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2022 Periodic Review Report

Nyack Manufactured Gas Plant Site
Village of Nyack, Rockland County, New York

NYSDEC Site Number: 344046
Index # D3-001-98-08

Prepared For:
Orange and Rockland Utilities, Inc.
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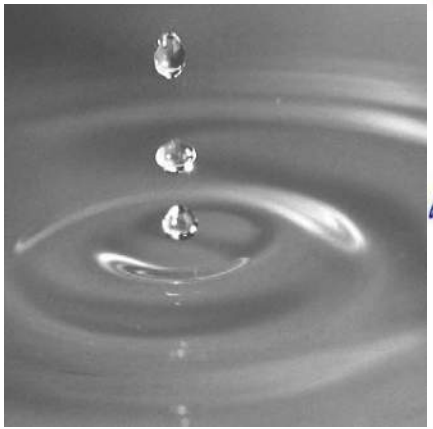
December 2022
Project 2202333



Wendy Moore, P.E.
Project Manager

Joseph Simone, P.E.
Senior Consulting Engineer

Engineer's Certification

I, Wendy Moore, P.E., certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375, and that this Periodic Review Report (PRR) was prepared in accordance with the Site Management Plan (SMP) for the Nyack Former Manufactured Gas Plant (MGP) site, and all applicable statutes and regulations, and in substantial conformance with the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10).

December 27, 2022
Date

Engineer's Seal
GEI Consultants, Inc., P.C.

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

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. 344046

Site Name OR - Nyack MGP

Site Address: 55 Gedney St Zip Code: 10960-
City/Town: Nyack
County: Rockland
Site Acreage: 3.840

Reporting Period: November 30, 2021 to November 30, 2022

		YES	NO
1.	Is the information above correct?	X	☐
	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?	☐	X
3.	Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
	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? Current owner has plans for development, but have been on hold for several years while they attempt to obtain permits.	☐	X

Box 2

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

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

8/22/2023
Date

SITE NO. 344046 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
66.39-1-1	TZ Vista, LLC	Ground Water Use Restriction
		Soil Management Plan
		Landuse Restriction
		Site Management Plan

Box 4

Description of Engineering Controls

Parcel	Engineering Control
66.39-1-1	Vapor Mitigation
	Cover System

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

YES	NO
X	☐

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;

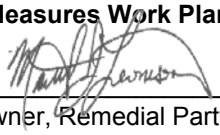
   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (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
X	☐

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

8/22/2023

Date

IC CERTIFICATIONS
SITE NO. 344046

Box 6

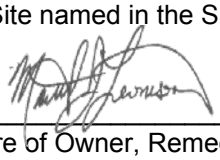
SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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 Matthew Levinson (print name) at Consolidated Edison of New York, Inc. (print business address),

am certifying as Remedial Party (Owner or Remedial Party)

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



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

8/22/2023
Date

EC CERTIFICATIONS

Box 7

Signature

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

I Wendy Moore (print name) at GEI Consultants, Inc. (print business address),

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

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

Stamp (Required for PE)

8/22/2023

Date

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WLM:mlr:tc

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1. Introduction

This Periodic Review Report (PRR) for monitoring and inspection is required as an element of the post-remedial program at the Nyack Former Manufactured Gas Plant (MGP) site under the New York State Inactive Hazardous Waste Disposal Site Remedial Program administered by the New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Order on Consent Index # D3-0001-98-08, Site #344046, which was executed on March 11, 1999.

1.1 General

Orange and Rockland Utilities, Inc. (O&R) entered into the above-referenced Order on Consent with the NYSDEC in 1999 to remediate the former Nyack MGP site located along Gedney Street in the Village of Nyack, Rockland County, New York. The Order on Consent required the Remedial Party (O&R) to investigate and remediate impacted media at the site.

The remediation of the site was performed over the course of several years and was completed in April 2015. The remediation activities are documented in the NYSDEC-approved Final Engineering Report (FER) prepared by GEI Consultants, Inc. (GEI) on behalf of O&R (GEI, 2016a). A Site Management Plan (SMP) was also prepared by GEI in April 2016 (GEI, 2016b) and subsequently approved by NYSDEC, which describes the long-term monitoring and maintenance activities necessary to comply with environmental and institutional controls placed on the site as part of the approved remedy. Specifically, the SMP identifies the required post-remedial tasks, including:

- non-aqueous phase liquid (NAPL) gauging (and removal if present in measurable quantities),
- annual groundwater sampling, and
- annual inspection of post-remedial engineering controls.

In 2017, the ownership of the site changed to TZ Vista LLC (TZ Vista). TZ Vista is redeveloping the former MGP site together with the "Hudson Vista parcel" (located immediately to the south of the site). From discussions with the Site Owner, it is O&R's understanding that construction of the new residential and commercial facility has been awaiting local approvals for the past several years, and will likely take place over a two-year period following these approvals. Phase 1 construction includes construction activities predominately on the Hudson Vista parcel; however, while some limited site work has taken place since TZ Vista took ownership, construction has not begun as of the October 27, 2022, site inspection. Further, discussions with a representative of the Site Owner indicate that the construction start date is unknown at this time. Phase 2 construction is planned within the MGP site limits following completion of the Phase 1 activities.

It is O&R's understanding that the Site Owner (TZ Vista) is corresponding directly with the NYSDEC Division of Environmental Remediation (DER) regarding the elements identified in the SMP that are not the responsibility of the Remedial Party (O&R). Several of these elements are discussed in subsequent sections of this report.

1.2 Site Location and Description

The location of the site is shown on Figure 1. The current site plan is shown on Figure 2. As depicted on Figure 2, the site was divided into two operable units (OUs) by the NYSDEC for the purpose of implementing the remedy described in the Record of Decision (ROD) for each OU (NYSDEC, 2004 and 2011). The OUs include:

- **OU1** – The portion of the site above the 100-year flood line, including Upper Terrace, the upland portion of the Lower Terrace, and a portion of the Hudson Vista Associates Parcel parking lot.
- **OU2** – Portion of the Lower Terrace located below the 100-year flood line and above the mean high water mark of the Hudson River, and also the Hudson River sediment that was impacted by MGP site-related residuals.

Eastern Parcel

The street address of the area of the former MGP operations is 55 Gedney Street, Nyack, New York (the "Eastern Parcel"). The Tax ID for the Eastern Parcel is 66.39-01-01.

The Eastern Parcel occupies an approximately 4-acre area in total, which includes about 2.17 acres of land, and 1.8 acres of submerged land in the Hudson River. The upland consists of an upper area along Gedney Street (the "Upper Terrace") separated by a steep slope from a lower area along the Hudson River (the "Lower Terrace"). The parcel is bounded by the Nyack Boat Club to the north, the Hudson Vista Parcel to the south, the Hudson River to the east, and Gedney Street to the west.

Impacted soil and former MGP subsurface foundations in the Upper Terrace were addressed during remediation through excavation to the top of bedrock and disposal off site (area outlined in gold on Figure 2). In situ chemical oxidation was used to treat impacts remaining within bedrock to the extent possible (area outlined in orange dashed line on Figure 2); however, MGP-related constituents of concern (COC) remain in groundwater within the bedrock unit present approximately 20 feet below the ground surface of the Upper Terrace area. A soil cover system was installed during implementation of the remedy in the Upper Terrace (area with diagonal grey hatching on Figure 2).

Impacted soil in the Lower Terrace and the Shoreline Area along the Hudson River were addressed by in-situ solidification (ISS) (areas outlined in blue and purple on Figure 2). MGP-related COC remain in these areas; however, the ISS process has created a low

permeability mass which has encapsulated the COC, which prevents further NAPL mobility and continued COC migration to groundwater or the river. A soil cover system was also installed during implementation of the remedy in the Lower Terrace (diagonal grey hatching on Figure 2). Riprap was installed to protect the shoreline from erosion for the Shoreline Area.

