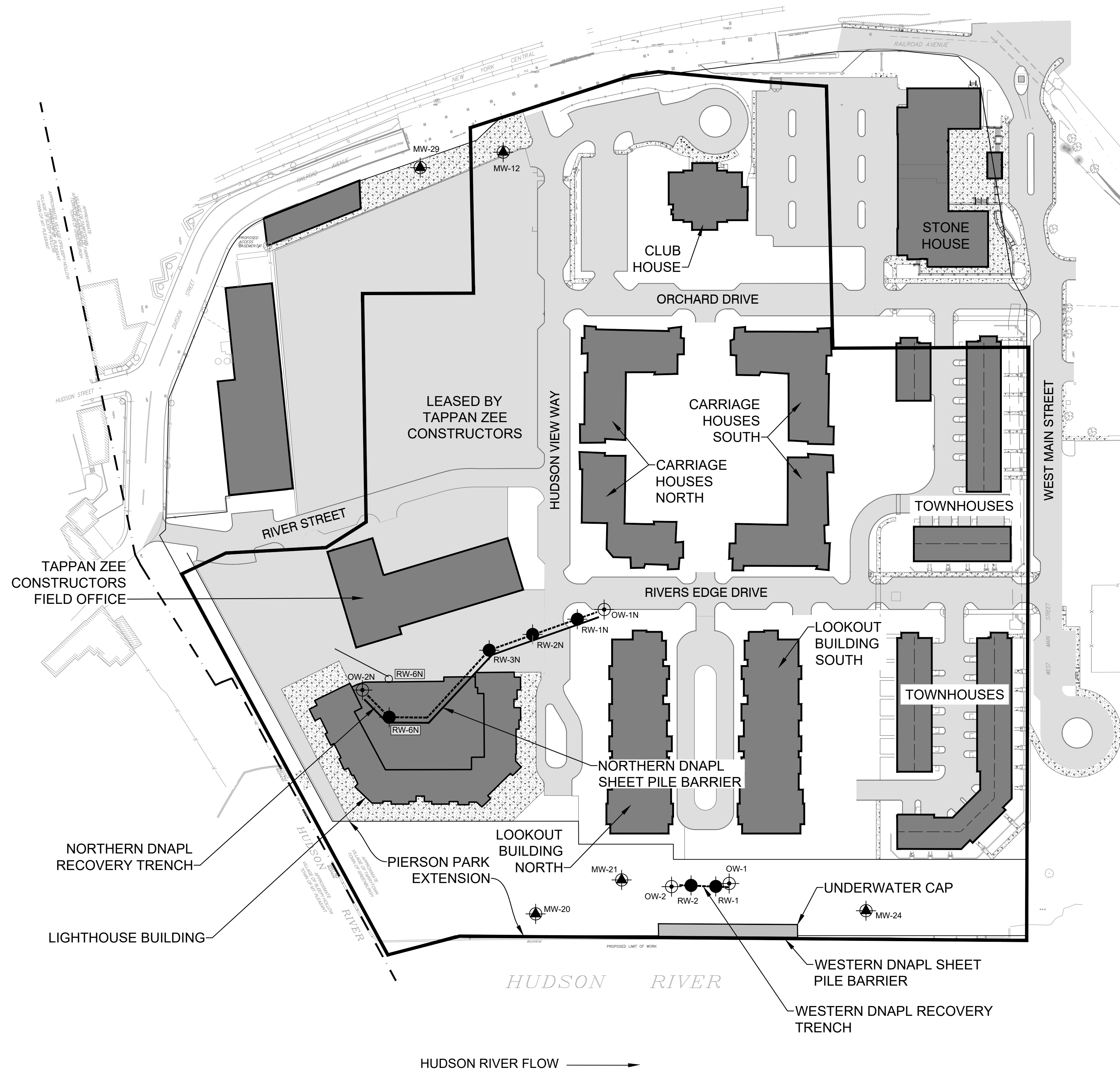
TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

PROJECT LOCUS





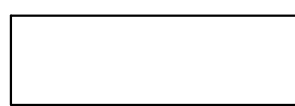



APPROXIMATE SCALE: 1 IN = 2000 FT
 DECEMBER 2021

FIGURE 1

HENSEN, KRISTIN
 \\HALEYALDRICH\SHARE\NEW_COMMON\28590\GLOBAL\CAD\DRAWINGS\28590-250-0020 SITE COVER 2018.DWG
 Layout: COVER PLAN
 Printed: 12/9/2021 1:19 PM
 COMMON\28590\GLOBAL\CAD\DRAWINGS\28590-250-0020 SITE COVER 2018.DWG

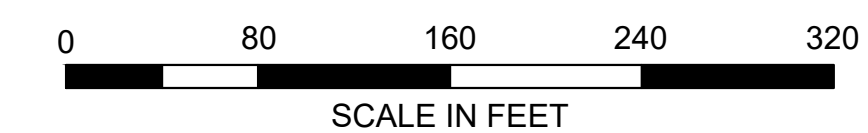
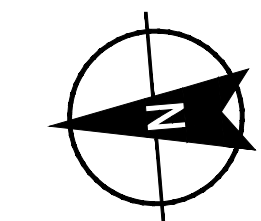


LEGEND

-  GROUNDWATER MONITORING WELL
-  DNAPL RECOVERY WELL
-  DNAPL OBSERVATION WELL
-  APPROXIMATE AREA ENCOMPASSED BY THE BROWNFIELD CLEAN-UP AGREEMENT #C360064
-  LANDSCAPED AREAS (THESE AREAS CONTAIN DEMARCATION LAYER BELOW CLEAN FILL AND LANDSCAPING)
-  PAVED WALKS, PATIOS, OR COURTYARDS
-  EXISTING BUILDINGS
-  ROADS AND PARKING AREAS

NOTES

1. BASE MAP IS BASED ON CAD DRAWING ENTITLED "PH1_10399-08_PHASE.DWG," DATED 1 JULY 2009 FROM CHAZEN COMPANIES OF GLENN FALLS, NEW YORK AND "PARKING ALLOCATION DIAGRAM," DATED 7 MARCH 2013 FROM LESSARD GROUP, INC., VIENNA, VIRGINIA.




 TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

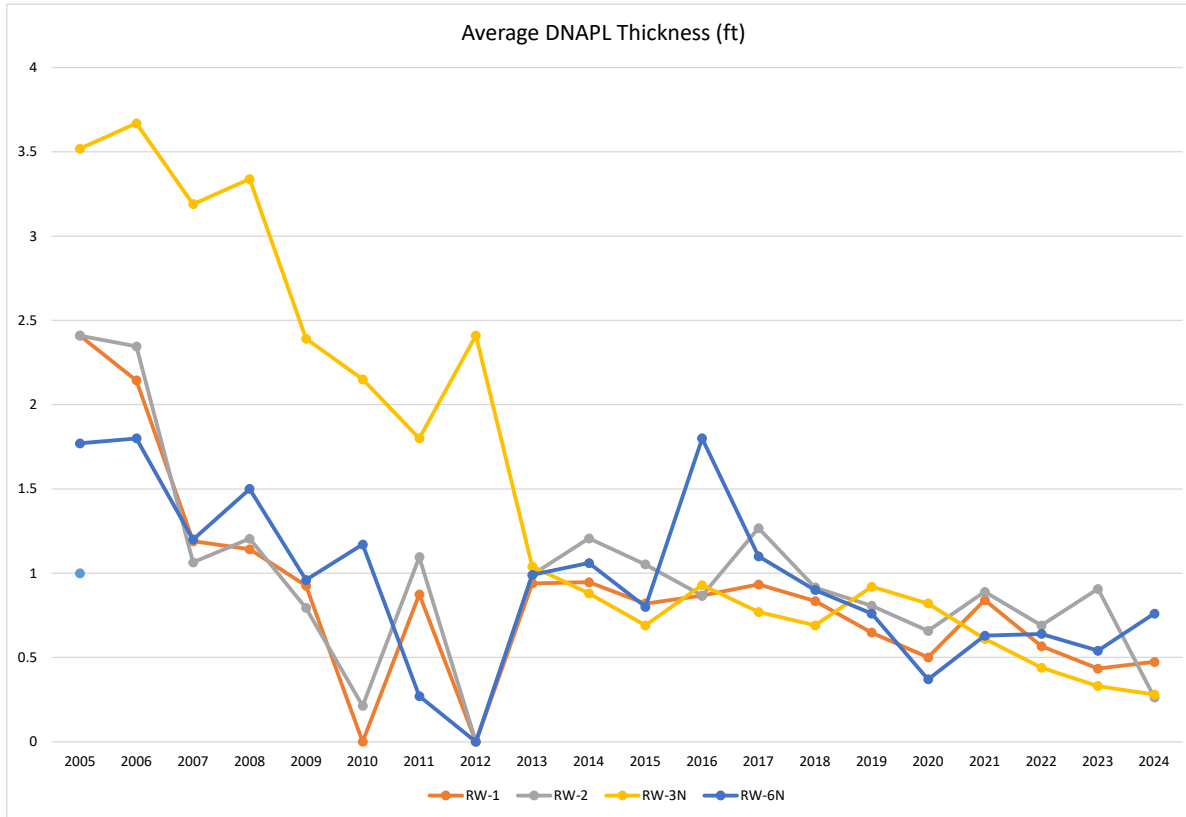
SITE COVER PLAN

SCALE: AS SHOWN
DECEMBER 2021

FIGURE 2

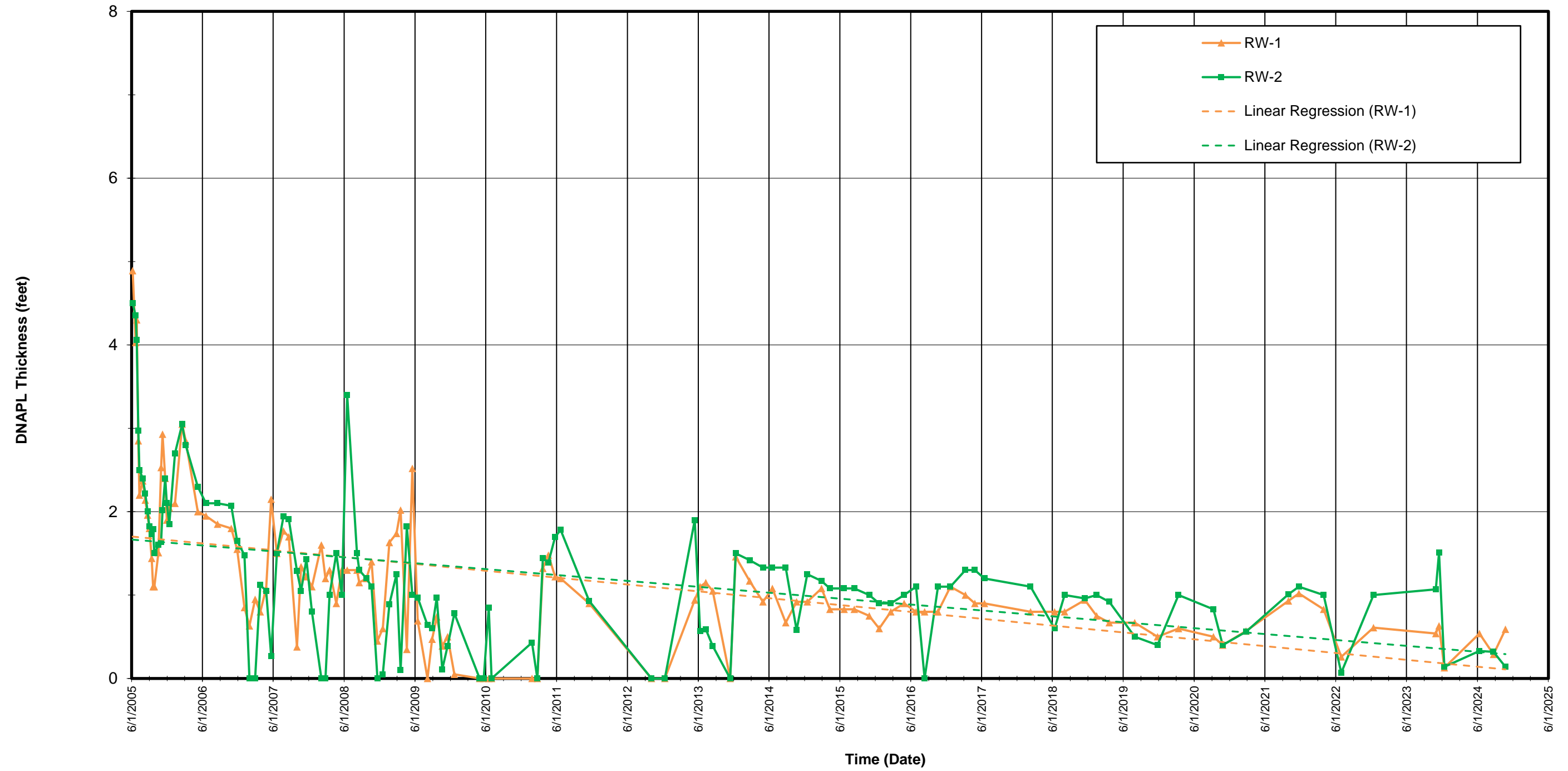
ATTACHMENT 1
DNAPL Thickness Table and Graph

	Average DNAPL Thickness (ft)																			
Well ID	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
RW-1	2.41	2.14	1.19	1.14	0.93	0.00	0.87	0.00	0.94	0.95	0.82	0.87	0.93	0.84	0.65	0.50	0.84	0.57	0.43	0.47
RW-2	2.41	2.35	1.06	1.21	0.79	0.21	1.10	0.00	0.99	1.21	1.05	0.87	1.27	0.92	0.81	0.66	0.89	0.69	0.91	0.26
RW-3N	3.52	3.67	3.19	3.34	2.39	2.15	1.80	2.41	1.04	0.88	0.69	0.93	0.77	0.69	0.92	0.82	0.61	0.44	0.33	0.28
RW-6N	1.77	1.80	1.20	1.50	0.96	1.17	0.27	0.00	0.99	1.06	0.80	1.80	1.10	0.90	0.76	0.37	0.63	0.64	0.54	0.76



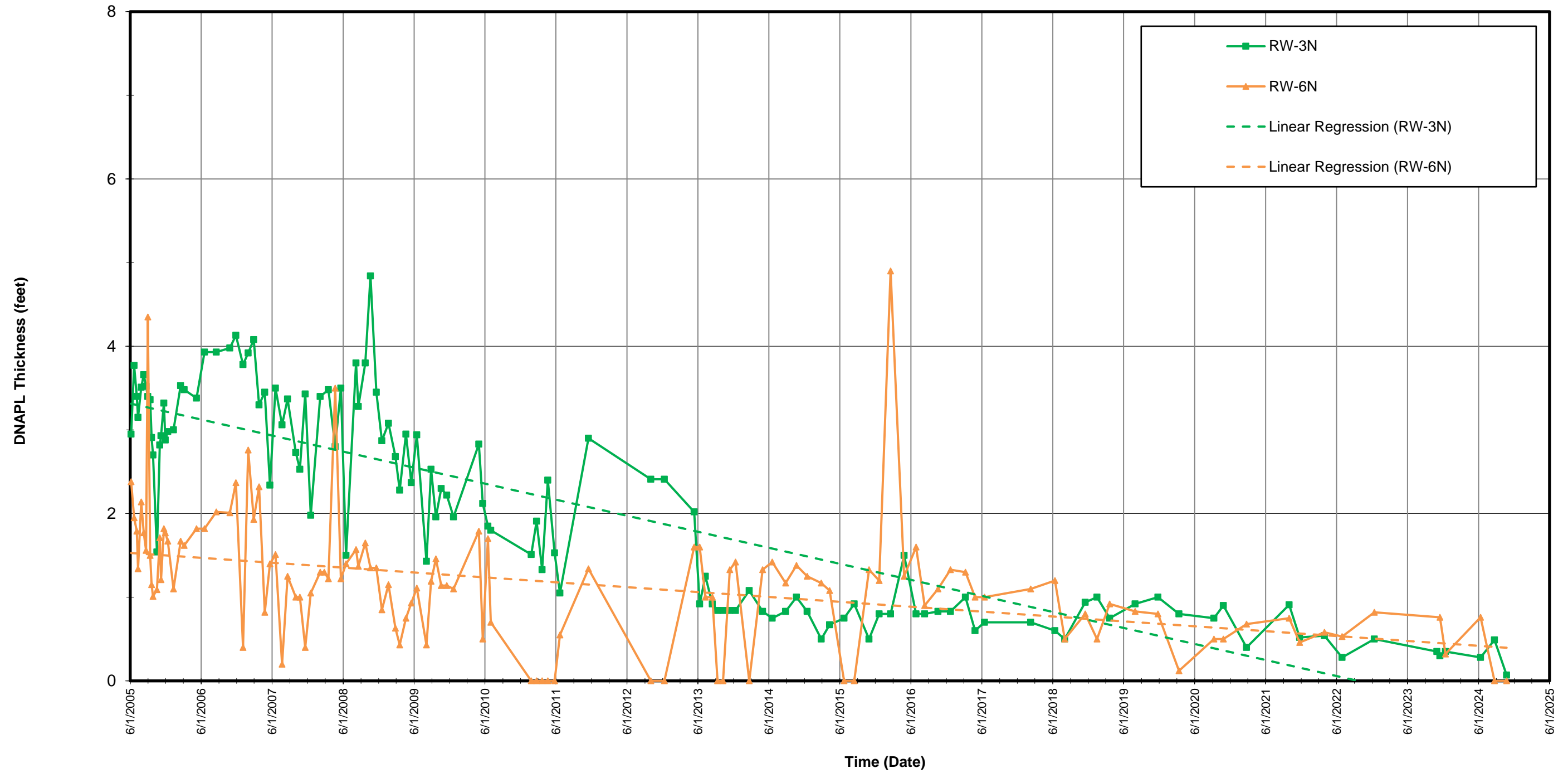
ATTACHMENT 2
2024 PRR DNAPL Trend Graphs

WESTERN DNAPL RECOVERY SYSTEM DNAPL THICKNESS



NOTES:
1. Lines illustrate data trends only and should not be used to interpolate data.