The Eastern Parcel is fenced to prevent trespassing. The Eastern Parcel, including the shoreline and offshore portions, is subject to control under this SMP, as shown on Figure 2. As discussed above, it is O&R's understanding that the Eastern Parcel will be redeveloped as a residential / commercial facility by the Site Owner.

Hudson Vista

Impacted soil in a portion of the lower parking lot area of the Hudson Vista Parcel, located immediately south of the Lower Terrace of the Eastern Parcel, was remediated through ISS of soils as a part of the OU1 remedial action (outlined in green on Figure 2). MGP-related COC remain in the subsurface of this area; however, the ISS process has encapsulated the COC within a low permeability mass. The ISS process prevents the treated area from serving as a source for future groundwater impact. The cover system in the Hudson Vista remedial area consists of the parking lot pavement, which was restored following the remedial action (diagonal grey hatching on Figure 2). The Hudson Vista Parcel's lower parking lot area is considered an off-site area, but is subject to the requirements of the SMP because MGP-related COC remain within the solidified subsurface soils in the parking lot area.

Western Parcel

A single gas holder was formerly located on the parking lot parcel to the west of the Eastern Parcel (across Gedney Street). The Western Parcel has a Tax ID of 66.38-02-14, and a street address of 26 Lydecker Street, Nyack, New York. The absence of MGP-related impact at the Western Parcel was demonstrated during the Remedial Investigation (RI), and remedial activities were not required for this parcel. The Western Parcel is not subject to the SMP, and SMP activities have not been performed in the Western Parcel.

2. SMP Field Activities and Results

As specified in the SMP, field activities include:

- The assessment of the presence or absence of light phase non-aqueous phase liquid (LNAPL), and dense phase non-aqueous phase liquid (DNAPL) at identified well locations.
- Groundwater monitoring at identified well locations.

NAPL gauging and groundwater sampling were performed consistent with the SMP (GEI, 2016b) to the extent possible. Certain unavoidable deviations, resulting from owner activities, are identified below.

2.1 Reconnaissance and Observed Well Conditions

Monitoring well details are summarized in Table 1 and the well locations are shown on Figure 3. A reconnaissance was performed at the site on October 18, 2022, to confirm the location and condition of each of the monitoring wells identified in the SMP prior to implementing SMP activities. The conditions observed at each well, and the activities performed at each location in 2022 are summarized as follows:

- **MW33D** (overburden well) – Well and surrounding conditions have not changed since 2018, when the Site Owner performed excavation work in the area immediately to the south of (within 10 feet of) MW33D, as part of the Hudson Vista Phase 1 Redevelopment (subsurface parking garage) construction. Due to presence of the adjacent open excavation, it is not safe to access the well and sampling was again not performed at this location in 2022.
- **MW41** (bedrock well) – As described in the 2017 and 2018 Annual Reports, this well was destroyed. Specifically, it appears that the uppermost 2 feet of fill was removed as the result of grading activities that the Site Owner performed in the area sometime prior to the 2017 inspection. Based on a survey performed in December 2017, the ground surface is approximately 2 feet lower than it was at the time of the well installation. As a result, NAPL gauging and groundwater sampling was not performed at this location.
- **MW43** (overburden well) – The well was located, gauged, and sampled in October 2022. NAPL was not observed in this well. As a conservative measure, the well was bailed to remove potential sheens that may be present, and an absorbent sock was placed in the well on October 18, 2022. On October 27, 2022, the absorbent sock was removed, the well was purged and a groundwater sample was collected after the well had stabilized for one week.

- **MW44** (bedrock well)– The well was located, gauged, and sampled in October 2022. No measurable NAPL thicknesses were identified at this location; however, DNAPL blebs were observed on the bottom 4 inches of the measuring device. As a conservative measure, the well was bailed in an attempt to remove NAPL, and an absorbent sock was placed in the well on October 18, 2022. On October 27, 2022, the absorbent sock was removed, the well was purged and a groundwater sample was collected after the well had stabilized for one week.
- **MW45** (bedrock well) **–** In December 2017, the well was found to be covered by a pile of soil estimated to be 7-10 feet in height, which remains in place at present. Therefore, NAPL gauging and groundwater sampling was again not performed at this well location.
- **MW46** (bedrock well) – The well was located, gauged, and sampled in October 2022. NAPL was not observed in this well. As a conservative measure, the well was bailed to remove potential sheens that may be present, and an absorbent sock was placed in the well on October 18, 2022. On October 27, 2022, the absorbent sock was removed, the well was purged and a groundwater sample was collected after the well had stabilized for one week.
- **MW47** (bedrock well) – At some point following the 2020 groundwater monitoring event, a pile of debris (including rolls of used chain link fencing) was placed atop or plowed into the area where MW47 is located. The well may have been destroyed or simply covered by the debris. O&R contacted the Site Owner to request removal of the material, but the well remained covered as of October 2022. Therefore, NAPL gauging and groundwater sampling was not performed at this well location in 2022.

The SMP states that, if redevelopment occurs, the owner must either protect monitoring wells for continued use, or abandon and replace them with new wells at locations which allow for continued groundwater monitoring at locations approved by the NYSDEC. As noted above, O&R has contacted the Site Owner, and anticipates that the Site Owner will properly abandon and replace the damaged wells as site redevelopment progresses. O&R will continue to work with the Site Owner in an attempt to recover or replace monitoring wells that have been damaged or destroyed in recent years.

2.2 NAPL Monitoring and Removal

Table 2 details the NAPL monitoring performed in 2022, as well as the prior post-remedial monitoring events. A summary is provided below.

- **MW43** – NAPL was not observed in 2022; further, NAPL has not been observed in this well during any monitoring event conducted to date. As discussed in Section 2.1, an absorbent sock was placed in the well as a conservative measure during the week between gauging and sampling. No evidence of NAPL (e.g., staining) was observed on the sock upon removal prior to purging and sampling the well.

- **MW44** – LNAPL and DNAPL have been periodically observed in this well. During the 2022 event, no measurable amounts of NAPL were present in this well; however, trace amounts of DNAPL (blebs) were observed on the bottom 4 inches of the measuring device during gauging. Again, as discussed in Section 2.1, an absorbent sock was placed in the well during the week between gauging and sampling. Little evidence of NAPL (minimal staining, mainly on the string and weight located below the sock) was observed upon sock removal prior to purging and sampling the well.
- **MW46** –Little to no NAPL has been observed during post-remedial sampling events performed at this location. In 2022, no NAPL was observed. Again, as discussed in Section 2.1, an absorbent sock was placed in the well as a conservative measure during the week between gauging and sampling. No evidence of NAPL (e.g., staining) was observed on the sock upon removal prior to purging and sampling the well.

Although no measurable NAPL was present in the wells during the 2022 gauging event, as a conservative measure, each well was bailed and an oil-absorbent sock was placed in each well on October 18, 2022, after each well was gauged. Groundwater samples were subsequently collected on October 27, 2022, after removing the absorbent sock and purging each well (Section 2.4).

2.3 Groundwater Elevation Monitoring

The results of the elevation monitoring performed on October 18, 2022, are provided in Table 1 and Figure 3. A summary of the 2022 findings is provided below.

The elevation of groundwater was highest in bedrock well MW44 (7.30 feet NAVD88), which is located in the Upper Terrace, within the western portion of the site. The elevation of groundwater was found to be lowest in overburden well MW43 (2.24 feet NAVD88). The difference in elevation across the site was 5.06 feet. The results indicate that, consistent with the results of the RI, groundwater flow is from the west to the east across the site, towards the Hudson River. The inferred direction of groundwater flow is shown on Figure 3.

2.4 Groundwater Sampling

Three wells (MW43, MW44, and MW46) were purged and sampled on October 27, 2022, according to the methods described in the SMP.

2.4.1 Groundwater Analyses and Results

Groundwater samples were analyzed by Test America (TA) Laboratory for benzene, toluene, ethyl benzene and xylenes (BTEX) by EPA Method 8260C, and polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270D. The results of the analyses are presented in Table 3, and on chemical summary boxes included on Figure 4.

The figure also summarizes post-remedial data collected from 2015 (i.e., pre-remediation baseline) through present to provide a comparison and show potential trends within each well. The laboratory chain-of-custody record and the Form I laboratory report sheets for the 2022 analyses are included in Appendix A. A summary of observed trends is provided below.

- **MW43** – Similar concentrations of COC have been detected for the post-remedial sampling events performed at this location.
- **MW44** – COC concentrations continue to be variable in this bedrock well. The concentrations observed in 2022 are less than those observed in 2019 but greater than concentrations reported in 2021 and 2020. However, like the other results from recent years, the 2022 concentrations remain well below those observed during the initial sampling event at this location in 2015.
- **MW46** – While variability exists among the data collected to date, the 2022 COC concentrations are within the range of concentrations that have been observed during prior post-remedial sampling events and below the initial sample collected at this location in 2017.

Variability in data from year to year is to be expected as groundwater continues to equilibrate following completion of the remedy in 2015. The annual monitoring required at these well locations will continue to evaluate trends in COC and NAPL conditions in groundwater at the site.

2.5 Soil Vapor Intrusion

Post-remedial soil vapor intrusion (SVI) monitoring has not been performed at the site. It is O&R's understanding that the site will eventually be redeveloped by the Site Owner, and the Site Owner will provide the NYSDEC with a Soil Vapor Intrusion Monitoring Plan (SVI MP) and will collect any samples required in the SMP and SVI MP. It is O&R's understanding that the building to be constructed at the site by the Site Owner includes controls to address the potential for vapor intrusion of MGP-related COC to indoor air.

3. Environmental Controls / Institutional Controls and Site Inspection

3.1 General

Because COCs in soil, bedrock, groundwater, and sediment remain in the subsurface of the site, Engineering Controls, and Institutional Controls (EC/ICs) have been implemented to protect human health and the environment, as further discussed below.

3.2 Engineering Controls

The ECs identified in the SMP and the results of the inspection performed by GEI in 2022 are discussed below. The 2022 SMP Annual Inspection Form is included in Appendix B.

3.2.1 Cover System Monitoring

An annual site inspection was performed on October 18, 2022, to observe the condition of the cover systems at:

- Upper Terrace,
- ISS area in the Lower Terrace, and
- ISS area on the Hudson Vista Associates Parcel.

The locations of each of these remedial areas are shown on Figure 2. Photographs taken during the site inspection are included in the Photographic Record in Appendix B.

As indicated in the site inspection form (Appendix B), the cover system in each of the identified remedial areas remains in place, does not appear to have been disturbed during the current monitoring period, and continues to be effective at preventing direct exposure to COC present in the subsurface.

3.2.2 Storm Sewer and Water Service

Two site utilities were identified in the SMP:

- Underground Village of Nyack storm sewer line is present near the southern property line of the Eastern Parcel, terminating at an outfall on the Hudson Vista Associates Parcel; and
- Village of Nyack water line present at the fire hydrant located at the western side of the Eastern Parcel.

These features were observed to be present, and not disturbed at the time of the October 18, 2022, site inspection. While some minor erosion continues to exist at the storm sewer outlet, it is localized and has not changed from that which was observed during prior events. A photograph of the storm sewer outlet is included in the Photographic Record in Appendix B.

3.2.3 Shoreline Area

Along the Lower Terrace shoreline, the ISS materials are protected from contact by site users and erosion by the installation of riprap during the remedial action, and by the placement of additional riprap at the shoreline by the Site Owner. Riprap areas were observed by GEI to be in good condition. Sediment has partially covered small portions of the riprap area, but evidence of movement or undermining was not observed anywhere in the riprap areas. Photographs of the shoreline are included in the Photographic Record in Appendix B.

It is O&R's understanding that the Site Owner plans to install additional shore protection features during redevelopment, and that the Site Owner has or will propose the methods and materials to be utilized directly to the NYSDEC DER.

3.2.4 Off-shore Area

The area offshore (east) from the Lower Terrace protected shoreline is a mix of sandy and silty native sediments. The sediment was dredged to elevation -6 to -10 feet in accordance with the ROD for OU2 (NYSDEC, 2011) (area outlined in pink on Figure 2). As specified in the SMP, to prevent these materials from being exposed at the sediment-water interface, the sediment surface should not be dredged, excavated, or deeply disturbed.

Evidence of dredging, the excavation of sediment, or other activities that may result in the disruption of the sediment remedial area was not observed during the site inspection performed by GEI on October 18, 2022.

3.3 Institutional Controls

The Eastern Parcel has a series of ICs in the form of site restrictions. Adherence to these ICs is required by the Environmental Easement. Site restrictions that apply to the Eastern Parcel, as defined in the SMP, are:

- The property may only be used for restricted residential use, commercial use and/or industrial use provided that the long-term Engineering and Institutional Controls included in the SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted residential use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC.

- Future activities on the property that will disturb remaining MGP-impacted material must be conducted in accordance with the SMP.
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area of the site, and potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.

Based on the inspection of the site performed by GEI and correspondence with O&R, the Site Owner and the NYSDEC, the ICs identified in the SMP adhere to the requirements of the Environmental Easement, remain in place, and are effective for OU1 and OU2 of the site. The site remedy continues to be protective of public health and the environment as described in the FER.

4. Conclusions

4.1 2022 SMP Annual Report Conclusions

Conclusions for this Annual Report are:

- **Site Ownership**: The ownership of the site continues to be TZ Vista LLC. Significant change in site conditions relative to the prior inspection were not observed. Construction for parcel redevelopment continues to be delayed at the time of the annual inspection.
- **Media Monitoring**: Media monitoring tasks identified in the SMP were performed at three wells in 2022, including: NAPL gauging and removal, and groundwater sampling.
    - Over the past several years, activities undertaken by the Site Owner have resulted in damaging or destroying four of the wells originally included in the SMP monitoring program. Based on SMP requirements, O&R anticipated that the Site Owner would recover/repair or replace these wells following completion of their construction activities consistent with SMP requirements. However, since the Site Owner's construction has been significantly delayed and the timeline for construction approval is still unknown, O&R has contacted the Site Owner to request that the monitoring locations be placed back into service in 2022 to the extent that is technically feasible. This work has not been completed to date. O&R will continue to work with the Site Owner to repair/replace these monitoring wells. When performed, the work will be conducted consistent with the SMP and summarized in the subsequent SMP annual report.
- **Engineering Controls**: The inspection of the site was performed in 2022, as specified in the SMP.
    - The inspection documented the effectiveness of the engineering controls.
    - The engineering controls employed at the Nyack MGP site are unchanged from the date the control was put in place, or last approved by the NYSDEC. As reported in prior SMP annual reports, some site work has occurred: the site has been graded in some areas[1] and additional materials have been added by the Site Owner in other areas.[2] However, no additional grading or materials appear to have been added since the November 2018 inspection.

[1] Specifically, it appears that the Site Owner conducted grading in the Upper Terrace in the vicinity of MW41, resulting in a ground surface approximately 2 feet lower now than it was at the time of the well installation in 2008. Approximately 10 feet of imported general fill had been placed in that area during remediation in 2006; as such, approximately 8 feet of fill remains.

[2] For example, a pile of soil estimated to be 7-10 feet in height was placed atop and in the vicinity of MW45, which remains in place at present.

- **Institutional Controls**: Based on the site inspection performed by GEI and on correspondence with O&R, the Site Owner and the NYSDEC, conclusions related to the ICs include:
  - The institutional controls employed at the Nyack MGP site are unchanged from the date the control was put in place, or last approved by the NYSDEC.
  - Nothing has occurred that would impair the ability of the control to protect the public health and environment.
  - Nothing has occurred that would constitute a violation or failure to comply with the site management plan for this control.
  - Access to the site will continue to be provided to the NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of this control.
  - Use of the site is compliant with the environmental easement.