NORTHERN DNAPL RECOVERY SYSTEM DNAPL THICKNESS



NOTES:
1. Lines illustrate data trends only and should not be used to interpolate data.

Sotomayor, Sebastian

From: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>
Sent: Wednesday, July 16, 2025 4:35 PM
To: Conlon, Mari
Cc: Omorogbe, Amen (DEC); McCague, Steven J (DEC); cmonheit@nationalresources.com; Bellew, James; Underhill, Scott; Probasco, Paul
Subject: RE: C360064 Site Management Program Modification Request

CAUTION: External Email

Mari Cate,

Correct, you may reduce to two events starting this year.

Thanks,
Michael

From: Conlon, Mari <MConlon@haleyaldrich.com>
Sent: Wednesday, 16 July, 2025 16:30
To: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>
Cc: Omorogbe, Amen (DEC) <amen.omorogbe@dec.ny.gov>; McCague, Steven J (DEC) <steven.mccague@dec.ny.gov>; cmonheit@nationalresources.com; Bellew, James <JBellew@haleyaldrich.com>; Underhill, Scott <SUnderhill@haleyaldrich.com>; Probasco, Paul <PProbasco@haleyaldrich.com>
Subject: RE: C360064 Site Management Program Modification Request

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Michael,

Thank you for your prompt response to this request, it is much appreciated. Can you please just confirm we are approved to reduce to two events starting this year (we have already completed one event) and at the next event we will not include OW-1 for extraction?

If so, we will also include this request and your response appended to this year's forthcoming PRR.

Again, thank you for your attention to this request.

All the best,
Mari Cate

Mari Cate Conlon, P.G.
Senior Associate

From: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>
Sent: Wednesday, July 16, 2025 4:26 PM
To: Conlon, Mari <MConlon@haleyaldrich.com>
Cc: Omorogbe, Amen (DEC) <amen.omorogbe@dec.ny.gov>; McCague, Steven J (DEC) <steven.mccague@dec.ny.gov>; cmonheit@nationalresources.com; Bellew, James <JBellew@haleyaldrich.com>; Underhill, Scott <SUnderhill@haleyaldrich.com>; Probasco, Paul <PProbasco@haleyaldrich.com>
Subject: RE: C360064 Site Management Program Modification Request

CAUTION: External Email

Mari,

I've reviewed the request and have no issues with the proposed reduction from three to two extraction and inspection events, and the proposed returning OW-1 to being an observation well only. I've cc'ed Steve McCague instead of David Pollock, as Steve now heads our regional division.

Thanks,
Michael

From: Conlon, Mari <MConlon@haleyaldrich.com>
Sent: Tuesday, 15 July, 2025 09:34
To: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>
Cc: Wittemeyer, Danielle M (DEC) <Danielle.Wittemeyer@dec.ny.gov>; Omorogbe, Amen (DEC) <amen.omorogbe@dec.ny.gov>; Pollock, David (DEC) <david.pollock@dec.ny.gov>; cmonheit@nationalresources.com; Bellew, James <JBellew@haleyaldrich.com>; Underhill, Scott <SUnderhill@haleyaldrich.com>; Probasco, Paul <PProbasco@haleyaldrich.com>
Subject: RE: C360064 Site Management Program Modification Request

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Good morning Michael,

Hope all is well. I wanted to confirm you received the below referenced modification request for Site C360064?

If you have any questions or comments we can answer to help in your review process please do not hesitate to let us know.

Thank you,
Mari Cate

Mari Cate Conlon, P.G.
Senior Associate

Haley & Aldrich of New York

81 Main Street, Suite 201
White Plains, NY 10601

213 West 35th Street, 7th Floor
New York, NY 10001

T: 646-277-5688

M: 347-271-1521

www.haleyaldrich.com

From: Conlon, Mari

Sent: Thursday, July 3, 2025 3:33 PM

To: Michael.Squire@dec.ny.gov

Cc: Danielle.Witte Meyer@dec.ny.gov; amen.omorogbe@dec.ny.gov; david.pollock@dec.ny.gov; cmonheit@nationalresources.com; Bellew, James <JBellew@haleyaldrich.com>; Underhill, Scott <SUnderhill@haleyaldrich.com>; Levy, Matthew <MLevy@haleyaldrich.com>; Probasco, Paul <PProbasco@haleyaldrich.com>

Subject: C360064 Site Management Program Modification Request

Good afternoon Michael,

Hope all is well. Attached please find a formal request letter for modifications to the existing site management program activities associated with the above referenced site. We request that you please review our proposed modifications and provide comments or approval on these updates prior to implementation and/or update to the existing Site Management Plan.

Should you have any questions during your review please do not hesitate to let us know.

Thank you and happy 4th of July weekend,
Mari Cate

Mari Cate Conlon, P.G.

Senior Associate

Haley & Aldrich of New York

213 West 35th Street, 7th Floor
New York, NY 10001

T: 646-277-5688

M: 347-271-1521

www.haleyaldrich.com

APPENDIX C
Groundwater Monitoring Report



Haley & Aldrich of New York
200 Town Centre Drive
Suite 2
Rochester, NY 14623
585.359.9000

22 December 2023
File No. 134976-002

Ferry Landings, LLC
485 West Putnam Avenue
Greenwich, CT 06830

Attention: Carl Monheit
Senior Director of Development and Chief Engineer

Subject: Tarrytown Former MGP Site
Post-Remediation Groundwater Monitoring - 2023 Data
Tarrytown, New York
Brownfield Site #C3600069

Ladies and Gentlemen:

We are pleased to submit this report which documents groundwater monitoring at the Tarrytown Former Manufactured Gas Plant (MGP) Site for 2023. Remediation ended and construction of the Hudson Harbor development began in 2005; site development continues to date. See Figure 1 for the site location.

PURPOSE

This report summarizes groundwater monitoring activities, which are requirements of the Site Management Plan (SMP), dated 10 August 2010 and approved by the New York State Department of Environmental Conservation (NYSDEC) on 26 August 2010.

GROUNDWATER MONITORING NETWORK

Five monitoring wells are used for post-remediation monitoring, two up-gradient and three down-gradient. The well locations are shown on Figure 2, as follows:

Up-gradient Wells

- MW-29: near the eastern site property line, northern location, and
- MW-12: near the eastern site property line, southern location.

Down-gradient Wells

- MW-20: near the western site property line (near Hudson River), northern location,
- MW-21: near the western site property line (near Hudson River), central location, and
- MW-24: near the western site property line (near Hudson River), southern location.

In addition, observation and recovery wells associated with the northern DNAPL recovery system and the western DNAPL recovery system are also located on site (see Figure 2 for locations of the recovery systems). These wells are specific to the DNAPL systems (performance and operation), and they are not associated with post remediation site groundwater monitoring.

GROUNDWATER MONITORING

Groundwater monitoring has occurred at the site during and since completion of remediation in 2005. During 2023, groundwater monitoring was performed in accordance with the Groundwater Monitoring Plan included in the SMP. Samples were collected using Operating Procedure OP3013 - Monitored Natural Attenuation Groundwater Sample Collection Procedure, 2003, which is appended to the NYSDEC-approved Groundwater Monitoring Plan.

Samples collected were analyzed for required parameters listed on Table 1, attached (which was derived from Table 2 of the NYSDEC-approved Groundwater Monitoring Plan), including:

- Volatile organic compounds (VOCs) benzene, toluene, ethylbenzene, and xylenes (BTEX);
- Semi-volatile organic compounds (SVOCs) classified as polycyclic aromatic hydrocarbons (PAHs); and
- Attenuation Indicators iron, manganese, nitrate, nitrite, sulfate, Total Organic Carbon (TOC), Dissolved Organic Carbon (DOC), sulfide, Biochemical Oxygen Demand (BOD), and Chemical Oxygen Demand (COD).

Chemical analyses were performed by Phoenix Environmental Laboratories, Inc. (Phoenix), a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory.

Results for the 2006 through 2023 sampling rounds are on Table 2. Results are compared to the Class GA Groundwater values listed in Division of Water Technical and Operational Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, NYSDEC, June 1998 (TOGS 1.1.1). A summary of analytes detected during the three most current sampling rounds at concentrations greater than the TOGS 1.1.1 Class GA Groundwater Standards and Guidance Values (the comparison criteria) are on Table 3. Appendix A contains the laboratory reports for the groundwater sampling analyses. Results on Table 2 that indicate detections above laboratory reporting limits are shown in bold font; results that are higher than applicable standards or guidance values are shaded gray.

As has been the case in past years of reporting, for five PAH compounds (Benz(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, and Indeno(1,2,3-cd)pyrene), the laboratory method detection limit of 0.02 ug/L is greater than the TOGS 1.1.1 Class GA Groundwater comparison criterion (0.002 ug/L). Phoenix reported that concentrations of these PAHs less than the reporting limit of 0.02 ug/L cannot be measured using EPA standard methods.

2023 RESULTS SUMMARY

The 2023 groundwater sampling round was performed on 16 November 2023 using low flow procedures. Well purging, sampling, sample containment, chain of custody and sample shipping procedures, and laboratory analyses were completed as required by the SMP. Results, compared to the TOGS 1.1.1 Class GA Groundwater standards and guidance values are provided in Table 2 and Table 3, and are summarized as follows:

MW-29 (up-gradient): Iron and manganese concentrations were greater than the comparison criteria; Iron detections were greater than historically measured, while manganese detections were consistent with previous results. Three PAH compounds were detected at concentrations greater than the comparison criteria. Compared to historical data, the levels measured for the three PAHs appear to be greater than the previous sampling event. Because both metals and PAHs are elevated, this is believed to be attributed to a higher turbidity in the sample than historically observed. No VOC compounds were detected at concentrations greater than the comparison criteria.

MW-12 (up-gradient): Iron concentration was greater than the comparison criteria; however, the concentration was consistent with previous results. Manganese was detected at a concentration less than the comparison criterion. Two VOC compounds were detected at concentrations above the method detection limit but less than the comparison criteria. Two PAH compounds were detected at concentrations greater than the comparison criteria; these PAH concentrations were consistent with previous results. Six PAH compounds were detected at concentrations above method detection limits but less than the comparison criteria.

MW-20 (down-gradient): Iron concentration was greater than the comparison criteria; however, the concentration was lower than previous results. Manganese was detected at a concentration above the method detection limit but less than the comparison criterion. No VOC or PAH compounds were detected.

MW-21 (down-gradient): Iron and manganese were detected at concentrations greater than the comparison criterion; however, the iron concentration was higher than previous results, while the manganese concentration was consistent with previous results. No VOC compounds were detected at concentrations greater than the comparison criteria. Three PAH compounds were detected at a concentration greater than the comparison criteria; however, the PAH concentrations were consistent with previous results.

MW-24 (down-gradient): Iron and manganese were detected at concentrations above the method detection limits but less than the comparison criterion. No VOCs or PAH compounds were detected.

COMPARISON OF UP-GRADIENT TO DOWN-GRADIENT WELLS

In general, concentrations of parameters in the down-gradient wells were less than or equal to the up-gradient concentrations, specifically:

- BTEX compound concentrations were not detected above comparison criterion in up-gradient nor down-gradient wells.
- Concentrations of detected PAH compounds in up-gradient wells were equivalent to down-gradient wells for all locations except MW-12, where Naphthalene was detected at concentrations greater than the comparison criteria, but consistent with previous results.
- Iron and Manganese concentrations in up-gradient wells were greater than or equivalent to down gradient wells except MW-24, which is believed to have had greater turbidity than past sampling events.

RECOMMENDATIONS

Based on the 2023 sampling results and analyses completed over several years of groundwater monitoring which consistently indicate the site remedy is effective, we recommend sampling to continue on a triennial basis (once every three years).

SUMMARY

This groundwater monitoring report summarizes the data for 2023. Current and past concentrations of metals, VOCs, and PAHs have trended in a limited range, indicating a general consistent quality of up-gradient groundwater coming onto the site. The pattern of overall groundwater quality continues, such that detected up-gradient concentrations were generally greater for selected compounds than down-gradient concentrations.


The objective of groundwater monitoring is to determine if groundwater quality meets NYS groundwater standards and guidance values, assess achievement of the remedial performance criteria and evaluate site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment. Based on the results, while there are some exceedances of groundwater standards and guidance values, the consistency of results over the period of monitoring and consistency of down-gradient versus up-gradient water quality indicates the remedy continues to be effective.


The SMP and the Environmental Easement specify that the use of untreated groundwater from the Site for any purpose is not permitted. There continue to be no groundwater uses at the Site; given the monitoring results to date, and without the potential exposure pathway of groundwater use, the remedy at the site remains protective of human health with respect to groundwater quality.

CLOSING AND REQUEST FOR MONITORING FREQUENCY CHANGE

In accordance with the request for triennial groundwater sampling as submitted in the December 2020 PRR, groundwater monitoring will continue triennial, until the NYSDEC approves an alternative schedule.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK


James M. Bellew
Principal


Mari C. Conlon, P.G.
Associate

Attachments:

- Table 1 – Sampling Parameters and Recommended Analytical Methods
- Table 2 – 2006 - 2023 Groundwater Monitoring Results
- Table 3 – 2013 - 2023 Groundwater Monitoring Results Summary
- Figure 1 – Project Locus
- Figure 2 – Site Plan
- Appendix A – Laboratory Reports for the Groundwater Analyses

\\haleyaldrich.com\share\roc_common\Projects\28590 Hudson Harbor - National Resources\123x 2023 Services\2. GW Sampling\Report\2023_1204 GW Rpt
2023_D1.docx

TABLES

Tarrytown Former MGP Site

Source: Site Management Plan Appendix F - Table 2

Table 1 - Sampling Parameters and Recommended Analytical Methods

Analyte	Analytical Method
BTEX	
Benzene	8260B
Toluene	8260B
Ethylbenzene	8260B
O-Xylene	8260B
M&P-Xylene	8260B
Polycyclic Aromatic Hydrocarbons (PAH)	
Acenaphthene	8270C
Acenaphthylene	8270C
Anthracene	8270C
Benz(a)anthracene	8270C
Benzo(a)pyrene	8270C
Benzo(b)fluoranthene	8270C
Benzo(ghi)fluoranthene	8270C
Benzo(k)fluoranthene	8270C
Chrysene	8270C
Dibenz(a,h)anthracene	8270C
Fluoranthene	8270C
Fluorene	8270C
Indeno(1,2,3-cd)pyrene	8270C
Naphthalene	8270C
Phenanthrene	8270C
Pyrene	8270C
Attenuation Indicators	
FIELD PARAMETERS	
Dissolved Oxygen	Field Probe
Oxygen-Reduction Potential	Field Probe
pH	Field Probe
Specific Conductance	Field Probe
Temperature	Field Probe
Ferrous Iron (Fe ²⁺)	Field Probe
Carbon Dioxide	Field Probe
Alkalinity	Field Probe
Turbidity	Field Probe
Laboratory Parameters	
Biochemical Oxygen Demand	5210B
Chemical Oxygen Demand	5520C, 5520D
Dissolved Organic Carbon	415.1
Total Organic Carbon	9060
Sulfate	375.4
Sulfide	376.1, 376.2
Nitrate	353.2
Nitrite	353.2
Total Iron	6010
Manganese	6010

TABLE 2
2006-2023 GROUNDWATER MONITORING RESULTS
Tarrytown Former MGP Site Groundwater Samples
Tarrytown, New York

Parameter	NYSDEC TOGS 1.1.1 Class GA Groundwater ⁽¹⁾	MW-29 (Up-Gradient)												
	Date Sampled	8/17/2006	12/17/2007	7/28/2008	12/8/2009	12/21/2010	12/20/2011	5/29/2013	11/19/2013	11/10/2014	11/15/2016	2/13/2018	10/29/2020	11/16/2023
BTEX	(ug/L)													
Benzene	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.70	<0.70	<0.70	<0.70
Toluene	5	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Ethyl Benzene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
p&m-Xylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Xylene (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tert Butyl Ether (MTBE)	10 ⁽⁶⁾	<2.0	3	<2.0	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PAH	(ug/L)													
Acenaphthene	20	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	0.1	<0.10	<0.10	<0.47	<0.47
Acenaphthylene	N/A ^(8,11)	<10	<10	<10	<0.3	<0.3	<0.3	<0.1	<0.1	0.33	<0.10	0.10	<0.47	<0.47
Anthracene	50	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	0.23	0.12	0.11	<0.47	<0.47
Benz(a)anthracene	0.002	<10	<10	<10	<0.06	<0.02	<0.02	0.06	0.02	0.25	0.03	0.07	<0.02	0.04
Benzo(a)pyrene	ND	<10	<10	<10	<0.2	<0.02	<0.02	0.05	<0.02	0.4	<0.02	0.09	<0.02	0.02
Benzo(b)fluoranthene	0.002	<10	<10	<10	<0.08	<0.02	<0.02	<0.02	<0.02	0.51	<0.02	0.07	<0.02	<0.02
Benzo(g,h,i)perylene	N/A ^(8,11)	<10	<10	<10	<4	<2.5	<2.5	<0.1	<0.1	0.29	<0.10	<0.10	<0.47	<0.47
Benzo(k)fluoranthene	0.002	<10	<10	<10	<0.3	<0.02	<0.02	<0.02	<0.02	0.22	<0.02	0.06	<0.02	<0.02
Chrysene	0.002	<10	<10	<10	<2	<0.02	<0.02	0.05	<0.02	0.3	0.02	0.06	<0.02	0.03
Dibenz(a,h)anthracene	N/A ^(8,11)	<10	<10	<10	<0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.47	<0.47
Fluoranthene	50	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	0.63	<0.10	<0.10	<0.47	<0.47
Fluorene	50	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	0.13	<0.10	<0.10	<0.47	<0.47
Indeno(1,2,3-cd)pyrene	0.002	<10	<10	<10	<0.2	<0.02	<0.02	0.05	<0.02	0.23	<0.02	0.06	<0.02	<0.02
Naphthalene	10	<10	<10	<10	<10	<2.5	<2.5	0.13	<0.1	<0.1	<0.10	<0.10	<0.47	<0.47
Phenanthrene	50	<10	<10	<10	<0.07	<0.07	<0.07	<0.07	<0.07	0.35	<0.07	<0.07	<0.47	<0.47
Pyrene	50	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	0.96	<0.10	0.11	<0.47	<0.47
ATTENUATION INDICATORS														
Field Parameters														
Dissolved Oxygen (mg/L)	N/A ^(10,11)							0.46	0.81	0.00	0.00	9.70	6.29	0.05
Oxygen-Reduction Potential (mV)	N/A ⁽¹¹⁾							-102	-22	-68	-89	-65	-156	-17
pH (Standard)	6.5 - 8.5 ⁽¹⁰⁾							7.0	7.0	7.2	7.5	7.8	7.1	7.58
Specific Conductance (mS/cm)	N/A ⁽¹¹⁾							5.93	5.80	10.30	5.6	5.2	0.502	14.5
Temperature (°C)	N/A ⁽¹¹⁾							20.5	16.2	18.8	16.8	16.8	17.6	17.43
Turbidity (NTU)	5 ⁽¹⁰⁾							22.7	6.5	129.0	14.8	69.4	92.4	19.8
Laboratory Parameters														
Nitrate as Nitrogen	10	0.06	<0.05	0.06	0.54	<0.05	0.14	<0.05	<0.05	<0.05	<0.004	<0.004	0.10	<0.25
Nitrite as Nitrogen	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	7.35	<0.05	<0.05	<0.200	0.04
Nitrate and Nitrite as Nitrogen (Total)	10	0.06	ND	0.06	0.54	ND	0.14	ND	ND	7.35	ND	ND	0.10	0.04
Sulfate	250	30	30	37	210	51	47.4	54	113	780	102	48.9	56.9	56.9
Total Organic Carbon	N/A ⁽¹¹⁾	4.2	31	5.0	3.2	3.4	2.8	3.4	12	7.0	8.2	3.7	4.2	4.9
Dissolved Organic Carbon	N/A ⁽¹¹⁾	2.8	20	2.9	3.1	3.2	2.8	2.9	12	7.0	8.0	3.4	4.1	4.9
Sulfide	1	<0.05	<0.2	<0.1	<0.1	NR	NR	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	0.09
B.O.D./5 day	N/A ⁽¹¹⁾	<2.0	7.4	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
C.O.D.	N/A ⁽¹¹⁾	12	45	54	76	75	52	53	72	104	103	142	171	95
Total Iron	0.3	1.05	12.8	7.14	15.7	5.97	9.40	4.92	5.39	9.46	4.63	9.38	8.02	21.5
Manganese	0.3	1.01	0.71	1.25	1.45	1.17	1.10	1.01	0.93	2.05	0.95	0.82	1.52	1.42
Iron and Manganese (Total)	0.5	2.06	13.51	8.39	17.15	7.14	10.50	5.93	6.32	11.51	5.58	10.20	9.54	22.92

Notes:

- (A) Concentrations shown in bold were detected.
- (B) <0.1, for example, means the analyte was not detected and the detection limit was 0.1.
- (C) Concentrations greater than the NYSDEC TOGS 1.1.1 standards and guidance values are shaded gray.

Footnotes:

- (1) NYSDEC Division of Water Technical Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998.
- (6) 10 NYCRR Part 5-Subpart 5-1 Public Water Systems - Tables
- (8) Not regulated by the Principal Organic Contaminant (POC) Groundwater Standard (TOGS 1.1.1 page 5).
- (10) 6 NYCRR 703.3 Water quality standards for pH, dissolved oxygen, dissolved solids, odor, color and turbidity.
- (11) N/A - No Class GA groundwater standard or guidance value.

Acronyms:

- BTEX = volatile organic compounds: Benzene, Toluene, Ethylbenzene, and Xylene
- ND - A non-detectable concentration by the approved analytical methods referenced in 6 NYCRR Part 700.3.
- NR = Not Reported
- NYSDEC = New York State Department of Environmental Conservation
- PAH = semi-volatile organic compounds classified as Polycyclic Aromatic Hydrocarbons.
- SVOC = Semivolatile Organic Compound
- VOC = Volatile Organic Compound

TABLE 2
2006-2023 GROUNDWATER MONITORING RESULTS
Tarrytown Former MGP Site Groundwater Samples
Tarrytown, New York

Parameter	NYSDEC TOGS 1.1.1 Class GA Groundwater ⁽¹⁾	MW-12 (Up-Gradient)													
	Date Sampled	8/17/2006	12/17/2007	12/8/2009	12/20/2010	12/21/2011	5/29/2013	11/19/2013	11/10/2014	11/16/2016	2/13/2018	10/29/2020	10/29/2020 duplicate	11/16/2023	
BTEX	(ug/L)														
Benzene	1	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<2.0	<1.0	<0.70	<0.70	<0.70	<0.70	<0.70	
Toluene	5	1.6	<5.0	<1.0	<10	<1.0	<1.0	<2.0	<1.0	0.7	0.67	<2.0	<2.0	<2.0	
Ethyl Benzene	5	20	9.6	2.6	<10	1.2	4	<2.0	1.2	1.6	2.5	<2.0	<2.0	<2.0	
o-Xylene	5	39	14	16	<10	7.9	<2	9.4	3.8	7.9	10	<2.0	<2.0	1.3	
p&m-Xylene	5	14	6.1	4.5	<10	2.3	5.9	<4.0	<2.0	3.7	5.1	<2.0	<2.0	0.9	
Xylene (Total)	5	53	20.1	20.5	ND	10.2	5.9	9.4	3.8	11.6	15.1	ND	ND	2.2	
Methyl Tert Butyl Ether (MTBE)	10 ⁽⁶⁾	<2.0	<2.0	<2.0	<10	<2.0	5.9	<4.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
PAH	(ug/L)														
Acenaphthene	20	41	18	77	57	51	<50	72	36	54	46	9.1	13	19	
Acenaphthylene	N/A ^(8,11)	<10	<10	5	8.1	7.3	<50	4.9	3	<7.0	3.6	<0.47	0.61	1	
Anthracene	50	<10	<10	<10	<2.5	<2.8	<50	1.5	1.3	<7.0	1.3	<0.47	0.49	0.82	
Benz(a)anthracene	0.002	<10	<10	<0.06	0.084	0.089	<50	0.06	0.04	<3.4	0.14	0.04	0.05	0.03	
Benzo(a)pyrene	ND	<10	<10	<0.2	0.068	0.078	<50	<0.02	<0.02	<3.2	0.16	<0.02	0.05	<0.02	
Benzo(b)fluoranthene	0.002	<10	<10	<0.08	0.074	0.089	<50	0.03	<0.02	<3.4	0.13	<0.02	0.02	<0.02	
Benzo(g,h,i)perylene	N/A ^(8,11)	<10	<10	<4	<2.5	<2.8	<50	<0.1	<0.01	<5.0	0.10	<0.47	<0.47	<0.47	
Benzo(k)fluoranthene	0.002	<10	<10	<0.3	0.023	<0.022	<50	<0.02	<0.02	<3.4	0.11	<0.02	0.02	<0.02	
Chrysene	0.002	<10	<10	<2	0.067	0.078	<50	0.04	0.03	<3.4	0.12	0.03	0.05	<0.02	
Dibenz(a,h)anthracene	N/A ^(8,11)	<10	<10	<0.2	0.015	<0.011	<50	<0.01	<0.01	<7.0	0.04	<0.47	<0.47	<0.47	
Fluoranthene	50	<10	<10	<10	<2.5	<2.8	<50	0.2	0.19	<7.0	0.3	<0.47	<0.47	<0.47	
Fluorene	50	13	<10	<10	13	8.8	<50	14	8.7	13	10	0.67	1.8	4.4	
Indeno(1,2,3-cd)pyrene	0.002	<10	<10	<0.2	0.045	0.056	<50	<0.02	<0.02	<3.4	0.09	<0.02	0.04	<0.02	
Naphthalene	10	600	280	400	44	110	290	96	53	88	130	<0.47	<0.47	16	
Phenanthrene	50	11	<10	3.9	6.4	3	<50	7	4.7	11	5.7	<0.47	<0.47	3	
Pyrene	50	<10	<10	<10	<2.5	<2.8	<50	0.27	0.28	<7.0	0.36	<0.47	<0.47	<0.47	
ATTENUATION INDICATORS															
Field Parameters															
Dissolved Oxygen (mg/L)	N/A ^(10,11)						0.54	0.91	0.00	7.23	9.10	3.84	-	0.22	
Oxygen-Reduction Potential (mV)	N/A ⁽¹¹⁾						-148	-13	-132	-117	-96	-36	-	-88	
pH (Standard)	6.5 - 8.5 ⁽¹⁰⁾						6.8	6.9	7.3	7.3	7.3	7.1	-	7.9	
Specific Conductance (mS/cm)	N/A ⁽¹¹⁾						1.06	0.95	0.69	2.08	2.80	0.380	-	1.2	
Temperature (°C)	N/A ⁽¹¹⁾						16.4	15.7	19.5	17.5	10.5	16.9	-	15.2	
Turbidity (NTU)	5 ⁽¹⁰⁾						3.2	0.0	4.8	0.0	34.3	201.0	-	22.1	
Laboratory Parameters															
Nitrate as Nitrogen	10	0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.004	<0.004	<0.004	0.01
Nitrite as Nitrogen	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01
Nitrate and Nitrite as Nitrogen (Total)	10	0.05	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
Sulfate	250	34	110	<3.0	7.1	13.1	<3.0	10.3	<3.0	<3.0	<3.0	9.9	10.7	4.3	
Total Organic Carbon	N/A ⁽¹¹⁾	20	93	17	23	15	20	18	15	18.8	19.5	5.0	5.6	13.9	
Dissolved Organic Carbon	N/A ⁽¹¹⁾	15	90	15	19	14	18	15	12	14.9	17	3.9	4.3	12.6	
Sulfide	1	<0.05	0.21	<0.1	NR	NR	0.1	<0.1	<0.1	0.06	<0.05	0.34	0.36	0.07	
B.O.D./5 day	N/A ⁽¹¹⁾	8.7	16	8.3	<4.0	<4.0	12	7.6	7.8	5.8	<3.7	<4.0	<4.0	<4.0	
C.O.D.	N/A ⁽¹¹⁾	51	100	55	68	43	62	52	46	63	149	17	14	34	
Total Iron	0.3	17.2	52.5	17.2	22.9	23.0	27.8	15.8	18.1	32.2	43.3	6.23	6.26	4.83	
Manganese	0.3	0.31	0.50	0.27	0.22	0.26	0.17	0.16	0.18	0.24	0.32	0.201	0.209	0.201	
Iron and Manganese (Total)	0.5	17.51	53.00	17.47	23.12	23.26	27.97	15.96	18.28	32.44	43.62	6.431	6.469	5.031	

Notes:
(A) Concentrations shown in bold were detected.
(B) <0.1, for example, means the analyte was not detected and the detection limit was 0.1.
(C) Concentrations greater than the NYSDEC TOGS 1.1.1 standards and guidance values are shaded gray.
Footnotes:
(1) NYSDEC Division of Water Technical Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998.
(6) 10 NYCRR Part 5-Subpart 5-1 Public Water Systems - Tables
(8) Not regulated by the Principal Organic Contaminant (POC) Groundwater Standard (TOGS 1.1.1 page 5).
(10) 6 NYCRR 703.3 Water quality standards for pH, dissolved oxygen, dissolved solids, odor, color and turbidity.
(11) N/A - No Class GA groundwater standard or guidance value.
Acronyms:
BTEX = volatile organic compounds: Benzene, Toluene, Ethylbenzene, and Xylene
ND - A non-detectable concentration by the approved analytical methods referenced in 6 NYCRR Part 700.3.
NR = Not Reported
NYSDEC = New York State Department of Environmental Conservation
PAH = semi-volatile organic compounds classified as Polycyclic Aromatic Hydrocarbons.
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

TABLE 2
2006-2023 GROUNDWATER MONITORING RESULTS
Tarrytown Former MGP Site Groundwater Samples
Tarrytown, New York

Parameter	NYSDEC TOGS 1.1.1 Class GA Groundwater ⁽¹⁾	MW-20 (Down-Gradient)																	
		Date Sampled	8/17/2006	12/18/2007	12/18/2007 duplicate	7/29/2008	12/8/2009	12/8/2009 duplicate	12/22/2010	12/19/2011	5/30/2013	11/19/2013	11/19/2013 duplicate	11/11/2014	11/11/2014 duplicate	11/15/2016	2/14/2018	10/29/2020	11/16/2023
BTEX	(ug/L)																		
Benzene	1	<1.0	<1.0	<1.0	3.1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.7	<1.0	<1.0	<1.0	<0.70	<0.70	<0.70	<0.70	
Toluene	5	<1.0	<3.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	
Ethyl Benzene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	
o-Xylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	
p&m-Xylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Xylene (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Methyl Tert Butyl Ether (MTBE)	10 ⁽⁶⁾	<2.0	2.8	2.8	<2.0	<2.0	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
PAH	(ug/L)																		
Acenaphthene	20	<10	<10	<10	<10	<10	<10	<2.5	<2.5	0.91	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	1.1	<0.47	
Acenaphthylene	N/A ^(8,11)	<10	<10	<10	<10	<0.3	<0.3	<0.3	<0.3	0.29	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	0.69	<0.47	
Anthracene	50	<10	<10	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.47	<0.47	
Benz(a)anthracene	0.002	<10	<10	<10	<10	<0.06	<0.06	0.023	0.09	0.06	0.02	<0.02	0.02	0.02	<0.02	0.08	0.09	<0.02	
Benzo(a)pyrene	ND	<10	<10	<10	<10	<0.2	<0.2	<0.02	0.11	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	0.09	0.08	<0.02	
Benzo(b)fluoranthene	0.002	<10	<10	<10	<10	<0.08	<0.08	<0.02	0.13	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	0.07	0.04	<0.02	
Benzo(g,h,i)perylene	N/A ^(8,11)	<10	<10	<10	<10	<4	<4.0	<2.5	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.47	<0.47	
Benzo(k)fluoranthene	0.002	<10	<10	<10	<10	<0.3	<0.3	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.03	<0.02	
Chrysene	0.002	<10	<10	<10	<10	<2	<2	<0.02	0.07	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.05	<0.02	
Dibenz(a,h)anthracene	N/A ^(8,11)	<10	<10	<10	<10	<0.2	<0.2	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.47	<0.47	
Fluoranthene	50	<10	<10	<10	<10	<10	<10	<2.5	<2.5	0.24	<0.1	<0.1	<0.1	<0.1	<0.10	0.10	<0.47	<0.47	
Fluorene	50	<10	<10	<10	<10	<10	<10	<2.5	<2.5	0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.47	<0.47	
Indeno(1,2,3-cd)pyrene	0.002	<10	<10	<10	<10	<0.2	<0.2	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	0.05	<0.02	
Naphthalene	10	<10	<10	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.47	<0.47	
Phenanthrene	50	<10	<10	<10	<10	<0.07	<0.07	<0.07	0.07	0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.47	<0.47	
Pyrene	50	<10	<10	<10	<10	<10	<10	<2.5	<2.5	0.17	<0.1	<0.1	<0.1	<0.1	<0.10	0.1	<0.47	<0.47	
ATTENUATION INDICATORS																			
Field Parameters																			
Dissolved Oxygen (mg/L)	N/A ^(10,11)									0.40	1.69	0.00	0.00	0.00	5.56	4.57	7.93	8.42	
Oxygen-Reduction Potential (mV)	N/A ⁽¹¹⁾									-205	92	99	99	99	175	46	159	231	
pH (Standard)	6.5 - 8.5 ⁽¹⁰⁾									8.1	8.7	8.0	8.0	8.0	8.2	7.9	7.5	9.1	
Specific Conductance (mS/cm)	N/A ⁽¹¹⁾									4.77	8.32	13.30	13.30	13.30	19.5	6.9	0.862	16.800	
Temperature (°C)	N/A ⁽¹¹⁾									21.8	14.0	16.9	16.9	16.9	12.5	10.2	18.5	14.1	
Turbidity (NTU)	5 ⁽¹⁰⁾									152.0	21.2	5.4	5.4	5.4	15.2	6.6	32.2	29.7	
Laboratory Parameters																			
Nitrate as Nitrogen	10	<0.05	<0.05	<0.05	0.05	0.55	0.54	NR	0.39	0.07	0.27	0.23	0.57	0.6	<0.1	0.89	0.61	0.64	
Nitrite as Nitrogen	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.78	<0.004	<0.200	<0.50	
Nitrate and Nitrite as Nitrogen (Total)	10	ND	ND	ND	0.05	0.55	0.54	NR	0.39	0.07	0.27	0.23	0.57	0.6	0.78	0.89	0.61	0.64	
Sulfate	250	34	240	240	240	210	210	390	60.8	173	364	369	523	400	712	251	662	519	
Total Organic Carbon	N/A ⁽¹¹⁾	3.5	12	5.7	4.6	3.2	3.2	3.5	4.1	3.3	2.7	2.4	2.7	2.6	2.9	3.8	4.2	3.9	
Dissolved Organic Carbon	N/A ⁽¹¹⁾	2.2	11	4.9	3.9	3.3	3.1	3.0	3.3	3.2	2.6	2.4	2.7	2.3	2.7	3.6	4	3.5	
Sulfide	1	<0.05	<0.2	<0.2	<0.1	<0.1	<0.1	NR	NR	<0.01	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	0.46	<0.05	
B.O.D./5 day	N/A ⁽¹¹⁾	<2.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	5.4	<4.0	
C.O.D.	N/A ⁽¹¹⁾	120	58	52	69	67	76	110	28	66	100	100	125	161	228	185	530	87	
Total Iron	0.3	0.06	0.14	0.13	0.37	0.32	0.32	0.44	18.40	1.68	0.24	0.23	0.34	0.31	0.28	0.92	17.30	0.35	
Manganese	0.3	0.01	0.03	0.03	0.08	0.02	0.02	0.02	1.83	0.14	0.03	0.04	0.05	0.05	0.04	0.06	0.88	0.05	
Iron and Manganese (Total)	0.5	0.06	0.17	0.16	0.44	0.34	0.34	0.46	20.23	1.82	0.27	0.26	0.39	0.35	0.32	0.98	18.18	0.40	