4.2 2023 SMP Implementation

The field activities and annual inspection for the implementation of the SMP that are the responsibility of O&R as the Remedial Party will be next implemented in 2023 with prior notice to the NYSDEC DER.

5. References

GEI, 2016a. Final Engineering Report, Nyack Manufactured Gas Plant Site, Rockland County, New York, NYSDEC Site Number 344046, May 2016.

GEI, 2016b. Site Management Plan, Nyack Former Manufactured Gas Plant Site, Rockland County, New York, NYSDEC Site Number 344046, April 2016.

NYSDEC, 2004. Record of Decision, Nyack Gas Plant Site Operable Unit No. 1 Former Plant Site, Nyack, Rockland County, New York, Site Number 344046, March 2004.

NYSDEC, 2011. Record of Decision, OR – Nyack, MGP, Operable Unit Number: 02. Nyack, Rockland County, Site No. 344046, March 2011.

Tables

Table i
Acronym and NYSDEC Reference Key
for Analytical Summary Tables

Groundwater Notes:

NYSDEC References:
GW STD = New York Groundwater Guidance or Standard Values - NYSDEC, Division of Water, TOGS (1.1.1) [NYSDEC, 1998], with Addendums

* = criterion listed is a Guidance Value (if not denoted with a "*", the criteria is a Standard Value)

0.0	**Bold value** - analyte estimated or detected at a concentration greater than the method detection limit (i.e., a detected result)
0.0	**Gray Shaded value** - analyte estimated or detected at concentration greater than the NYSDEC Groundwater Standard or Guidance Value

Units for groundwater samples:
µg/L = micrograms/Liter = parts per billion
mg/L = milligrams/Liter = parts per million

Laboratory or Validation Qualifiers:
B = For organic analyses - compound was found in the associated blank sample. For metals analysis - the result is an estimated quantity.
For inorganic analyses - analyte detected in the associated method blank.
E = Analyte concentration exceeded the calibration range of the instrument.
F1 = Matrix spike (MS) and/or matrix spike duplicate (MSD) Recovery is outside acceptance limits.
F2 = MS/MSD relative percent difference (RPD) exceeds control limits.
H = Sample was analyzed outside of holding time limit.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J- = The result is an estimated quantity, likely to be biased low. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The result is an estimated quantity, likely to be biased high. The associated numerical value is the approximate concentration of the analyte in the sample.
N = Tentative identification. Special methods may be needed to confirm its presence or absence in future sampling events.
R = The data are unusable. The sample results are rejected due to serious deficiencies in the ability to meet quality control criteria.
U = The analyte was analyzed for, but was not detected above the concentration reported.
UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximated.
BW = Analyte detected in the associated method blank and post-digestion spike recovery furnace analysis was outside of 85-115 percent control limit, while sample absorbance was less than 50 percent of spike absorbance.
BWN = Analyte detected in the associated method blank and post-digestion spike recovery furnace analysis was outside of 85-115 percent control limit, while sample absorbance was less than 50 percent of spike absorbance. Analyte is presumptively present.
UW = Not detected at or above the reporting limit shown and post-digestion spike recovery furnace analysis was outside of 85-115 percent control limit, while sample absorbance was less than 50 percent of spike absorbance.
JB = Estimated value and the analyte was detected in the associated method blank.
*+/- = Laboratory control spike (LCS) and/or laboratory control spike duplicate (LCSD) is outside acceptance limits (+ is bias high, - is bias low).

Other Notes:
CAS No. = Chemical Abstracts Service Number
MGP = Manufactured Gas Plant
NA = Not analyzed for, or not applicable
ND = Not detected; total concentration is listed as ND because no compounds were detected in the group (such as for Total BTEX)
NE = Not established
NL = Not listed
NS = Not Sampled
PAHs - polycyclic aromatic hydrocarbons
SVOCs - semi-volatile organic compounds
TAL - Target Analyte List
TCL - Target Compound List

The BTEX and Total PAH summations are calculated using laboratory-measured or estimated (J) values only (i.e., detected results)
Total VOCs includes all BTEX compounds
Total SVOCs includes all PAH compounds

Table 1
Groundwater Monitoring and Sample Summary
Nyack MGP Site 2022 SMP Annual Report

Well Construction Summary									2022 Water Level Gauging Summary				2022 Sampling SOW	
Designation	Installation Date	Ground Surface Elevation (ft AMSL)	Top of PVC Riser Elevation (ft AMSL)	Screened Interval (ft AMSL)	Northing (NAD83)	Easting (NAD83)	Well Location	Purpose	Depth to Water 10/18/2022 (ft BTOC)	Water Elevation 10/18/2022 (ft AMSL)	NAPL Presence (Table 2)	Well Condition Comments	BTEX	PAHs
MW33D	8/31/2004	25.33	25.16	15.16 to -0.16	822865.99	653222.97	Southern site boundary, cross-gradient location	Monitor groundwater flow around ISS mass to the south	NM	NM	NM	Not accessible due to unsafe condition; immediately adjacent to open excavation	--	--
MW41	5/19/2008	34.07	33.79	14.29 to -0.71	823022.67	653236.45	Within Upper Terrace	Monitor on-site groundwater and residual NAPL conditions in bedrock	NM	NM	NM	Not accessible; destroyed or buried following grading	--	--
MW43	5/22/2008	8.60	9.04	-14.22 to -19.22	823061.51	653448.31	Downgradient	Monitor groundwater in overburden between bedrock and the hanging ISS mass	6.80	2.24	None	Well in good condition, soft bottom	X	X
MW44	5/20/2008	33.84	33.55	1.55 to 16.55	823072.61	653244.4	Within Upper Terrace	Monitor on-site groundwater and residual NAPL conditions in bedrock	26.25	7.30	Blebs in sump portion of well	Well in fair condition (surface completion has broken bolt connectors)	X	X
MW45	5/23/2008	14.15	13.84	1.34 to -13.66	822983.34	653307.75	Within Lower Terrace; downgradient location	Monitor potential on-site groundwater mounding at upgradient side of ISS mass	NM	NM	NM	Not accessible; covered by soil pile	--	--
MW46	12/5/2017	27.00	26.73	8.0 to 16.0	823178.96	653260.92	Northern site boundary, cross-gradient location	Monitor groundwater flow around ISS mass	22.30	4.43	None	Well in good condition, soft bottom	X	X
MW47	12/6/2017	34.20	33.87	19.7 to -2.3	823089.60	653160.11	Western site boundary (at Gedney Street)	Monitor upgradient groundwater conditions	NM	NM	NM	Not accessible; covered by debris	--	--

Notes:

ft BTOC = feet below top of casing (measuring point)

ft AMSL = feet above mean sea level (negative values are below mean seal level)

NM = Not measured; well is inaccessible as the result of activities by others

-- = Not applicable; well is inaccessible as the result of activities by others

Horizontal Coordinates are New York State Plane, Central Zone, NAD83 North American Datum 1983 (NAD83)

Vertical Coordinates are North American Datum 1988 (NAVD88)

Table 2
SMP Post-Remedial NAPL Gauging and Removal Summary
Nyack MGP Site 2022 SMP Annual Report

Well ID:	MW41 (Note 1)												
Date:	2/27/2015	3/13/2015		3/20/2015		3/27/2015		4/10/2015		5/22/2015		7/17/2015	
	Before Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging
Depth to LNAPL	21.27	NP	NP	NP	NP	NP	NP	20.46	NP	20.70	NP	20.94	NP
Depth to Water	21.29	20.80	20.92	20.31	20.39	20.36	20.54	20.46	20.63	20.71	21.25	20.95	22.42
Depth to DNAPL	*	33.66	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Depth to Bottom of Well	34.25	34.25	34.25	34.25	34.25	34.25	34.25	34.25	34.25	34.24	34.24	34.25	34.25
LNAPL thickness	0.02	NP	NP	NP	NP	NP	NP	<0.01	NP	~0.01	NP	~0.01	NP
DNAPL thickness	*	0.59	NP	**	NP	**	NP	Blebs	NP	Blebs	NP	Blebs	NP