Notes:
(A) Concentrations shown in bold were detected.
(B) <0.1, for example, means the analyte was not detected and the detection limit was 0.1.
(C) Concentrations greater than the NYSDEC TOGS 1.1.1 standards and guidance values are shaded gray.
Footnotes:
(1) NYSDEC Division of Water Technical Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998.
(6) 10 NYCRR Part 5-Subpart 5-1 Public Water Systems - Tables
(8) Not regulated by the Principal Organic Contaminant (POC) Groundwater Standard (TOGS 1.1.1 page 5).
(10) 6 NYCRR 703.3 Water quality standards for pH, dissolved oxygen, dissolved solids, odor, color and turbidity.
(11) N/A - No Class GA groundwater standard or guidance value.
Acronyms:
BTEX = volatile organic compounds: Benzene, Toluene, Ethylbenzene, and Xylene
ND - A non-detectable concentration by the approved analytical methods referenced in 6 NYCRR Part 700.3.
NR = Not Reported
NYSDEC = New York State Department of Environmental Conservation
PAH = semi-volatile organic compounds classified as Polycyclic Aromatic Hydrocarbons.
SVOC = Semivolatile Organic Compound
VOC = Volatile Organic Compound

TABLE 2
2006-2023 GROUNDWATER MONITORING RESULTS
Tarrytown Former MGP Site Groundwater Samples
Tarrytown, New York

Parameter	NYSDEC TOGS 1.1.1 Class GA Groundwater ⁽¹⁾	MW-21 (Down-Gradient)															
		Date Sampled	8/17/2006	12/18/2007	7/30/2008	12/8/2009	12/22/2010	12/19/2011	12/19/2011 duplicate	5/30/2013	5/30/2013 duplicate	11/19/2013	11/11/2014	11/16/2016	2/14/2018	10/29/2020	11/16/2023
BTEX	(ug/L)																
Benzene	1	<1.0	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<0.7	<0.7	<1.0	1.5	0.53	< 0.70	< 0.70	< 0.70
Toluene	5	<1.0	<3.0	<1.0	<1.0	4.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethyl Benzene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
p&m-Xylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Xylene (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tert Butyl Ether (MTBE)	10 ⁽⁶⁾	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PAH	(ug/L)																
Acenaphthene	20	<11	<10	<10	<10	<50	<2.5	<2.5	<0.1	<0.1	<0.1	0.6	0.27	< 0.10	0.54	< 0.48	< 0.48
Acenaphthylene	N/A ^(8,11)	<11	<10	<10	<0.3	<50	<0.3	<0.3	0.14	0.14	0.13	0.1	0.16	0.18	< 0.47	< 0.48	< 0.48
Anthracene	50	<11	<10	<10	<10	<50	<2.5	<2.5	0.17	0.17	0.2	0.12	< 0.10	0.35	< 0.47	< 0.48	< 0.48
Benz(a)anthracene	0.002	<11	<10	<10	<0.06	<50	0.05	0.03	<0.02	<0.02	<0.02	0.02	0.03	0.03	0.05	0.04	0.04
Benzo(a)pyrene	ND	<11	<10	<10	<0.2	<50	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Benzo(b)fluoranthene	0.002	<11	<10	<10	<0.08	<50	0.04	0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Benzo(g,h,i)perylene	N/A ^(8,11)	<11	<10	<10	<4	<50	<2.5	<2.5	<0.1	<0.1	<0.1	<0.1	< 0.10	< 0.10	< 0.47	< 0.48	< 0.48
Benzo(k)fluoranthene	0.002	<11	<10	<10	<0.3	<50	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chrysene	0.002	<11	<10	<10	<2	<50	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03
Dibenz(a,h)anthracene	N/A ^(8,11)	<11	<10	<10	<0.2	<50	<0.01	<0.01	0.14	<0.01	<0.01	<0.01	< 0.01	< 0.01	< 0.47	< 0.48	< 0.48
Fluoranthene	50	<11	<10	<10	<10	<50	<2.5	<2.5	<0.1	0.33	0.12	0.15	0.43	0.36	0.62	< 0.48	< 0.48
Fluorene	50	<11	<10	<10	<10	<50	<2.5	<2.5	<0.1	<0.1	<0.1	<0.1	< 0.10	< 0.1	< 0.47	< 0.48	< 0.48
Indeno(1,2,3-cd)pyrene	0.002	<11	<10	<10	<0.2	<50	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03
Naphthalene	10	<11	<10	<10	<10	<50	<2.5	<2.5	<0.1	0.15	<0.1	<0.1	< 0.10	< 0.1	< 0.47	< 0.48	< 0.48
Phenanthrene	50	<11	<10	<10	<0.07	<50	0.08	<0.07	<0.07	<0.07	<0.07	<0.07	0.3	<0.07	< 0.47	< 0.48	< 0.48
Pyrene	50	<11	<10	<10	<10	<50	<2.5	<2.5	0.17	0.37	0.23	0.23	0.66	0.51	0.64	< 0.48	< 0.48
ATTENUATION INDICATORS																	
Field Parameters																	
Dissolved Oxygen (mg/L)	N/A ^(10,11)									0.53	0.53	0.74	0.00	0.00	11.76	1.50	0.21
Oxygen-Reduction Potential (mV)	N/A ⁽¹¹⁾									-310	-310	-119	-340	-260	-237	-216	-227
pH (Standard)	6.5 - 8.5 ⁽¹⁰⁾									7.3	7.3	6.6	8.0	7.6	7.1	7.4	10.0
Specific Conductance (mS/cm)	N/A ⁽¹¹⁾									2.99	2.99	4.29	2.99	3.21	3.37	0.298	3.830
Temperature (°C)	N/A ⁽¹¹⁾									24.9	24.9	14.0	18.6	15.6	11.2	16.6	17.3
Turbidity (NTU)	5 ⁽¹⁰⁾									24.6	24.6	8.2	0.0	0.0	6.6	6.6	19.8
Laboratory Parameters																	
Nitrate as Nitrogen	10	0.05	<0.05	<0.05	<0.05	NR	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	< 0.05	0.01
Nitrite as Nitrogen	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 0.05	< 0.04	< 0.020	< 0.05	< 0.05
Nitrate and Nitrite as Nitrogen (Total)	10	0.05	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01
Sulfate	250	350	460	360	360	640	474	479	155	163	496	43.6	353	298	99.5	539	
Total Organic Carbon	N/A ⁽¹¹⁾	6.0	12	11	11	9.1	12	13	14	13	8.1	14	15.2	14.4	13.6	13.5	
Dissolved Organic Carbon	N/A ⁽¹¹⁾	4.5	12	9.8	9.8	9.0	12	12	13	13	11	15	14.1	13.5	12.8	12.1	
Sulfide	1	<0.05	<0.2	0.38	0.38	NR	NR	NR	3.1	3	<0.1	<0.1	1.61	2.87	24.1	3.86	
B.O.D./5 day	N/A ⁽¹¹⁾	<2.0	6.4	<4.0	<4.0	19	<4.0	<4.0	11	11	<4.0	10	6.5	< 4.2	18	9.1	
C.O.D.	N/A ⁽¹¹⁾	38	27	54	54	82	82	66	66	64	52	50	54	65	63	61	
Total Iron	0.3	2.74	2.42	1.32	12.70	15.80	15.40	15.0	1.88	2.10	9.01	0.62	10.80	12.70	0.593	36.400	
Manganese	0.3	0.43	0.44	0.38	1.54	1.49	1.08	1.09	0.31	0.33	0.89	0.14	0.77	0.66	0.311	0.975	
Iron and Manganese (Total)	0.5	3.17	2.86	1.70	14.24	17.29	16.48	16.09	2.19	2.43	9.90	0.76	11.57	13.36	0.904	37.375	

Notes:
(A) Concentrations shown in bold were detected.
(B) <0.1, for example, means the analyte was not detected and the detection limit was 0.1.
(C) Concentrations greater than the NYSDEC TOGS 1.1.1 standards and guidance values are shaded gray.
Footnotes:
(1) NYSDEC Division of Water Technical Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998.
(6) 10 NYCRR Part 5-Subpart 5-1 Public Water Systems - Tables
(8) Not regulated by the Principal Organic Contaminant (POC) Groundwater Standard (TOGS 1.1.1 page 5).
(10) 6 NYCRR 703.3 Water quality standards for pH, dissolved oxygen, dissolved solids, odor, color and turbidity.
(11) N/A - No Class GA groundwater standard or guidance value.
Acronyms:
BTEX = volatile organic compounds: Benzene, Toluene, Ethylbenzene, and Xylene
ND - A non-detectable concentration by the approved analytical methods referenced in 6 NYCRR Part 700.3.
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PAH = semi-volatile organic compounds classified as Polycyclic Aromatic Hydrocarbons.
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TABLE 2
2006-2023 GROUNDWATER MONITORING RESULTS
Tarrytown Former MGP Site Groundwater Samples
Tarrytown, New York

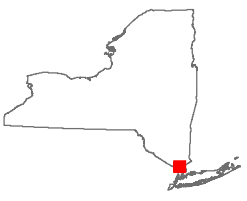
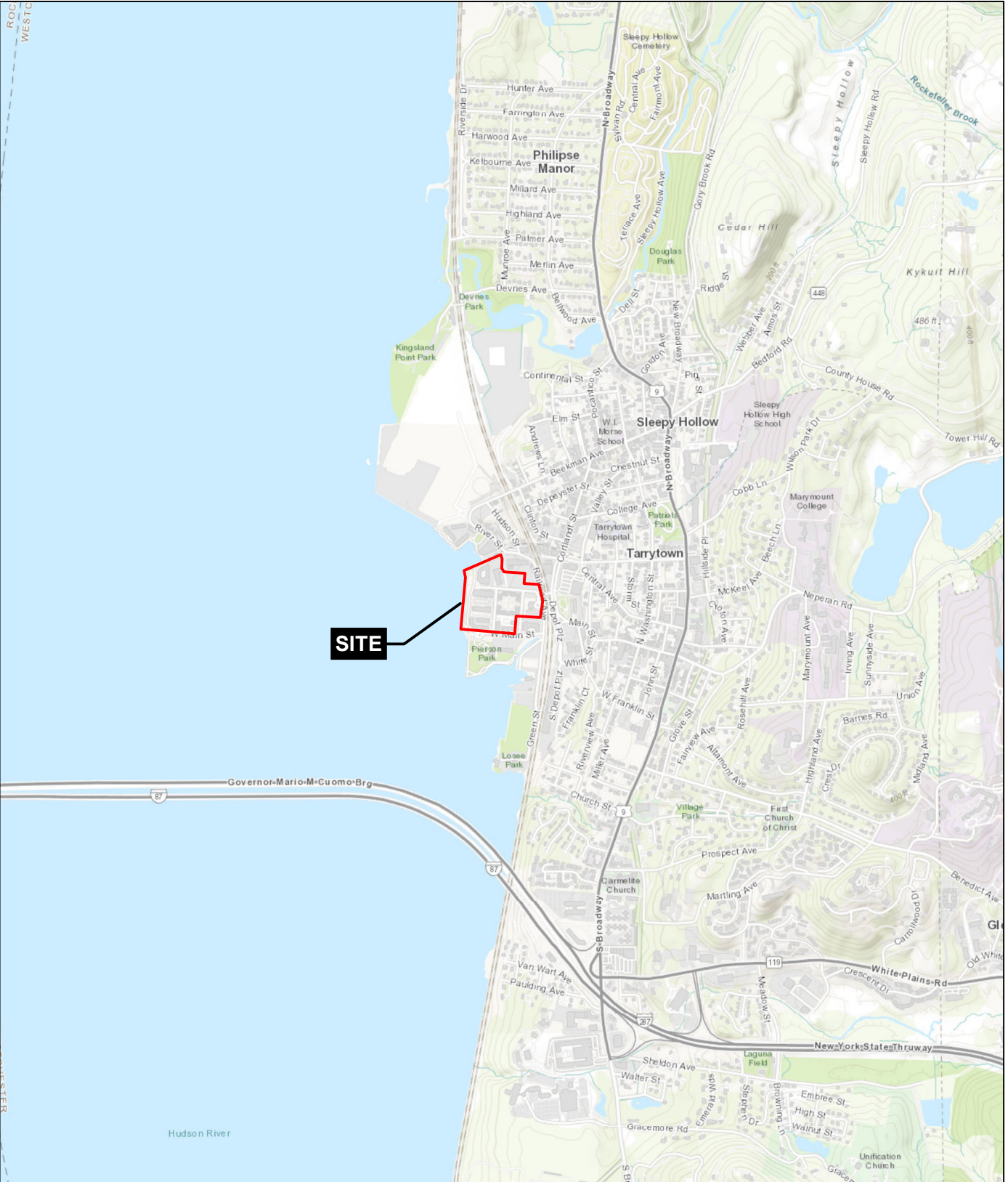
Parameter	NYSDEC TOGS 1.1.1 Class GA Groundwater ⁽¹⁾	MW-24 (Down-Gradient)																
		Date Sampled	8/17/2006	8/17/2006 duplicate	12/18/2007	7/30/2008	7/30/2008 duplicate	12/8/2009	12/22/2010	12/19/2011	5/30/2013	11/20/2013	11/11/2014	11/16/2016	2/14/2018	10/29/2020	11/16/2023 duplicate	11/16/2023
BTEX		(ug/L)																
Benzene	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.7	<1.0	<1.0	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70
Toluene	5	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethyl Benzene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
o-Xylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
p&m-Xylene	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Xylene (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tert Butyl Ether (MTBE)	10 ⁽⁶⁾	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PAH		(ug/L)																
Acenaphthene	20	<50	<10	<10	<10	<10	<10	<2.5	<2.5	<0.1	< 0.1	< 0.1	< 0.10	< 0.10	2.9	< 0.47	< 0.48	
Acenaphthylene	N/A ^(8,11)	<50	<10	<10	<10	<10	<0.3	<0.3	<0.3	<0.1	<0.1	<0.1	< 0.10	< 0.10	2.1	< 0.47	< 0.48	
Anthracene	50	<50	<10	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	<0.1	< 0.10	< 0.10	< 0.10	< 0.47	< 0.48	
Benz(a)anthracene	0.002	<50	<10	<10	<10	<10	<0.06	0.024	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	0.74	< 0.02	< 0.02	
Benzo(a)pyrene	ND	<50	<10	<10	<10	<10	<0.2	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	0.68	< 0.02	< 0.02	
Benzo(b)fluoranthene	0.002	<50	<10	<10	<10	<10	<0.08	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	0.34	< 0.02	< 0.02	
Benzo(g,h,i)perylene	N/A ^(8,11)	<50	<10	<10	<10	<10	<4	<2.5	<2.5	<0.1	<0.1	<0.1	< 0.10	< 0.10	< 0.10	< 0.47	< 0.48	
Benzo(k)fluoranthene	0.002	<50	<10	<10	<10	<10	<0.3	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	0.28	< 0.02	< 0.02	
Chrysene	0.002	<50	<10	<10	<10	<10	<2	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	0.45	< 0.02	< 0.02	
Dibenz(a,h)anthracene	N/A ^(8,11)	<50	<10	<10	<10	<10	<0.2	<0.01	<0.01	<0.01	<0.01	<0.01	< 0.01	< 0.01	< 0.01	< 0.47	< 0.48	
Fluoranthene	50	<50	<10	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	<0.1	< 0.10	< 0.10	0.7	< 0.47	< 0.48	
Fluorene	50	<50	<10	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	<0.1	< 0.10	< 0.10	< 0.10	< 0.47	< 0.48	
Indeno(1,2,3-cd)pyrene	0.002	<50	<10	<10	<10	<10	<0.2	<0.02	<0.02	<0.02	<0.02	<0.02	< 0.02	< 0.02	0.36	< 0.02	< 0.02	
Naphthalene	10	<50	<10	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	<0.1	< 0.10	< 0.10	< 0.10	< 0.47	< 0.48	
Phenanthrene	50	<50	<10	<10	<10	<10	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	< 0.07	< 0.07	< 0.07	< 0.47	< 0.48	
Pyrene	50	<50	<10	<10	<10	<10	<10	<2.5	<2.5	<0.1	<0.1	<0.1	< 0.10	< 0.10	0.80	< 0.47	< 0.48	
ATTENUATION INDICATORS																		
Field Parameters																		
Dissolved Oxygen (mg/L)	N/A ^(10,11)										7.47	6.87	4.81	9.33	1.59	5.05	-	9.63
Oxygen-Reduction Potential (mV)	N/A ⁽¹¹⁾										94	205	64	30	49	48	-	199
pH (Standard)	6.5 - 8.5 ⁽¹⁰⁾										7.7	7.7	8.0	8.1	8.0	7.9	-	8.3
Specific Conductance (mS/cm)	N/A ⁽¹¹⁾										3.41	8.05	13.60	14.77	3.91	0.412	-	17.5
Temperature (°C)	N/A ⁽¹¹⁾										21.5	11.7	18.1	17.1	11.3	17.9	-	12.9
Turbidity (NTU)	5 ⁽¹⁰⁾										17.6	28.1	4.4	26.0	22.7	61.1	-	24.1
Laboratory Parameters																		
Nitrate as Nitrogen	10	0.08	0.08	0.07	0.2	0.2	0.05	NR	0.43	0.59	0.63	0.81	< 0.004	0.84	< 0.50	0.62	0.59	
Nitrite as Nitrogen	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.39	< 0.04	< 0.200	< 0.50	< 0.50	
Nitrate and Nitrite as Nitrogen (Total)	10	0.08	0.08	0.07	0.2	0.2	0.05	NR	0.43	0.59	0.63	0.81	1.39	0.84	ND	0.62	0.59	
Sulfate	250	320	290	280	330	340	240	340	95	141	327	<3.0	646	166	615	534	537	
Total Organic Carbon	N/A ⁽¹¹⁾	3.3	3.3	8.6	3.9	5.1	8.0	3.6	3.5	2.8	2.6	2.6	2.7	2.5	4.4	3.7	3.1	
Dissolved Organic Carbon	N/A ⁽¹¹⁾	2.2	2.8	5.7	2.6	3.0	7.9	2.9	3.5	2.2	2.6	2.4	2.5	2.8	3.9	3.1	3.1	
Sulfide	1	<0.05	<0.05	<0.2	<0.1	<0.1	<0.1	NR	NR	<0.1	<0.1	<0.1	< 0.05	< 0.05	0.35	< 0.05	< 0.05	
B.O.D./5 day	N/A ⁽¹¹⁾	<2.0	<2.0	<4.0	<4.0	<4.0	<4.0	4.2	<4.0	<4.0	<4.0	<4.0	< 4.0	< 4.0	4.6	< 4.0	< 4.0	
C.O.D.	N/A ⁽¹¹⁾	69	46	70	110	83	37	110	<10	58	89	180	194	237	407	87	76	
Total Iron	0.3	0.07	0.06	0.11	ND	ND	0.22	0.08	1.00	0.23	0.68	0.09	0.76	0.58	5.82	0.06	0.06	
Manganese	0.3	0.01	0.01	0.03	0.01	0.01	0.02	0.00	0.05	0.01	0.03	0.00	0.05	0.03	0.782	0.006	0.005	
Iron and Manganese (Total)	0.5	0.08	0.07	0.14	0.01	0.01	0.24	0.08	1.04	0.23	0.72	0.10	0.81	0.61	6.602	0.067	0.064	