Well ID:	MW43
	NAPL has not been observed in this well to date

Well ID:	MW44												
Date:	2/27/2015	3/13/2015		3/20/2015		3/27/2015		4/10/2015		5/22/2015		7/17/2015	
	Before Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging
Depth to LNAPL	26.12	25.13	25.41	24.43	NP	24.53	NP	24.59	NP	25.25	NP	25.52	NP
Depth to Water	27.35	25.23	25.42	24.57	25.21	24.65	25.38	24.69	25.03	25.35	26.05	25.62	28.06
Depth to DNAPL	*	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Depth to Bottom of Well	32.33	32.33	32.33	32.33	32.33	32.33	32.33	32.33	32.33	32.30	32.30	32.30	32.30
LNAPL thickness	1.23	0.10	0.01	0.14	NP	0.12	NP	0.10	NP	~0.10	NP	~0.10	NP
DNAPL thickness	*	Blebs	Blebs	Blebs	NP	Blebs	NP	Blebs	NP	NP	NP	NP	NP

Well ID:	MW44 (continued)											
Date:	9/20/2017		11/12/2018		6/14/2019		10/6/2020		10/18/2021		10/18/2022	
	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging
Depth to LNAPL	24.44	NP	24.42	24.42	23.96	NP	23.84	NP	25.15	NP	NP	NP
Depth to Water	25.94	25.94	24.43	24.43	24.05	24.00	28.71	27.51	25.19	31.00	26.25	26.60
Depth to DNAPL	NP	NP	NP	NP	NP	NP	NP	NP	32.33	NP	NP	NP
Depth to Bottom of Well	32.30	32.30	32.30	32.30	32.25	32.25	33.24	33.24	32.57	32.57	32.60	32.60
LNAPL thickness	1.50	NP	0.01	NP	0.09	NP	4.87	NP	0.04	NP	NP	NP
DNAPL thickness	NP	NP	Blebs	Blebs	Blebs	Blebs	NP	NP	0.24	NP	Blebs	NP

Well ID:	MW46							
Date:	11/12/2018		10/6/2020		10/18/2021		10/18/2022	
	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging
Depth to LNAPL	NP	NA	22.75	NP	NP	NA	NP	NP
Depth to Water	21.15	NA	22.84	22.85	21.54	NA	22.30	22.48
Depth to DNAPL	NP	NA	NP	NP	NP	NA	NP	NP
Depth to Bottom of Well	39.45	NA	39.73	39.73	32.57	NA	36.60	36.60
LNAPL thickness	NP	NA	0.09	NP	NP	NA	NP	NP
DNAPL thickness	NP	NA	NP	NP	Blebs	NA	NP	NP

Well ID:	MW47					
Date:	11/12/2018		6/14/2019		10/6/2020	
	Before Purging	After Purging	Before Purging	After Purging	Before Purging	After Purging
Depth to LNAPL	NP	NA	NP	NA	NP	NA
Depth to Water	17.1	NA	16.95	NA	22.34	NA
Depth to DNAPL	NP	NA	NP	NA	NP	NA
Depth to Bottom of Well	38.0	NA	37.98	NA	38.71	NA
LNAPL thickness	NP	NA	NP	NA	NP	NA
DNAPL thickness	Blebs	NA	Blebs	NA	Blebs	NA

Notes:

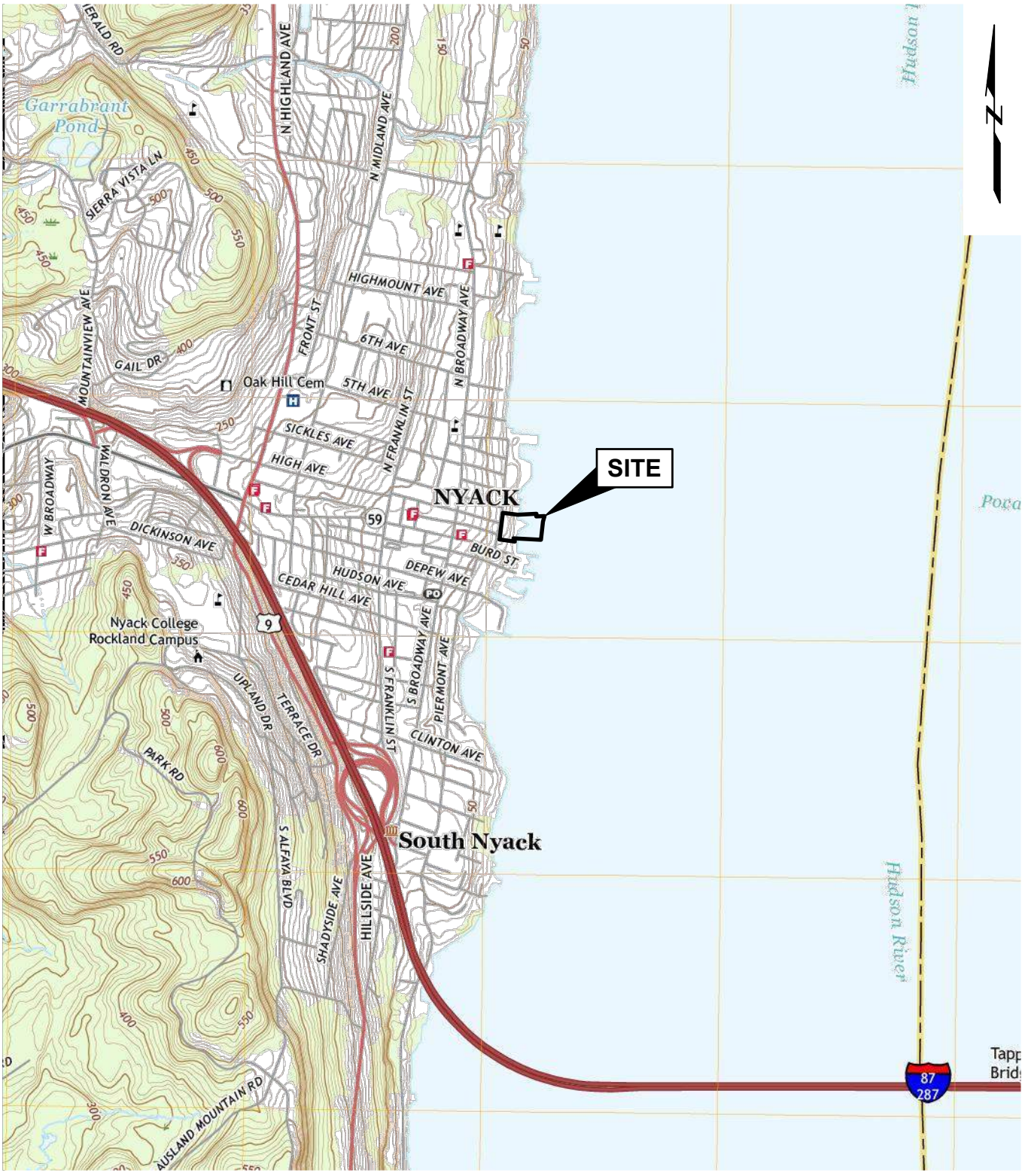
1. Wells MW41 and MW45 could not be located 2017 through present due to construction activities by owner; presumed destroyed. MW47 could not be located 2021 through present; area plowed over and covered by debris (used chain link fencing). MW33D is inaccessible due to construction activities by owner. (See report for details.)
2. Data for those wells in which NAPL has been observed at least once are included in this table.
3. Depth and thickness measurements are in feet.
4. Includes data collected post-remediation, 2015 through present.
5. * indicates that accurate DNAPL measurement could not be determined in the field due to freezing conditions.
6. ** indicates that DNAPL was not detected with oil/water interface probe, but small quantity (~50 to 100 mL) observed during subsequent purging.

NA = Not applicable (not purged because measurable NAPL not present)
NAPL = Non-aqueous phase liquid (prefix L = light; D = dense)
NP = Not present

Table 3
Groundwater Analytical Data Summary
Nyack MGP Site 2022 SMP Annual Report

Analyte	Units	CAS No.	NYS AWQS	MW43 MW43 10/27/2022	MW43 DUP102722 10/27/2022	MW44 MW44 10/27/2022	MW46 MW46 10/27/2022
Monitoring Well ID / Sample Name / Sample Date							
BTEX	ug/L						
Benzene		71-43-2	1	**6.2**	**3.7**	**1700**	**3000**
Ethylbenzene		100-41-4	5	**1.3**	**0.93 J**	**1300**	**270**
Toluene		108-88-3	5	**0.52 J**	**0.42 J**	**23**	**4.7 J**
Total Xylene		1330-20-7	5	**0.89 J**	0.65 U	**1200**	**190**
Total BTEX		N/A	NE	**8.91 J**	**5.1 J**	**4223**	**3465 J**
Polycyclic Aromatic Hydrocabons (PAHs)	ug/L						
Acenaphthene		83-32-9	20*	1.1 U	**1.3 J**	**3900**	**31**
Acenaphthylene		208-96-8	NE	0.82 U	0.82 U	**590**	**3.0 J**
Anthracene		120-12-7	50*	1.3 U	1.3 U	**2500**	**2.1 J**
Benzo(a)anthracene		56-55-3	0.002*	0.59 U	0.59 U	**1900**	0.59 U
Benzo(a)pyrene		50-32-8	ND	0.41 U	0.41 U	**1600**	0.41 U
Benzo(b)fluoranthene		205-99-2	0.002*	0.68 U	0.68 U	**1100**	0.68 U
Benzo(g,h,i)perylene		191-24-2	NE	0.70 U*+	0.70 U*+	**1000 *+**	0.70 U*+
Benzo(k)fluoranthene		207-08-9	0.002*	0.67 U	0.67 U	**340**	0.67 U
Chrysene		218-01-9	0.002*	0.91 U	0.91 U	**1800**	0.91 U
Dibenz(a,h)anthracene		53-70-3	NE	0.72 U*+	0.72 U*+	**260 *+**	0.72 U*+
Fluoranthene		206-44-0	50*	0.84 U	0.84 U	**3400**	**1.3 J**
Fluorene		86-73-7	50*	0.91 U	0.91 U	**2600**	**9.8 J**
Indeno(1,2,3-cd)pyrene		193-39-5	0.002*	0.94 U*+	0.94 U*+	**930 *+**	0.94 U*+
Naphthalene		91-20-3	10*	0.54 U	**0.66 J**	**21000**	**81**
Phenanthrene		85-01-8	50*	1.3 U	1.3 U	**8700**	**6.3 J**
Pyrene		129-00-0	50*	1.6 U	1.6 U	**4300**	**1.9 J**
Total PAHs		N/A	NE	ND	**1.96 J**	**55920**	**136 J**

Figures



SOURCE:

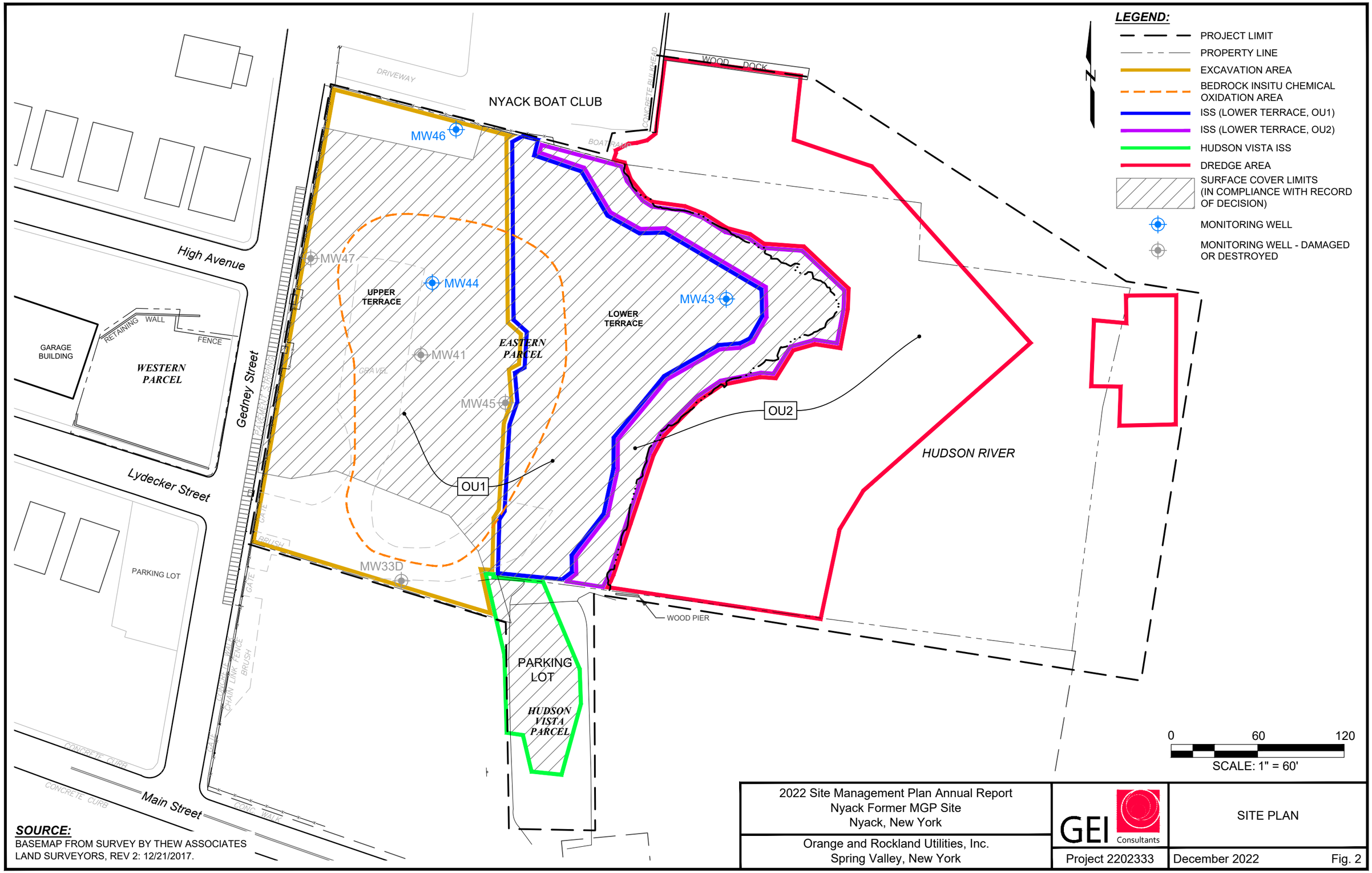
U.S.G.S TOPOGRAPHIC MAPS, 7.5-MINUTE SERIES: NYACK, NY-NJ, 2019, ACCESSED VIA THE NATIONAL GEOLOGIC MAP DATABASE *(https://ngmdb.usgs.gov/topoview/)*.

0 2000' 4000'

SCALE: 1" = 2000'

2022 Site Management Plan Annual Report Nyack Former MGP Site Nyack, New York	GEI Consultants	SITE LOCATION MAP
Orange and Rockland Utilities, Inc. Spring Valley, New York	Project 2202333	December 2022 Fig. 1

\\geiconsulta B:\Working\O&R\2202333 Nyack MGP Annual SMP\00_CAD\Figures\2022 SMP\2202333_SMP_SLM.dwg - 12/21/2022



SOURCE:
BASEMAP FROM SURVEY BY THEW ASSOCIATES
LAND SURVEYORS, REV 2: 12/21/2017.