Notes:

- (A) Concentrations shown in bold were detected.
 - (B) <0.1, for example, means the analyte was not detected and the detection limit was 0.1.
 - (C) Concentrations greater than the NYSDEC TOGS 1.1.1 standards and guidance values are shaded gray.
- Footnotes:
- (1) NYSDEC Division of Water Technical Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998.
 - (6) 10 NYCRR Part 5-Subpart 5-1 Public Water Systems - Tables
 - (8) Not regulated by the Principal Organic Contaminant (POC) Groundwater Standard (TOGS 1.1.1 page 5).
 - (10) 6 NYCRR 703.3 Water quality standards for pH, dissolved oxygen, dissolved solids, odor, color and turbidity.
 - (11) N/A - No Class GA groundwater standard or guidance value.
- Acronyms:
- BTEX = volatile organic compounds: Benzene, Toluene, Ethylbenzene, and Xylene
 - ND - A non-detectable concentration by the approved analytical methods referenced in 6 NYCRR Part 700.3.
 - NR = Not Reported
 - NYSDEC = New York State Department of Environmental Conservation
 - PAH = semi-volatile organic compounds classified as Polycyclic Aromatic Hydrocarbons.
 - SVOC = Semivolatile Organic Compound
 - VOC = Volatile Organic Compound

FIGURES

GIS FILE PATH: G:\Projects\26590 Hudson Harbor - National Resources\Global\GIS\Maps\2018-12\32566_027_0004_SITE_VCINITY_KFP.mxd — USER: sgonzalez — LAST SAVED: 11/29/2018 11:20:42 AM



MAP SOURCE: ESRI
 USGS QUAD: WHITEPLAINS, NEW YORK
 SITE COORDINATES: 41°44'2.9"N, 73°52'3.6"W

**HALEY
 ALDRICH**

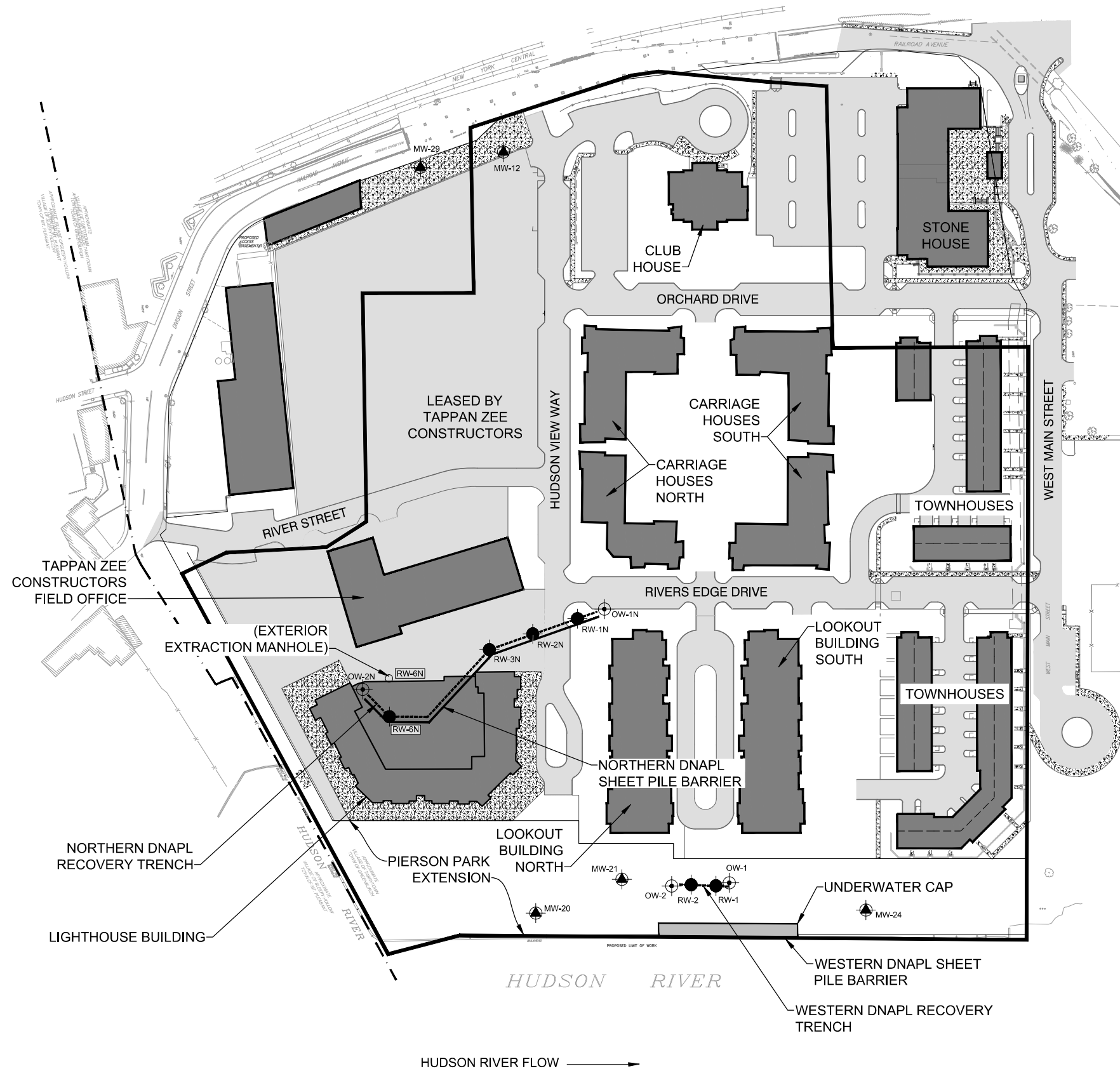
TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

SITE LOCUS










APPROXIMATE SCALE: 1 IN = 2000 FT
 DECEMBER 2020

FIGURE 1

POSTOLOWSKI, KEVIN Printed: 11/29/2018 9:01 PM Layout: PBR FIG 3 G:\28590\GLOBAL\CAD\DRAWINGS\28590-250-0020 SITE COVER 2018.DWG

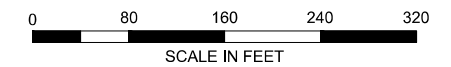
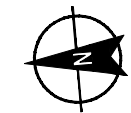


LEGEND

-  GROUNDWATER MONITORING WELL
-  DNAPL RECOVERY WELL
-  EXTERIOR EXTRACTION MANHOLE
-  DNAPL OBSERVATION WELL
-  APPROXIMATE AREA ENCOMPASSED BY THE BROWNFIELD CLEAN-UP AGREEMENT #C360064
-  LANDSCAPED AREAS (THESE AREAS CONTAIN DEMARCATION LAYER BELOW CLEAN FILL AND LANDSCAPING)
-  PAVED WALKS, PATIOS, OR COURTYARDS
-  EXISTING BUILDINGS
-  ROADS AND PARKING AREAS

NOTES

1. BASE MAP IS BASED ON CAD DRAWING ENTITLED "PH1_10399-08_PHASE.DWG," DATED 1 JULY 2009 FROM CHAZEN COMPANIES OF GLENN FALLS, NEW YORK AND "PARKING ALLOCATION DIAGRAM," DATED 7 MARCH 2013 FROM LESSARD GROUP, INC., VIENNA, VIRGINIA.



TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

SITE COVER PLAN 2020

SCALE: AS SHOWN
 DECEMBER 2020

FIGURE 2

APPENDIX A
Laboratory Reports



Thursday, November 30, 2023

Attn: Cheryl Benmergui
Haley & Aldrich
100 Corporate Place
Suite 105
Rocky Hill, CT 06067-1803

Project ID: TARRYTOWN
SDG ID: GCP49910
Sample ID#s: CP49910 - CP49916

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style with a large initial "P".

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



SDG Comments

November 30, 2023

SDG I.D.: GCP49910

SIM Analysis:

The lowest possible reporting limit under SIM conditions is 0.02 ug/L. The NY TOGS GA criteria for some PAHs is 0.002 ug/L. This level cannot be achieved.

Any compound that is not detected above the MDL/LOD is reported as ND on the report and is reported in the electronic deliverables (EDD) as <RL or U at the RL per state and EPA guidance.

Version 1: Analysis results minus raw data.

Version 2: Complete report with raw data.



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Sample Id Cross Reference

November 30, 2023

SDG I.D.: GCP49910

Project ID: TARRYTOWN

Client Id	Lab Id	Matrix
MW-12	CP49910	GROUND WATER
MW-29	CP49911	GROUND WATER
MW-20	CP49912	GROUND WATER
MW-24	CP49913	GROUND WATER
MW-21	CP49914	GROUND WATER
DUP-1	CP49915	GROUND WATER
TRIP BLANK	CP49916	GROUND WATER



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report
November 30, 2023

FOR: Attn: Cheryl Benmergui
Haley & Aldrich
100 Corporate Place
Suite 105
Rocky Hill, CT 06067-1803

Sample Information

Matrix: GROUND WATER
Location Code: HALEY-NY
Rush Request: Standard
P.O.#: 0134976

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date Time
11/16/23 8:30
11/16/23 18:38

Laboratory Data

SDG ID: GCP49910
Phoenix ID: CP49910

Project ID: TARRYTOWN
Client ID: MW-12

Table with 9 columns: Parameter, Result, RL/PQL, LOD/MDL, Units, Dilution, Date/Time, By, Reference. Rows include Iron, Manganese, B.O.D./5 day, C.O.D., Dissolved Organic Carbon, Nitrite as Nitrogen, Nitrate as Nitrogen, Sulfate, Sulfide, Total Organic Carbon, Semi-Volatile Extraction, and Total Metals Digestion.

Aromatic Volatiles

Table with 9 columns: Parameter, Result, RL/PQL, LOD/MDL, Units, Dilution, Date/Time, By, Reference. Rows include Benzene, Ethylbenzene, m&p-Xylene, Methyl t-butyl ether (MTBE), o-Xylene, and Toluene.

QA/QC Surrogates

Table with 9 columns: Parameter, Result, RL/PQL, LOD/MDL, Units, Dilution, Date/Time, By, Reference. Rows include % 1,2-dichlorobenzene-d4, % Bromofluorobenzene, % Dibromofluoromethane, and % Toluene-d8.

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<u>Semivolatiles by SIM, PAH</u>								
2-Methylnaphthalene	12	0.09	0.09	ug/L	1	11/21/23	MR	SW8270E (SIM)
Acenaphthene	19	0.09	0.09	ug/L	1	11/21/23	MR	SW8270E (SIM)
Acenaphthylene	1.0	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Anthracene	0.82	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benz(a)anthracene	0.03	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(a)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(b)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(ghi)perylene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(k)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Chrysene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Dibenz(a,h)anthracene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluoranthene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluorene	4.4	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Naphthalene	16	0.09	0.09	ug/L	1	11/21/23	MR	SW8270E (SIM)
Phenanthrene	3.0	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Pyrene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
<u>QA/QC Surrogates</u>								
% 2-Fluorobiphenyl	58			%	1	11/21/23	MR	30 - 130 %
% Nitrobenzene-d5	62			%	1	11/21/23	MR	30 - 130 %
% Terphenyl-d14	48			%	1	11/21/23	MR	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low J=Estimated Below RL LOD=Limit of Detection MDL=Method Detection Limit1
 QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

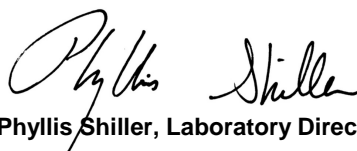
Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Semi-Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

November 30, 2023

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report
 November 30, 2023

FOR: Attn: Cheryl Benmergui
 Haley & Aldrich
 100 Corporate Place
 Suite 105
 Rocky Hill, CT 06067-1803

Sample Information

Matrix: GROUND WATER
 Location Code: HALEY-NY
 Rush Request: Standard
 P.O.#: 0134976

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date Time
 11/16/23 10:00
 11/16/23 18:38

Laboratory Data

SDG ID: GCP49910
 Phoenix ID: CP49911

Project ID: TARRYTOWN
 Client ID: MW-29

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Iron	21.5	0.010	0.01	mg/L	1	11/28/23	TH	SW6010D
Manganese	1.42	0.001	0.001	mg/L	1	11/28/23	TH	SW6010D
B.O.D./5 day	ND	4.0		mg/L	2	11/16/23 18:38	PK/DT	SM 5210B-16
B.O.D./5 day End Incubation						11/21/23 13:43	PK/DT	SM 5210B-16
C.O.D.	95	10	10	mg/L	1	11/21/23	NP	SM 5220D-11
Dissolved Organic Carbon	4.9	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-11
Nitrite as Nitrogen	ND	0.25	0.100	mg/L	25	11/16/23 22:33	BS/GD	E300.0
Nitrate as Nitrogen	0.04	J 0.05	0.01	mg/L	1	11/16/23 21:26	BS/GD	E300.0
Sulfate	56.9	5.0	2.5	mg/L	1	11/16/23	BS/GD	E300.0
Sulfide	0.09	0.05	0.05	mg/L	1	11/17/23	GD	SM4500S-D-11
Total Organic Carbon	4.9	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-14
Semi-Volatile Extraction	Completed					11/17/23	Z/MQ	SW3520C
Total Metals Digestion	Completed					11/17/23	AG	SW3010A

Aromatic Volatiles

Benzene	ND	0.70	0.50	ug/L	1	11/17/23	HM	SW8260C
Ethylbenzene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
m&p-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
o-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Toluene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C

QA/QC Surrogates

% 1,2-dichlorobenzene-d4	102			%	1	11/17/23	HM	70 - 130 %
% Bromofluorobenzene	103			%	1	11/17/23	HM	70 - 130 %
% Dibromofluoromethane	98			%	1	11/17/23	HM	70 - 130 %
% Toluene-d8	99			%	1	11/17/23	HM	70 - 130 %

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<u>Semivolatiles by SIM, PAH</u>								
2-Methylnaphthalene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Acenaphthene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Acenaphthylene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Anthracene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benz(a)anthracene	0.04	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(a)pyrene	0.02	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(b)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(ghi)perylene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(k)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Chrysene	0.03	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Dibenz(a,h)anthracene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluoranthene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluorene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Naphthalene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Phenanthrene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Pyrene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
<u>QA/QC Surrogates</u>								
% 2-Fluorobiphenyl	60			%	1	11/20/23	MR	30 - 130 %
% Nitrobenzene-d5	69			%	1	11/20/23	MR	30 - 130 %
% Terphenyl-d14	26			%	1	11/20/23	MR	30 - 130 %

3

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low J=Estimated Below RL LOD=Limit of Detection MDL=Method Detection Limit

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

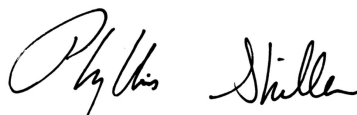
Semi-Volatile Comment:

Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

Semi-Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

November 30, 2023

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

November 30, 2023

FOR: Attn: Cheryl Benmergui
 Haley & Aldrich
 100 Corporate Place
 Suite 105
 Rocky Hill, CT 06067-1803

Sample Information

Matrix: GROUND WATER
 Location Code: HALEY-NY
 Rush Request: Standard
 P.O.#: 0134976

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date Time
 11/16/23 11:35
 11/16/23 18:38

Laboratory Data

SDG ID: GCP49910
 Phoenix ID: CP49912

Project ID: TARRYTOWN
 Client ID: MW-20

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Iron	0.354	0.010	0.01	mg/L	1	11/28/23	TH	SW6010D
Manganese	0.049	0.001	0.001	mg/L	1	11/28/23	TH	SW6010D
B.O.D./5 day	ND	4.0		mg/L	2	11/16/23 18:38	PK/DT	SM 5210B-16
B.O.D./5 day End Incubation						11/21/23 13:43	PK/DT	SM 5210B-16
C.O.D.	87	10	10	mg/L	1	11/21/23	NP	SM 5220D-11
Dissolved Organic Carbon	3.5	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-11
Nitrite as Nitrogen	ND	0.50	0.200	mg/L	50	11/16/23 23:38	BS/GD	E300.0
Nitrate as Nitrogen	0.64	0.05	0.01	mg/L	1	11/16/23 21:36	BS/GD	E300.0
Sulfate	519	50.0	25.0	mg/L	10	11/16/23	BS/GD	E300.0
Sulfide	ND	0.05	0.05	mg/L	1	11/17/23	GD	SM4500S-D-11
Total Organic Carbon	3.9	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-14
Semi-Volatile Extraction	Completed					11/17/23	Z/MQ	SW3520C
Total Metals Digestion	Completed					11/17/23	AG	SW3010A

Aromatic Volatiles

Benzene	ND	0.70	0.50	ug/L	1	11/17/23	HM	SW8260C
Ethylbenzene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
m&p-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
o-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Toluene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C