2022 Site Management Plan Annual Report Nyack Former MGP Site Nyack, New York	GEI Consultants	SITE PLAN
Orange and Rockland Utilities, Inc. Spring Valley, New York	Project 2202333	December 2022 Fig. 2

\\GTB-PHERIOT B:\Working\O&R\2202333 Nyack MGP Annual SMP\00_CAD\Figures\2022 SMP\2202333_SMP_FIGS.dwg - 12/21/2022

LEGEND:

- PROJECT LIMIT
- PROPERTY LINE
- MONITORING WELL
- MONITORING WELL - DAMAGED OR DESTROYED
- 4.43 GROUNDWATER ELEVATION MEASURED 10/18/2022
- INFERRED DIRECTION OF GROUNDWATER FLOW

N

NYACK BOAT CLUB

DRIVEWAY

CONCRETE BULKHEAD

WOOD DOCK

BOAT RAMP

MW46 4.43

MEAN HIGH WATER LINE

High Avenue

MW47

MW44 7.30

UPPER TERRACE

LOWER TERRACE

MW43 2.24

GARAGE BUILDING

RETAINING WALL

FENCE

WESTERN PARCEL

EASTERN PARCEL

MW41

GRAVEL

MW45

Gedney Street

PAVEMENT STRIPING

HUDSON RIVER

Lydecker Street

GATE

BRUSH

OU1/OU2 BOUNDARY

MW33D

PARKING LOT

GATE

CONCRETE WALK

CHAIN LINK FENCE

BRUSH

WOOD PIER

PARKING LOT

HUDSON VISTA PARCEL

CONCRETE CURB

CONCRETE CURB

Main Street

CONC. WALK

0 60 120

SCALE: 1" = 60'

SOURCE:
BASEMAP FROM SURVEY BY THEW ASSOCIATES
LAND SURVEYORS, REV 2: 12/21/2017.

2022 Site Management Plan Annual Report
Nyack Former MGP Site
Nyack, New York

Orange and Rockland Utilities, Inc.
Spring Valley, New York

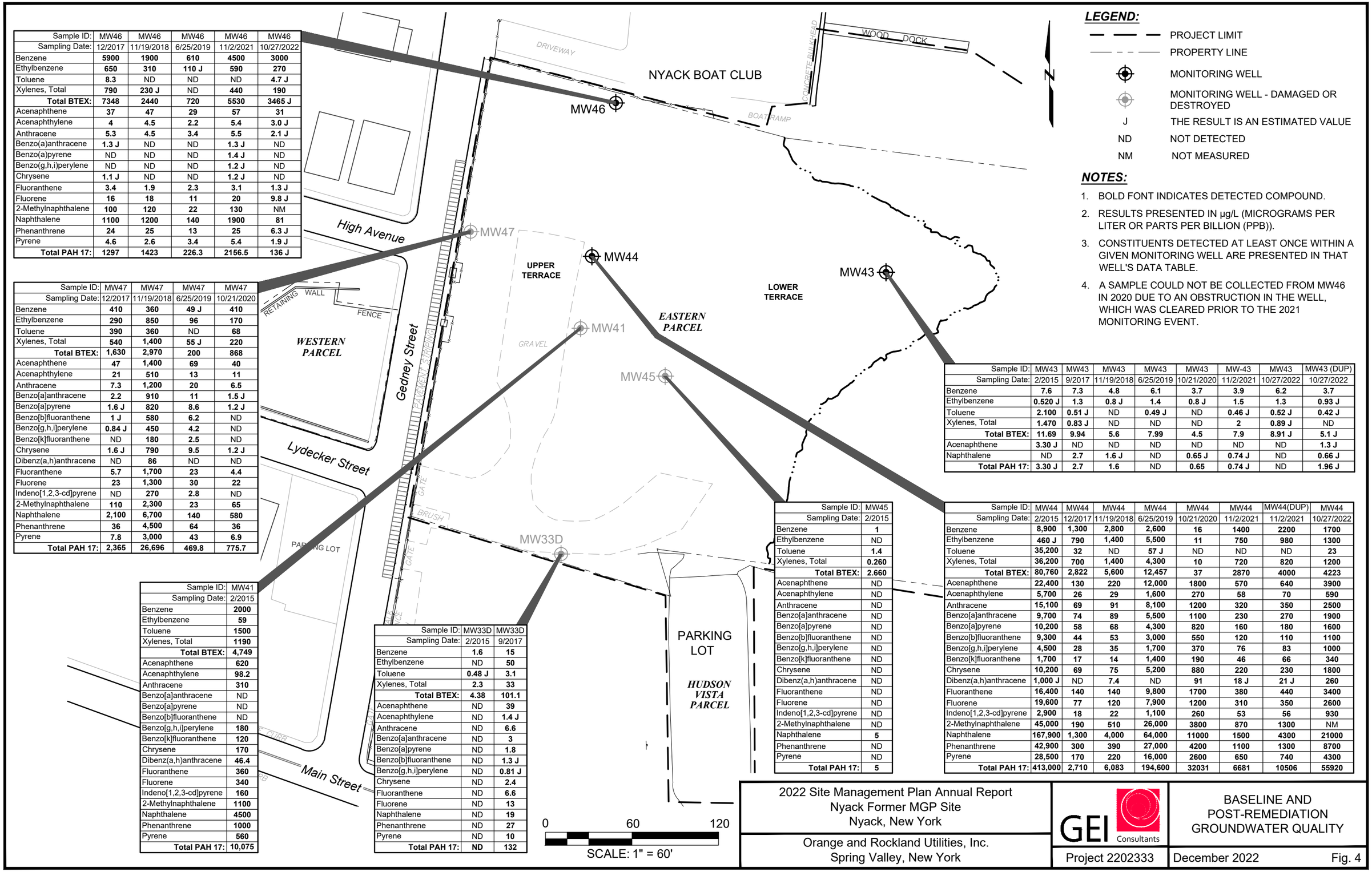
GEI Consultants

Project 2202333

GROUNDWATER ELEVATION SUMMARY
OCTOBER 18, 2021

December 2022 Fig. 3

\\GTB-PHERIOT B:\Working\O&R\2202333 Nyack MGP Annual SMP\00_CAD\Figures\2022 SMP\2202333_SMP_FIGS.dwg - 12/21/2022



Sample ID:	MW46	MW46	MW46	MW46	MW46
Sampling Date:	12/2017	11/19/2018	6/25/2019	11/2/2021	10/27/2022
Benzene	**5900**	**1900**	**610**	**4500**	**3000**
Ethylbenzene	**650**	**310**	**110 J**	**590**	**270**
Toluene	**8.3**	ND	ND	ND	**4.7 J**
Xylenes, Total	**790**	**230 J**	ND	**440**	**190**
Total BTEX:	**7348**	**2440**	**720**	**5530**	**3465 J**
Acenaphthene	**37**	**47**	**29**	**57**	**31**
Acenaphthylene	**4**	**4.5**	**2.2**	**5.4**	**3.0 J**
Anthracene	**5.3**	**4.5**	**3.4**	**5.5**	**2.1 J**
Benzo(a)anthracene	**1.3 J**	ND	ND	**1.3 J**	ND
Benzo(a)pyrene	ND	ND	ND	**1.4 J**	ND
Benzo(g,h,i)perylene	ND	ND	ND	**1.2 J**	ND
Chrysene	**1.1 J**	ND	ND	**1.2 J**	ND
Fluoranthene	**3.4**	**1.9**	**2.3**	**3.1**	**1.3 J**
Fluorene	**16**	**18**	**11**	**20**	**9.8 J**
2-Methylnaphthalene	**100**	**120**	**22**	**130**	NM
Naphthalene	**1100**	**1200**	**140**	**1900**	**81**
Phenanthrene	**24**	**25**	**13**	**25**	**6.3 J**
Pyrene	**4.6**	**2.6**	**3.4**	**5.4**	**1.9 J**
Total PAH 17:	**1297**	**1423**	**226.3**	**2156.5**	**136 J**