QA/QC Surrogates

% 1,2-dichlorobenzene-d4	102			%	1	11/17/23	HM	70 - 130 %
% Bromofluorobenzene	102			%	1	11/17/23	HM	70 - 130 %
% Dibromofluoromethane	100			%	1	11/17/23	HM	70 - 130 %
% Toluene-d8	99			%	1	11/17/23	HM	70 - 130 %

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<u>Semivolatiles by SIM, PAH</u>								
2-Methylnaphthalene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Acenaphthene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Acenaphthylene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Anthracene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benz(a)anthracene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(a)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(b)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(ghi)perylene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(k)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Chrysene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Dibenz(a,h)anthracene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluoranthene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluorene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Naphthalene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Phenanthrene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Pyrene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
<u>QA/QC Surrogates</u>								
% 2-Fluorobiphenyl	53			%	1	11/20/23	MR	30 - 130 %
% Nitrobenzene-d5	60			%	1	11/20/23	MR	30 - 130 %
% Terphenyl-d14	57			%	1	11/20/23	MR	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
 QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

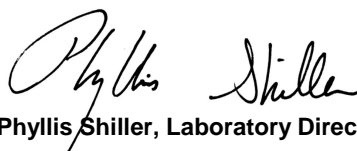
Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Semi-Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

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Phyllis Shiller, Laboratory Director

November 30, 2023

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

November 30, 2023

FOR: Attn: Cheryl Benmergui
Haley & Aldrich
100 Corporate Place
Suite 105
Rocky Hill, CT 06067-1803

Sample Information

Matrix: GROUND WATER
Location Code: HALEY-NY
Rush Request: Standard
P.O.#: 0134976

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date

11/16/23
11/16/23

Time

13:45
18:38

Laboratory Data

SDG ID: GCP49910
Phoenix ID: CP49913

Project ID: TARRYTOWN
Client ID: MW-24

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Iron	0.059	0.010	0.01	mg/L	1	11/27/23	TH	SW6010D
Manganese	0.005	0.001	0.001	mg/L	1	11/27/23	TH	SW6010D
B.O.D./5 day	ND	4.0		mg/L	2	11/16/23 18:38	PK/DT	SM 5210B-16
B.O.D./5 day End Incubation						11/21/23 13:43	PK/DT	SM 5210B-16
C.O.D.	76	10	10	mg/L	1	11/21/23	NP	SM 5220D-11
Dissolved Organic Carbon	3.1	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-11
Nitrite as Nitrogen	ND	0.50	0.200	mg/L	50	11/16/23 23:15	BS/GD	E300.0
Nitrate as Nitrogen	0.59	0.05	0.01	mg/L	1	11/16/23 21:47	BS/GD	E300.0
Sulfate	537	50.0	25.0	mg/L	10	11/16/23	BS/GD	E300.0
Sulfide	ND	0.05	0.05	mg/L	1	11/17/23	GD	SM4500S-D-11
Total Organic Carbon	3.1	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-14
Semi-Volatile Extraction	Completed					11/17/23	Z/MQ	SW3520C
Total Metals Digestion	Completed					11/17/23	AG	SW3010A

Aromatic Volatiles

Benzene	ND	0.70	0.50	ug/L	1	11/17/23	HM	SW8260C
Ethylbenzene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
m&p-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
o-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Toluene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C

QA/QC Surrogates

% 1,2-dichlorobenzene-d4	101			%	1	11/17/23	HM	70 - 130 %
% Bromofluorobenzene	101			%	1	11/17/23	HM	70 - 130 %
% Dibromofluoromethane	98			%	1	11/17/23	HM	70 - 130 %
% Toluene-d8	99			%	1	11/17/23	HM	70 - 130 %

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<u>Semivolatiles by SIM, PAH</u>								
2-Methylnaphthalene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Acenaphthene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Acenaphthylene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Anthracene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benz(a)anthracene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(a)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(b)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(ghi)perylene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(k)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Chrysene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Dibenz(a,h)anthracene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluoranthene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluorene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Naphthalene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Phenanthrene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
Pyrene	ND	0.48	0.48	ug/L	1	11/20/23	MR	SW8270E (SIM)
<u>QA/QC Surrogates</u>								
% 2-Fluorobiphenyl	64			%	1	11/20/23	MR	30 - 130 %
% Nitrobenzene-d5	72			%	1	11/20/23	MR	30 - 130 %
% Terphenyl-d14	67			%	1	11/20/23	MR	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
 QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

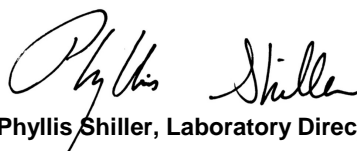
Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Semi-Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

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Phyllis Shiller, Laboratory Director

November 30, 2023

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

November 30, 2023

FOR: Attn: Cheryl Benmergui
 Haley & Aldrich
 100 Corporate Place
 Suite 105
 Rocky Hill, CT 06067-1803

Sample Information

Matrix: GROUND WATER
 Location Code: HALEY-NY
 Rush Request: Standard
 P.O.#: 0134976

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date Time
 11/16/23 15:20
 11/16/23 18:38

Laboratory Data

SDG ID: GCP49910
 Phoenix ID: CP49914

Project ID: TARRYTOWN
 Client ID: MW-21

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Iron	36.4	0.010	0.01	mg/L	1	11/27/23	CPP	SW6010D
Manganese	0.975	0.001	0.001	mg/L	1	11/27/23	CPP	SW6010D
B.O.D./5 day	9.1	4.0		mg/L	2	11/16/23 18:38	PK/DT	SM 5210B-16
B.O.D./5 day End Incubation						11/21/23 13:43	PK/DT	SM 5210B-16
C.O.D.	61	10	10	mg/L	1	11/21/23	NP	SM 5220D-11
Dissolved Organic Carbon	12.1	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-11
Nitrite as Nitrogen	ND	0.05	0.020	mg/L	5	11/16/23 23:26	BS/GD	E300.0
Nitrate as Nitrogen	0.01	J 0.05	0.01	mg/L	1	11/16/23 21:58	BS/GD	E300.0
Sulfate	539	50.0	25.0	mg/L	10	11/17/23	BS/GD	E300.0
Sulfide	3.86	0.75	0.75	mg/L	15	11/17/23	GD	SM4500S-D-11
Total Organic Carbon	13.5	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-14
Client MS/MSD	Completed					11/21/23		
Semi-Volatile Extraction	Completed					11/17/23	Z/MQ	SW3520C
Total Metals Digestion	Completed					11/17/23	AG	SW3010A

Aromatic Volatiles

Benzene	ND	0.70	0.50	ug/L	1	11/20/23	HM	SW8260C
Ethylbenzene	ND	2.0	0.50	ug/L	1	11/20/23	HM	SW8260C
m&p-Xylene	ND	2.0	0.50	ug/L	1	11/20/23	HM	SW8260C
Methyl t-butyl ether (MTBE)	0.62	J 2.0	0.50	ug/L	1	11/20/23	HM	SW8260C
o-Xylene	ND	2.0	0.50	ug/L	1	11/20/23	HM	SW8260C
Toluene	ND	2.0	0.50	ug/L	1	11/20/23	HM	SW8260C

QA/QC Surrogates

% 1,2-dichlorobenzene-d4	101			%	1	11/20/23	HM	70 - 130 %
% Bromofluorobenzene	102			%	1	11/20/23	HM	70 - 130 %
% Dibromofluoromethane	100			%	1	11/20/23	HM	70 - 130 %
% Toluene-d8	99			%	1	11/20/23	HM	70 - 130 %

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<u>Semivolatiles by SIM, PAH</u>								
2-Methylnaphthalene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Acenaphthene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Acenaphthylene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Anthracene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Benz(a)anthracene	0.04	0.02	0.02	ug/L	1	11/20/23	AW	SW8270E (SIM)
Benzo(a)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	AW	SW8270E (SIM)
Benzo(b)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	AW	SW8270E (SIM)
Benzo(ghi)perylene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Benzo(k)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	AW	SW8270E (SIM)
Chrysene	0.03	0.02	0.02	ug/L	1	11/20/23	AW	SW8270E (SIM)
Dibenz(a,h)anthracene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Fluoranthene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Fluorene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Indeno(1,2,3-cd)pyrene	0.03	0.02	0.02	ug/L	1	11/20/23	AW	SW8270E (SIM)
Naphthalene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Phenanthrene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
Pyrene	ND	0.48	0.48	ug/L	1	11/20/23	AW	SW8270E (SIM)
<u>QA/QC Surrogates</u>								
% 2-Fluorobiphenyl	67			%	1	11/20/23	AW	30 - 130 %
% Nitrobenzene-d5	75			%	1	11/20/23	AW	30 - 130 %
% Terphenyl-d14	71			%	1	11/20/23	AW	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low J=Estimated Below RL LOD=Limit of Detection MDL=Method Detection Limit1
 QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Semi-Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

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Phyllis Shiller, Laboratory Director

November 30, 2023

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

November 30, 2023

FOR: Attn: Cheryl Benmergui
Haley & Aldrich
100 Corporate Place
Suite 105
Rocky Hill, CT 06067-1803

Sample Information

Matrix: GROUND WATER
Location Code: HALEY-NY
Rush Request: Standard
P.O.#: 0134976

Custody Information

Collected by:
Received by: CP
Analyzed by: see "By" below

Date Time
11/16/23
11/16/23 18:38

Laboratory Data

SDG ID: GCP49910
Phoenix ID: CP49915

Project ID: TARRYTOWN
Client ID: DUP-1

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Iron	0.061	0.010	0.01	mg/L	1	11/28/23	TH	SW6010D
Manganese	0.006	0.001	0.001	mg/L	1	11/28/23	TH	SW6010D
B.O.D./5 day	ND	4.0		mg/L	2	11/16/23 18:38	PK/DT	SM 5210B-16
B.O.D./5 day End Incubation						11/21/23 13:43	PK/DT	SM 5210B-16
C.O.D.	87	10	10	mg/L	1	11/21/23	NP	SM 5220D-11
Dissolved Organic Carbon	3.1	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-11
Nitrite as Nitrogen	ND	0.50	0.200	mg/L	50	11/17/23 00:52	BS/GD	E300.0
Nitrate as Nitrogen	0.62	0.05	0.01	mg/L	1	11/16/23 22:08	BS/GD	E300.0
Sulfate	534	50.0	25.0	mg/L	10	11/17/23	BS/GD	E300.0
Sulfide	ND	0.05	0.05	mg/L	1	11/17/23	GD	SM4500S-D-11
Total Organic Carbon	3.7	1.0	1.0	mg/L	1	11/17/23	EG	SM5310B-14
Semi-Volatile Extraction	Completed					11/17/23	Z/MQ	SW3520C
Total Metals Digestion	Completed					11/17/23	AG	SW3010A

Aromatic Volatiles

Benzene	ND	0.70	0.50	ug/L	1	11/17/23	HM	SW8260C
Ethylbenzene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
m&p-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
o-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Toluene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C

QA/QC Surrogates

% 1,2-dichlorobenzene-d4	102			%	1	11/17/23	HM	70 - 130 %
% Bromofluorobenzene	102			%	1	11/17/23	HM	70 - 130 %
% Dibromofluoromethane	96			%	1	11/17/23	HM	70 - 130 %
% Toluene-d8	100			%	1	11/17/23	HM	70 - 130 %

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<u>Semivolatiles by SIM, PAH</u>								
2-Methylnaphthalene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Acenaphthene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Acenaphthylene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Anthracene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benz(a)anthracene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(a)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(b)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(ghi)perylene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Benzo(k)fluoranthene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Chrysene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Dibenz(a,h)anthracene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluoranthene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Fluorene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.02	0.02	ug/L	1	11/20/23	MR	SW8270E (SIM)
Naphthalene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Phenanthrene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
Pyrene	ND	0.47	0.47	ug/L	1	11/20/23	MR	SW8270E (SIM)
<u>QA/QC Surrogates</u>								
% 2-Fluorobiphenyl	50			%	1	11/20/23	MR	30 - 130 %
% Nitrobenzene-d5	56			%	1	11/20/23	MR	30 - 130 %
% Terphenyl-d14	55			%	1	11/20/23	MR	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
 QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

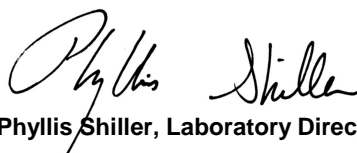
Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

Semi-Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

November 30, 2023

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
 Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report
 November 30, 2023

FOR: Attn: Cheryl Benmergui
 Haley & Aldrich
 100 Corporate Place
 Suite 105
 Rocky Hill, CT 06067-1803

Sample Information

Matrix: GROUND WATER
 Location Code: HALEY-NY
 Rush Request: Standard
 P.O.#: 0134976

Custody Information

Collected by:
 Received by: CP
 Analyzed by: see "By" below

Date Time
 11/16/23
 11/16/23 18:38

Laboratory Data

SDG ID: GCP49910
 Phoenix ID: CP49916

Project ID: TARRYTOWN
 Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<u>Aromatic Volatiles</u>								
Benzene	ND	0.70	0.50	ug/L	1	11/17/23	HM	SW8260C
Ethylbenzene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
m&p-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
o-Xylene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
Toluene	ND	2.0	0.50	ug/L	1	11/17/23	HM	SW8260C
<u>QA/QC Surrogates</u>								
% 1,2-dichlorobenzene-d4	102			%	1	11/17/23	HM	70 - 130 %
% Bromofluorobenzene	102			%	1	11/17/23	HM	70 - 130 %
% Dibromofluoromethane	97			%	1	11/17/23	HM	70 - 130 %
% Toluene-d8	99			%	1	11/17/23	HM	70 - 130 %

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
-----------	--------	------------	-------------	-------	----------	-----------	----	-----------

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

Volatile Comment:

To achieve client's objectives, where the lowest calibration standard or LOD justifies lowering the RL/PQL, the RL/PQL of some compounds have been lowered to meet criteria.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

November 30, 2023

Reviewed and Released by: Rashmi Makol, Project Manager

Thursday, November 30, 2023

Criteria: NY: GW

State: NY

Sample Criteria Exceedances Report

GCP49910 - HALEY-NY

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CP49910	\$8100SIMR	Benzo(a)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Benz(a)anthracene	NY / TAGM - Semi-Volatiles / Groundwater Standards	0.03	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Benzo(b)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Benzo(k)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Chrysene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Naphthalene	NY / TAGM - Semi-Volatiles / Groundwater Standards	16	0.09	10	10	ug/L
CP49910	\$8100SIMR	Naphthalene	NY / TAGM - Volatile Organics / Groundwater Standards	16	0.09	5	5	ug/L
CP49910	\$8100SIMR	Benzo(k)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Chrysene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Benz(a)anthracene	NY / TOGS - Water Quality / GA Criteria	0.03	0.02	0.002	0.002	ug/L
CP49910	\$8100SIMR	Naphthalene	NY / TOGS - Water Quality / GA Criteria	16	0.09	10	10	ug/L
CP49910	\$8100SIMR	Benzo(b)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49910	FE-WM	Iron	NY / TOGS - Water Quality / GA Criteria	4.83	0.010	0.3	0.3	mg/L
CP49911	\$8100SIMR	Benzo(a)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	0.02	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Benz(a)anthracene	NY / TAGM - Semi-Volatiles / Groundwater Standards	0.04	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Benzo(b)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Benzo(k)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Chrysene	NY / TAGM - Semi-Volatiles / Groundwater Standards	0.03	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Benzo(b)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Benzo(k)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Chrysene	NY / TOGS - Water Quality / GA Criteria	0.03	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49911	\$8100SIMR	Benz(a)anthracene	NY / TOGS - Water Quality / GA Criteria	0.04	0.02	0.002	0.002	ug/L
CP49911	FE-WM	Iron	NY / TOGS - Water Quality / GA Criteria	21.5	0.010	0.3	0.3	mg/L
CP49911	MN-WM	Manganese	NY / TOGS - Water Quality / GA Criteria	1.42	0.001	0.3	0.3	mg/L
CP49912	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Chrysene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Benz(a)anthracene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Benzo(k)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Benzo(b)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Benzo(a)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Benzo(b)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Benzo(k)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Benz(a)anthracene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49912	\$8100SIMR	Chrysene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49912	FE-WM	Iron	NY / TOGS - Water Quality / GA Criteria	0.354	0.010	0.3	0.3	mg/L

Thursday, November 30, 2023

Criteria: NY: GW

State: NY

Sample Criteria Exceedances Report

GCP49910 - HALEY-NY

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CP49912	SO4-IC	Sulfate	NY / TOGS - Water Quality / GA Criteria	519	50.0	250	250	mg/L
CP49913	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Benzo(k)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Benzo(b)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Chrysene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Benzo(a)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Benz(a)anthracene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Benzo(b)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Benzo(k)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Benz(a)anthracene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49913	\$8100SIMR	Chrysene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49913	SO4-IC	Sulfate	NY / TOGS - Water Quality / GA Criteria	537	50.0	250	250	mg/L
CP49914	\$8100SIMR	Chrysene	NY / TAGM - Semi-Volatiles / Groundwater Standards	0.03	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Benzo(a)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Benz(a)anthracene	NY / TAGM - Semi-Volatiles / Groundwater Standards	0.04	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Benzo(k)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Benzo(b)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	0.03	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Benz(a)anthracene	NY / TOGS - Water Quality / GA Criteria	0.04	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Benzo(b)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Chrysene	NY / TOGS - Water Quality / GA Criteria	0.03	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TOGS - Water Quality / GA Criteria	0.03	0.02	0.002	0.002	ug/L
CP49914	\$8100SIMR	Benzo(k)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49914	FE-WM	Iron	NY / TOGS - Water Quality / GA Criteria	36.4	0.010	0.3	0.3	mg/L
CP49914	MN-WM	Manganese	NY / TOGS - Water Quality / GA Criteria	0.975	0.001	0.3	0.3	mg/L
CP49914	SO4-IC	Sulfate	NY / TOGS - Water Quality / GA Criteria	539	50.0	250	250	mg/L
CP49915	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Benz(a)anthracene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Benzo(a)pyrene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Benzo(b)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Benzo(k)fluoranthene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Chrysene	NY / TAGM - Semi-Volatiles / Groundwater Standards	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Benz(a)anthracene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Benzo(b)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Benzo(k)fluoranthene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Indeno(1,2,3-cd)pyrene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49915	\$8100SIMR	Chrysene	NY / TOGS - Water Quality / GA Criteria	ND	0.02	0.002	0.002	ug/L
CP49915	SO4-IC	Sulfate	NY / TOGS - Water Quality / GA Criteria	534	50.0	250	250	mg/L

Thursday, November 30, 2023

Criteria: NY: GW

State: NY

Sample Criteria Exceedances Report

GCP49910 - HALEY-NY

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
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Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



NY Temperature Narration

November 30, 2023

SDG I.D.: GCP49910

The samples in this delivery group were received at 2.1°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)



NY/NJ/PA CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Email: Makrina Nolan, makrina@phoenixlabs.com Fax (860) 645-0823
 Client Services (860) 645-1102

Coolant: Yes No
 IPK ICE
 Temp: 14 °C Pg of 1

Contact Options:

Phone:
 Fax:
 Email:

Project P.O.: 0134976

Project: Tarrytown
 Report to: cbenmrgui@chulayshih.com
 Invoice to:
 QUOTE # :

This section MUST be completed with Bottle Quantities.

Sampler's Signature	Client Sample - Information - Identification		Date: <u>11/16/13</u>	Analysis Request	
	Signature	Date			
	<u>[Signature]</u>	<u>11/16/13</u>			
Matrix Code:	GW=Ground Water SW=Surface Water WW=Waste Water OIL=Oil DW=Drinking Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe RW=Raw Water B=Bulk L=Liquid				
PHOENIX USE ONLY	SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled
	12	MW-12	SW	11/16/13	8:30
	12	MW-29			10:00
	12	MW-20		11/35	
	12	MW-24		13:45	
	12	MW-21		15:20	
	12	DUP-1		-	
	12	MW-21-MJ		15:25	
	12	MW-21-MSD		15:30	
	2	Trip Blank	TB		

Relinquished by: <u>[Signature]</u>	Accepted by: <u>[Signature]</u>	Date: <u>11/16/13</u>	Time: <u>3:46</u>
			<u>10:38</u>

Comments, Special Requirements or Regulations:	Data Format:	Data Package:
	<input type="checkbox"/> Phoenix Std Report <input checked="" type="checkbox"/> EQUIS <input type="checkbox"/> Excel <input type="checkbox"/> NJ Hazsite EDD <input type="checkbox"/> PDF <input type="checkbox"/> NY EZ EDD (ASP) <input type="checkbox"/> GIS/Key <input type="checkbox"/> Other	<input type="checkbox"/> Res. Criteria <input type="checkbox"/> GW Criteria <input type="checkbox"/> Non-Res. Criteria <input type="checkbox"/> Other <input type="checkbox"/> Impact to GW Soil <input type="checkbox"/> Other <input type="checkbox"/> Cleanup Criteria <input type="checkbox"/> Other <input type="checkbox"/> Impact to GW soil screen Criteria

Turnaround:	PA
<input type="checkbox"/> 1 Day* <input type="checkbox"/> 2 Days* <input type="checkbox"/> 3 Days* <input type="checkbox"/> 4 Days* <input type="checkbox"/> 5 Days* <input checked="" type="checkbox"/> Standard *SURCHARGE APPLIES	<input type="checkbox"/> Clean Fill Limits <input type="checkbox"/> PA-GW <input type="checkbox"/> Reg Fill Limits <input type="checkbox"/> PA Soil Restricted <input type="checkbox"/> PA Soil non-restricted

NY	TOGS GW	State Samples Collected?
<input checked="" type="checkbox"/> TOGS GW <input type="checkbox"/> CP-51 SOIL <input type="checkbox"/> 375SCO <input type="checkbox"/> Unrestricted Soil <input type="checkbox"/> 375SCO <input type="checkbox"/> Residential Soil <input type="checkbox"/> 375SCO <input type="checkbox"/> Residential Restricted Soil <input type="checkbox"/> 375SCO <input type="checkbox"/> Commercial Soil <input type="checkbox"/> 375SCO <input type="checkbox"/> Industrial Soil <input type="checkbox"/> Subpart 5 DW	<input type="checkbox"/> Clean Fill Limits <input type="checkbox"/> PA-GW <input type="checkbox"/> Reg Fill Limits <input type="checkbox"/> PA Soil Restricted <input type="checkbox"/> PA Soil non-restricted	<input type="checkbox"/> State Samples Collected?

CPC49910

Tarrytown Former MGP Site

Source: Site Management Plan Appendix F - Table 2

Table 1 - Sampling Parameters and Recommended Analytical Methods

Analyte	Analytical Method
BTEX	
Benzene	8260B
Toluene	8260B
Ethylbenzene	8260B
O-Xylene	8260B
M&P-Xylene	8260B
Polycyclic Aromatic Hydrocarbons (PAH)	
Acenaphthene	8270C
Acenaphthylene	8270C
Anthracene	8270C
Benz(a)anthracene	8270C
Benzo(a)pyrene	8270C
Benzo(b)fluoranthene	8270C
Benzo(ghi)fluoranthene	8270C
Benzo(k)fluoranthene	8270C
Chrysene	8270C
Dibenz(a,h)anthracene	8270C
Fluoranthene	8270C
Fluorene	8270C
Indeno(1,2,3-cd)pyrene	8270C
Napthalene	8270C
Phenanthrene	8270C
Pyrene	8270C
Attenuation Indicators	
FIELD PARAMETERS	
Dissolved Oxygen	Field Probe
Oxygen-Reduction Potential	Field Probe
pH	Field Probe
Specific Conductance	Field Probe
Temperature	Field Probe
Ferrous Iron (Fe ²⁺)	Field Probe
Carbon Dioxide	Field Probe
Alkalinity	Field Probe
Turbidity	Field Probe
Laboratory Parameters	
Biochemical Oxygen Demand	5210B
Chemical Oxygen Demand	5520C, 5520D
Dissolved Organic Carbon	415.1
Total Organic Carbon	9060
Sulfate	375.4
Sulfide	376.1, 376.2
Nitrate	353.2
Nitrite	353.2
Total Iron	6010
Manganese	6010

* include this attachment when submitting the Chain of Custody

Phoenix Environmental Laboratories, Inc.
 587 East Middle Turnpike
 Manchester, CT 06040
 Please email Krystal Houle with any questions
khoule@phoenixlabs.com

GCP49910

Container Order

Company: **Haley & Aldrich -Site**
 2 Hudson View Way
 Tarrytown, NY

Tarrytown
Project: Former MGP

Contact: Sebastian Sotomayor

Deliver: 11.15.23

Ground Water

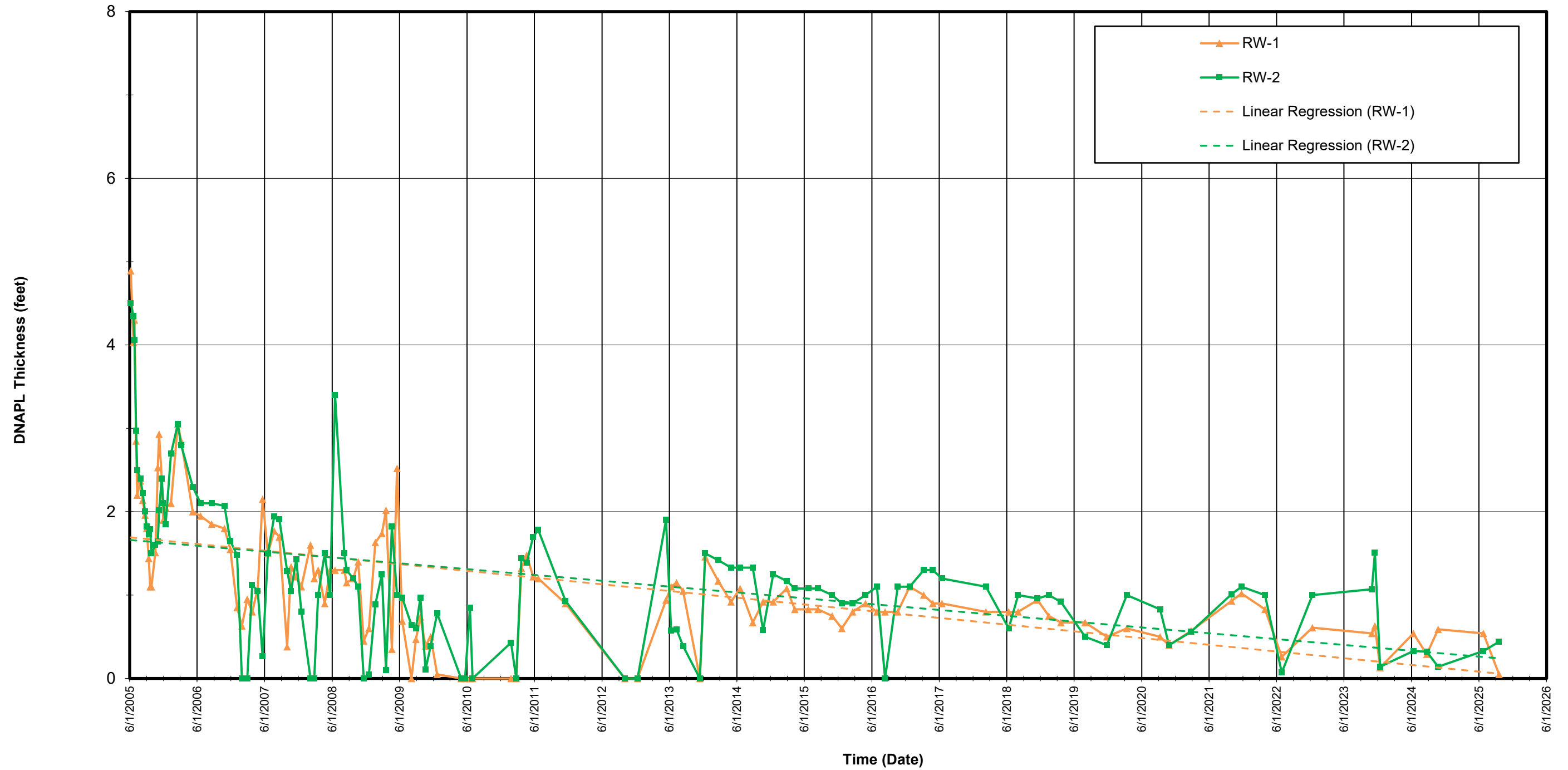
<u>Phoenix Requires # Per Set</u>	<u>Your Requested Sets</u>	<u>Total</u>	<u>Container</u>	<u>Preservative</u>	<u>Analysis Being Requested</u>
3	8	24	40ml Vials	HCL	BTEX
2	8	16	Liter Amber	AS IS	PAH
1	8	8	500ml Plastic	AS IS	BOD
1	8	8	250ml Plastic	H2SO4	COD
1	8	8	250ml Plastic	HNO3	Total Iron, Manganese
1	8	8	250ml Plastic	NAOH/Zinc Acetate	Sulfide
1	8	8	8oz Amber Bottle	H3PO4	TOC
1	8	8	500ml Plastic	AS IS	Sulfate, Nitrate, Nitrite
1	8	8	8oz Amber Bottle	AS IS	DOC (lab to filter)

Also Included:

- Chains, Labels
- VOA Bags
- Coolers
- 2 HCL Vials with Reagent Water Sealed = Trip Blank

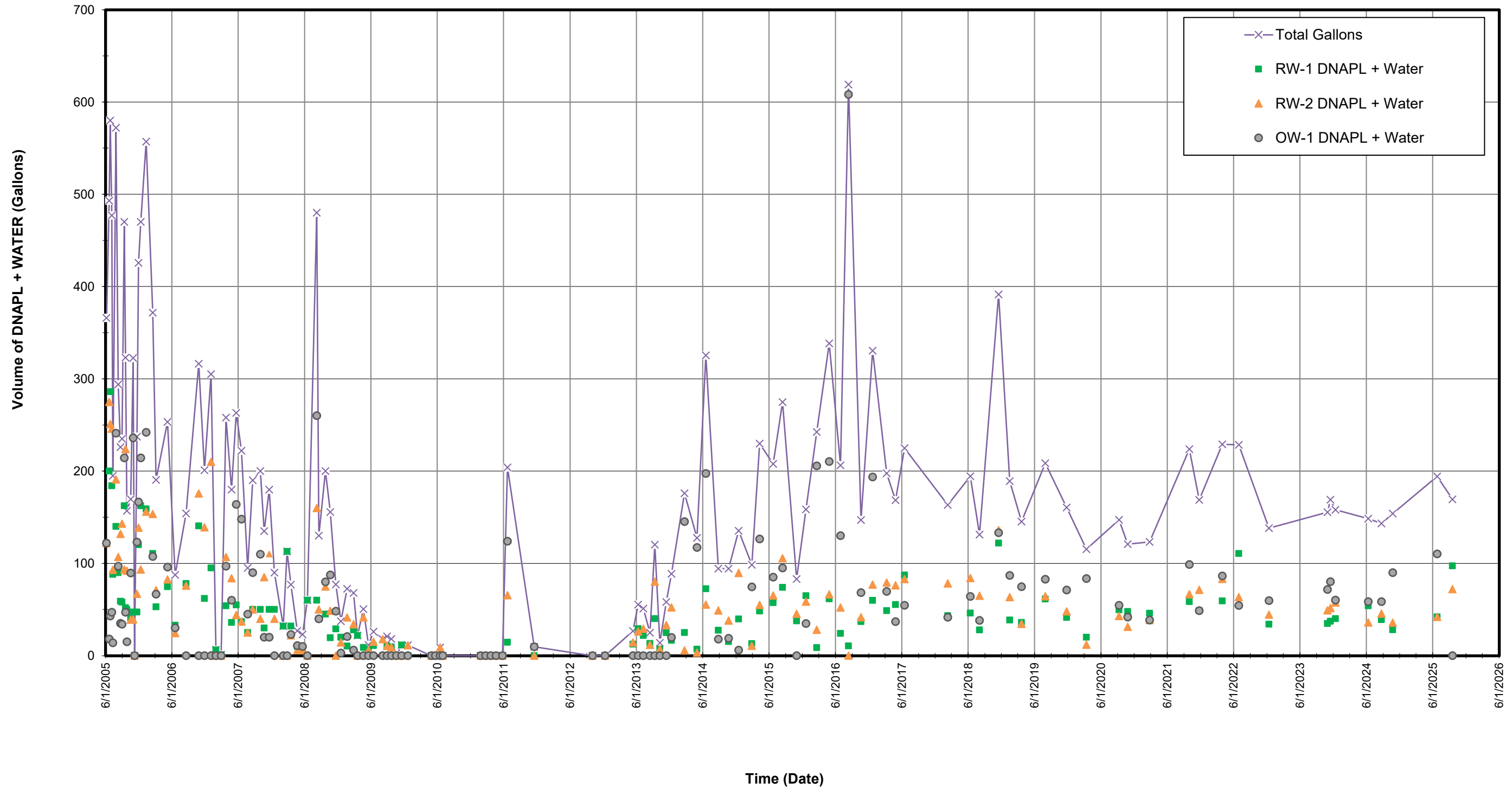
APPENDIX D
DNAPL Monitoring and Extraction Summary

**FIGURE 1
WESTERN DNAPL RECOVERY SYSTEM
DNAPL THICKNESS**

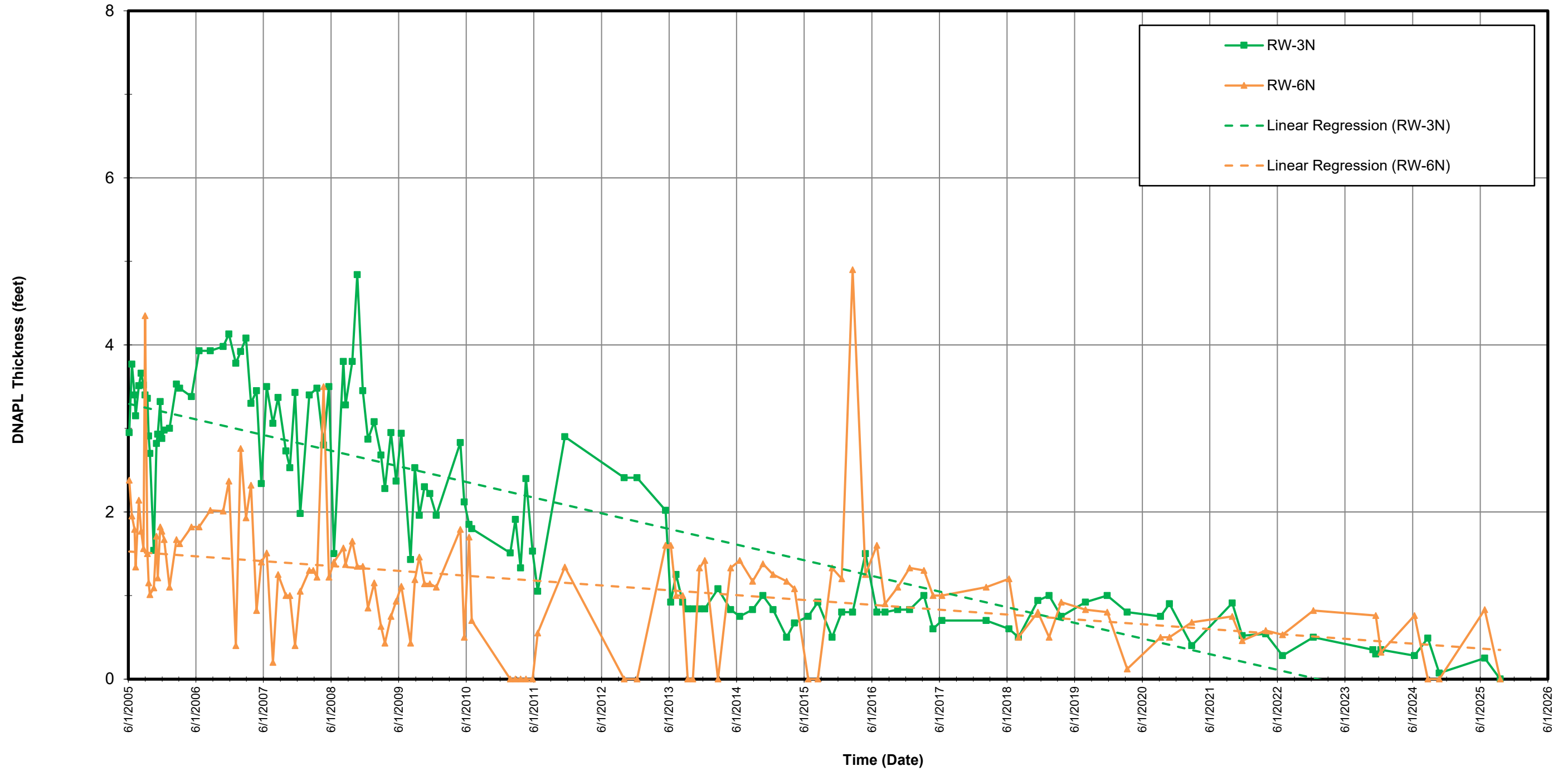


NOTES:
1. Lines illustrate data trends only and should not be used to interpolate data.

FIGURE 2
WESTERN DNAPL RECOVERY SYSTEM
FLUID VOLUME EXTRACTED

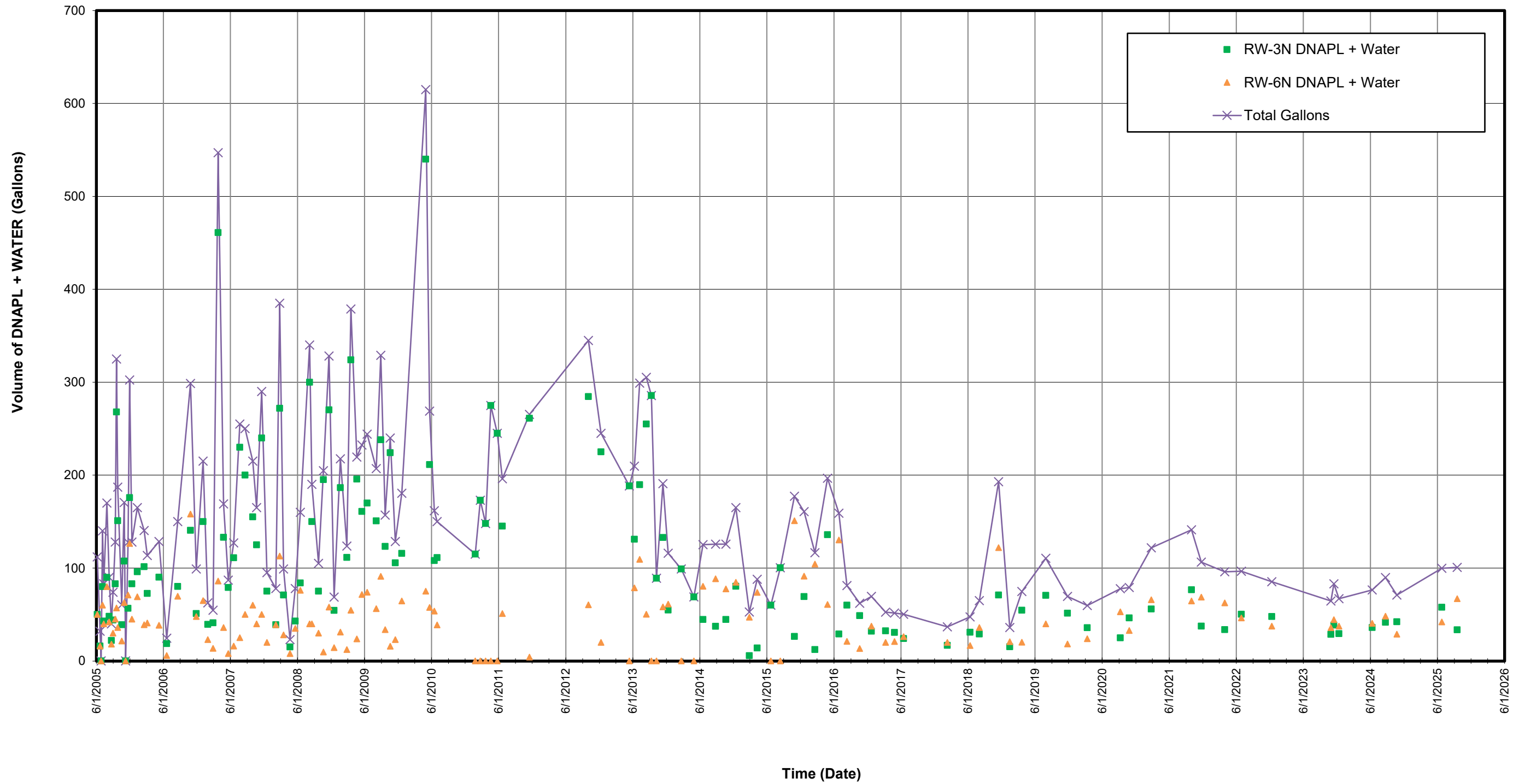


**FIGURE 3
NORTHERN DNAPL RECOVERY SYSTEM
DNAPL THICKNESS**



NOTES:
1. Lines illustrate data trends only and should not be used to interpolate data.

FIGURE 4
NORTHERN DNAPL RECOVERY SYSTEM
FLUID VOLUME EXTRACTED





DNAPL EXTRACTION REPORT

PROJECT Tarrytown Former MGP Site
LOCATION Tarrytown, New York

Well ID#	Date	DNAPLTime (seconds)	Total Time (seconds)	DNAPL Extracted	Total Extracted	Units	Extraction Method	Performed By	
OW-1	6/25/2025	41	45	43.1	47.25	Gallons	vac truck	SS	KM
RW-1	6/25/2025	14	20	14.7	21.00	Gallons	vac truck	SS	KM
RW-2	6/25/2025	26	30	27.3	31.50	Gallons	vac truck	SS	KM
OW-1	6/25/2025	60	60	63.0	63.00	Gallons	vac truck	SS	KM
RW-1	6/25/2025	10	20	10.5	21.00	Gallons	vac truck	SS	KM
RW-2	6/25/2025	5	10	5.3	10.50	Gallons	vac truck	SS	KM
OW-1	-	-	-	-	-	-	-	-	-
RW-1	-	-	-	-	-	-	-	-	-
RW-2	-	-	-	-	-	-	-	-	-
RW-6N	6/25/2025	22	30	23.1	31.50	Gallons	vac truck	SS	KM
RW-3N	6/25/2025	15	25	15.8	26.25	Gallons	vac truck	SS	KM
RW-6N	6/25/2025	3	10	3.2	10.50	Gallons	vac truck	SS	KM
RW-3N	6/25/2025	15	30	15.8	31.50	Gallons	vac truck	SS	KM
Total Time		211	280						
Total Volume Extracted				221.6	294.00				

Total Volume Removed From Site: gals.

REMARKS: See Section 2 of Operation, Maintenance and Monitoring Plan for DNAPL extraction instructions

All wells producing DNAPL contain 2-inch PVC risers for collection.



DNAPL MONITORING REPORT

PROJECT Tarrytown Former MGP Site
LOCATION Tarrytown, New York

Well ID#	Date	Time	Depth of Water from Stick Down*	Top of LNAPL	Top of DNAPL	Bottom of DNAPL	Thickness of DNAPL	Depth of Well	Thickness of Sediment in Bottom of Well	Read By
Northern DNAPL Area										
OW-1N	6/25/2025	9:35	6.16	N/A	N/A	N/A	0	22.5		SS/KM
RW-1N	6/25/2025	9:39	7.33	N/A	N/A	N/A	0	18.55		SS/KM
RW-2N	6/25/2025	9:43	6.07	N/A	N/A	N/A	0	18.05		SS/KM
RW-3N	6/25/2025	9:50	5.23	N/A	18.45	Bottom of well	0.25	18.7		SS/KM
RW-4N	Well decommissioned and grouted closed on 7/14/2017									
RW-5N	Well decommissioned and grouted closed on 7/14/2017									
RW-6N	6/25/2025	9:54	7.99	N/A	23.05	Bottom of well	0.83	23.88	-	SS/KM
OW-2N	6/25/2025	10:00	8.18	N/A	N/A	N/A	N/A	22.05		SS/KM
RW-3N	6/25/2025	14:12	5.26	N/A	N/A	N/A	N/A	18.7		SS/KM
RW-6N	6/25/2025	14:16	8.03	N/A	23.81	Bottom of well	0.07	23.88	-	SS/KM
Western DNAPL Area										
OW-1	6/25/2025	8:45	7.47	N/A	26.71	Bottom of well	2.12	28.83		SS/KM
RW-1	6/25/2025	8:50	7.35	N/A	27.32	Bottom of well	0.54	27.86		SS/KM
RW-2	6/25/2025	8:55	7.66	N/A	28.07	Bottom of well	0.33	28.4		SS/KM
OW-2	6/25/2025	9:00	7.71	-	-	-	-	-	-	SS/KM
OW-1	6/25/2025	11:05	-	N/A	8.38	Bottom of well	20.45	28.83		SS/KM
RW-1	6/25/2025	11:10	7.24	N/A	27.74	Bottom of well	0.12	27.86		SS/KM
RW-2	6/25/2025	11:15	7.53	N/A	28.32	Bottom of well	0.08	28.4		SS/KM
OW-2	6/25/2025	11:20	7.59	-	-	-	-	-	-	SS/KM

REMARKS: Criteria to note in remarks: 1. Thickness of Sediment within the well. 2. Describe any soils on the probe (color, type) 3. Note color of DNAPL on probe or tape.

* Depth measurements taken from top of riser.

** New depth of well(s) due to addition of riser installed with new manhole(s). OW-1N NEW STICK-UP = EI 9.37. RW-1N NEW STICK-UP = EI 10.07.

*** Depths of wells RW-4N, RW-5N, RW-6N and OW-2N changed recently due to riser and well head extensions.

RW-4N NEW STICK-UP = EL 11.19 (CONFIRMED 04/27/2017). RW-5N NEW STICK-UP = EL 11.23. RW-6N NEW STICK-UP = EL 11.17. OW-2N NEW STICK-UP = EL 11.15.

**** Second Extraction on OW-1 showed no water, DNAPL rose to top of column and well measured DNAPL all the way to bottom of the well.

See Table I in Operation, Maintenance and Monitoring Plan for frequency of monitoring and inspection.

ANNUAL INSPECTION NOTES:

SHIPPING DOCUMENT

IN THE EVENT OF AN EMERGENCY CALL **24-Hr-Number** 1-800-460-1760 (SAFETY-KLEEN SYSTEMS, INC.)

REFERENCE NBR.

97516527 - 2503290885

CUSTOMER / GENERATOR: FE18257 Ferry Landings Llc
129 Main Street
Tarrytown NY 10591 - 0000
PHONE: 203 - 661 - 0055

GENERATOR USEPA ID:

GENERATOR STATE ID:

MANIFEST#:

FORM CD : NR

SIMP# 245938290

TRANSPORTER 1 TX0000081205 Safety Kleen
Address Transporter1: SAFETY - KLEEN SYSTEMS INC.
1722 COOPER CREEK RD
Ste 100
DENTON , TX
US PostalCode: 76208
Phone: 800 - 669 - 5840
TRANSPORTER 2

US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID)

OILY WATER

(NOT USDOT OR USEPA REGULATED)(VAC)

FEDERAL WASTE CODES NONE

STATE WASTE CODES

TOTAL CONT 1 TYPE: TT WT/VOL 6 SLDOT 7008471
CNT# 250610295986 S2: BULK VOLUME CONTAINER QTY: 294 PRDF# 150451

DESIGNATED FACILITY NAME/ADDRESS:

Murphy's Waste Oil Service, Inc.
279 RTE 6
MAHOPAC
NY 10541
TSD PHONE: 845 - 279 - 0263

FACILITY USEPA ID NO NYD044825636

FACILITY STATE ID NO

GENERATOR STATUS CES06: Vehicle

CUSTOMER / GENERATOR: Mike

TRANSPORTER: Delahanty, Richard B

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DNAPL EXTRACTION REPORT

PROJECT Tarrytown Former MGP Site
LOCATION Tarrytown, New York

Well ID#	Date	DNAPLTime (seconds)	Total Time (seconds)	DNAPL Extracted	Total Extracted	Units	Extraction Method	Performed By	
RW-1	9/17/2025	35	38	58.7	63.73	Gallons	vac truck	SS	KM
RW-2	9/17/2025	18	20	30.2	33.54	Gallons	vac truck	SS	KM
RW-1	9/17/2025	16	20	26.8	33.54	Gallons	vac truck	SS	KM
RW-2	9/17/2025	20	23	33.5	38.57	Gallons	vac truck	SS	KM
RW-6N	9/17/2025	18	20	30.2	33.54	Gallons	vac truck	SS	KM
RW-3N	9/17/2025	0	10	0.0	16.77	Gallons	vac truck	SS	KM
RW-6N	9/17/2025	0	20	0.0	33.54	Gallons	vac truck	SS	KM
RW-3N	9/17/2025	0	10	0.0	16.77	Gallons	vac truck	SS	KM
Total Time		107	161						
Total Volume Extracted				179.4	270.00				

Total Volume Removed From Site: gals.

REMARKS: See Section 2 of Operation, Maintenance and Monitoring Plan for DNAPL extraction instructions

As per the NYSDEC approved Site Management Program Modification Request, OW-1 has been removed from the extraction event.

All wells producing DNAPL contain 2-inch PVC risers for collection.



DNAPL MONITORING REPORT

PROJECT Tarrytown Former MGP Site
LOCATION Tarrytown, New York

Well ID#	Date	Time	Depth of Water from Stick Down*	Top of LNAPL	Top of DNAPL	Bottom of DNAPL	Thickness of DNAPL	Depth of Well	Thickness of Sediment in Bottom of Well	Read By
Northern DNAPL Area										
OW-1N	9/17/2025		6.06	NA	-	-	0	22.5		SS/KM
RW-1N	9/17/2025		7.14	NA	-	-	0	18.55		SS/KM
RW-2N	9/17/2025		5.98	NA	-	-	0	18.05		SS/KM
RW-3N	9/17/2025		5.35	NA	-	-	0	18.7		SS/KM
RW-4N	Well decommissioned and grouted closed on 7/14/2017									
RW-5N	Well decommissioned and grouted closed on 7/14/2017									
RW-6N	9/17/2025		8.12	NA	-	-	0	23.88	-	SS/KM
OW-2N	9/17/2025		8.34	NA	-	-	0	22.05		SS/KM
RW-3N	9/17/2025		5.33	NA	-	-	0	18.7		SS/KM
RW-6N	9/17/2025		8.11	NA	-	-	0	23.88	-	
Western DNAPL Area										
OW-1	9/17/2025	9:24	7.28	NA	25.07	28.83	3.76	28.83		SS/KM
RW-1	9/17/2025	9:29	7.03	NA	27.81	27.86	0.05	27.86		SS/KM
RW-2	9/17/2025	9:35	7.23	NA	27.96	28.4	0.44	28.4		SS/KM
OW-2	9/17/2025	-	-	-	-	-	-	-	-	SS/KM
OW-1	9/17/2025	12:05	7.35	NA	25	28.83	3.83	28.83		SS/KM
RW-1	9/17/2025	12:10	7.2	NA	27.69	27.86	0.17	27.86		SS/KM
RW-2	9/17/2025	12:14	7.72	NA	-	28.4	0	28.4		SS/KM
OW-2	9/17/2025	-	-	-	-	-	-	-	-	SS/KM

REMARKS: Criteria to note in remarks: 1. Thickness of Sediment within the well. 2. Describe any soils on the probe (color, type) 3. Note color of DNAPL on probe or tape.

* Depth measurements taken from top of riser.

** New depth of well(s) due to addition of riser installed with new manhole(s). OW-1N NEW STICK-UP = EI 9.37. RW-1N NEW STICK-UP = EI 10.07.

*** Depths of wells RW-4N, RW-5N, RW-6N and OW-2N changed recently due to riser and well head extensions.

RW-4N NEW STICK-UP = EL 11.19 (CONFIRMED 04/27/2017). RW-5N NEW STICK-UP = EL 11.23. RW-6N NEW STICK-UP = EL 11.17. OW-2N NEW STICK-UP = EL 11.15.

**** No DNAPL reading for RW-3N and RW-6N before or after either purge event.

See Table I in Operation, Maintenance and Monitoring Plan for frequency of monitoring and inspection.

ANNUAL INSPECTION NOTES:

APPENDIX E
Annual Site Inspection Form



SMP - ANNUAL SITE INSPECTION

PROJECT	Tarrytown Former MGP Site	Prepared By: Sebastian Sotomayor	Routine/Nonroutine Inspection: Routine Annual
LOCATION	Tarrytown, NY	Company: Haley & Aldrich	Weather: Sunny 75 F
DATE(s)	9/17/2025	Title: Project Environmental Engineer	Other Noteworthy Conditions: None

Attach sketches and/or photographs, as needed.

1. SITE COVER - SOIL, CONCRETE, ASPHALT, STRUCTURES

A. Visual Inspection and Observations:

During the 12/14/2024 - 12/13/2025 reporting period, Haley & Aldrich performed environmental monitoring and other services as needed under the Site Management Plan. The site cover is in place and effective at the time of inspection. There were no changes in the site cover plan.

B. Maintenance, repairs, or changes to site cover completed since previous inspection(s):

None related to site cover.

C. Deficiencies noted, if any:

None related to site cover.

D. Recommended actions:

None related to site engineering controls.

2. OTHER SITE OBSERVATIONS (include any incidents, repairs, maintenance, or other observations affecting site management plan and reporting):

DNAPL monitoring and extractions were performed two times during the reporting period.

3. SITE / OWNER PERSONNEL CONTACTED:

a. Michael Cooney, Ferry Landings, LLC

b. Carlos Jimenez, Ferry Landings, LLC