Sample ID:	MW47	MW47	MW47	MW47
Sampling Date:	12/2017	11/19/2018	6/25/2019	10/21/2020
Benzene	**410**	**360**	**49 J**	**410**
Ethylbenzene	**290**	**850**	**96**	**170**
Toluene	**390**	**360**	ND	**68**
Xylenes, Total	**540**	**1,400**	**55 J**	**220**
Total BTEX:	**1,630**	**2,970**	**200**	**868**
Acenaphthene	**47**	**1,400**	**69**	**40**
Acenaphthylene	**21**	**510**	**13**	**11**
Anthracene	**7.3**	**1,200**	**20**	**6.5**
Benzo[a]anthracene	**2.2**	**910**	**11**	**1.5 J**
Benzo[a]pyrene	**1.6 J**	**820**	**8.6**	**1.2 J**
Benzo[b]fluoranthene	**1 J**	**580**	**6.2**	ND
Benzo[g,h,i]perylene	**0.84 J**	**450**	**4.2**	ND
Benzo[k]fluoranthene	ND	**180**	**2.5**	ND
Chrysene	**1.6 J**	**790**	**9.5**	**1.2 J**
Dibenz(a,h)anthracene	ND	**86**	ND	ND
Fluoranthene	**5.7**	**1,700**	**23**	**4.4**
Fluorene	**23**	**1,300**	**30**	**22**
Indeno[1,2,3-cd]pyrene	ND	**270**	**2.8**	ND
2-Methylnaphthalene	**110**	**2,300**	**23**	**65**
Naphthalene	**2,100**	**6,700**	**140**	**580**
Phenanthrene	**36**	**4,500**	**64**	**36**
Pyrene	**7.8**	**3,000**	**43**	**6.9**
Total PAH 17:	**2,365**	**26,696**	**469.8**	**775.7**

Sample ID:	MW41
Sampling Date:	2/2015
Benzene	**2000**
Ethylbenzene	**59**
Toluene	**1500**
Xylenes, Total	**1190**
Total BTEX:	**4,749**
Acenaphthene	**620**
Acenaphthylene	**98.2**
Anthracene	**310**
Benzo[a]anthracene	ND
Benzo[a]pyrene	ND
Benzo[b]fluoranthene	ND
Benzo[g,h,i]perylene	**180**
Benzo[k]fluoranthene	**120**
Chrysene	**170**
Dibenz(a,h)anthracene	**46.4**
Fluoranthene	**360**
Fluorene	**340**
Indeno[1,2,3-cd]pyrene	**160**
2-Methylnaphthalene	**1100**
Naphthalene	**4500**
Phenanthrene	**1000**
Pyrene	**560**
Total PAH 17:	**10,075**

Sample ID:	MW33D	MW33D
Sampling Date:	2/2015	9/2017
Benzene	**1.6**	**15**
Ethylbenzene	ND	**50**
Toluene	**0.48 J**	**3.1**
Xylenes, Total	**2.3**	**33**
Total BTEX:	**4.38**	**101.1**
Acenaphthene	ND	**39**
Acenaphthylene	ND	**1.4 J**
Anthracene	ND	**6.6**
Benzo[a]anthracene	ND	**3**
Benzo[a]pyrene	ND	**1.8**
Benzo[b]fluoranthene	ND	**1.3 J**
Benzo[g,h,i]perylene	ND	**0.81 J**
Chrysene	ND	**2.4**
Fluoranthene	ND	**6.6**
Fluorene	ND	**13**
Naphthalene	ND	**19**
Phenanthrene	ND	**27**
Pyrene	ND	**10**
Total PAH 17:	**ND**	**132**

Sample ID:	MW45
Sampling Date:	2/2015
Benzene	**1**
Ethylbenzene	ND
Toluene	**1.4**
Xylenes, Total	**0.260**
Total BTEX:	**2.660**
Acenaphthene	ND
Acenaphthylene	ND
Anthracene	ND
Benzo[a]anthracene	ND
Benzo[a]pyrene	ND
Benzo[b]fluoranthene	ND
Benzo[g,h,i]perylene	ND
Benzo[k]fluoranthene	ND
Chrysene	ND
Dibenz(a,h)anthracene	ND
Fluoranthene	ND
Fluorene	ND
Indeno[1,2,3-cd]pyrene	ND
2-Methylnaphthalene	ND
Naphthalene	**5**
Phenanthrene	ND
Pyrene	ND
Total PAH 17:	**5**

Sample ID:	MW43	MW43	MW43	MW43	MW43	MW-43	MW43	MW43 (DUP)
Sampling Date:	2/2015	9/2017	11/19/2018	6/25/2019	10/21/2020	11/2/2021	10/27/2022	10/27/2022
Benzene	**7.6**	**7.3**	**4.8**	**6.1**	**3.7**	**3.9**	**6.2**	**3.7**
Ethylbenzene	**0.520 J**	**1.3**	**0.8 J**	**1.4**	**0.8 J**	**1.5**	**1.3**	**0.93 J**
Toluene	**2.100**	**0.51 J**	ND	**0.49 J**	ND	**0.46 J**	**0.52 J**	**0.42 J**
Xylenes, Total	**1.470**	**0.83 J**	ND	ND	ND	**2**	**0.89 J**	ND
Total BTEX:	**11.69**	**9.94**	**5.6**	**7.99**	**4.5**	**7.9**	**8.91 J**	**5.1 J**
Acenaphthene	**3.30 J**	ND	ND	ND	ND	ND	ND	**1.3 J**
Naphthalene	ND	**2.7**	**1.6 J**	ND	**0.65 J**	**0.74 J**	ND	**0.66 J**
Total PAH 17:	**3.30 J**	**2.7**	**1.6**	ND	**0.65**	**0.74 J**	ND	**1.96 J**

Sample ID:	MW44	MW44	MW44	MW44	MW44	MW44	MW44(DUP)	MW44
Sampling Date:	2/2015	12/2017	11/19/2018	6/25/2019	10/21/2020	11/2/2021	11/2/2021	10/27/2022
Benzene	**8,900**	**1,300**	**2,800**	**2,600**	**16**	**1400**	**2200**	**1700**
Ethylbenzene	**460 J**	**790**	**1,400**	**5,500**	**11**	**750**	**980**	**1300**
Toluene	**35,200**	**32**	ND	**57 J**	ND	ND	ND	**23**
Xylenes, Total	**36,200**	**700**	**1,400**	**4,300**	**10**	**720**	**820**	**1200**
Total BTEX:	**80,760**	**2,822**	**5,600**	**12,457**	**37**	**2870**	**4000**	**4223**
Acenaphthene	**22,400**	**130**	**220**	**12,000**	**1800**	**570**	**640**	**3900**
Acenaphthylene	**5,700**	**26**	**29**	**1,600**	**270**	**58**	**70**	**590**
Anthracene	**15,100**	**69**	**91**	**8,100**	**1200**	**320**	**350**	**2500**
Benzo[a]anthracene	**9,700**	**74**	**89**	**5,500**	**1100**	**230**	**270**	**1900**
Benzo[a]pyrene	**10,200**	**58**	**68**	**4,300**	**820**	**160**	**180**	**1600**
Benzo[b]fluoranthene	**9,300**	**44**	**53**	**3,000**	**550**	**120**	**110**	**1100**
Benzo[g,h,i]perylene	**4,500**	**28**	**35**	**1,700**	**370**	**76**	**83**	**1000**
Benzo[k]fluoranthene	**1,700**	**17**	**14**	**1,400**	**190**	**46**	**66**	**340**
Chrysene	**10,200**	**69**	**75**	**5,200**	**880**	**220**	**230**	**1800**
Dibenz(a,h)anthracene	**1,000 J**	ND	**7.4**	ND	**91**	**18 J**	**21 J**	**260**
Fluoranthene	**16,400**	**140**	**140**	**9,800**	**1700**	**380**	**440**	**3400**
Fluorene	**19,600**	**77**	**120**	**7,900**	**1200**	**310**	**350**	**2600**
Indeno[1,2,3-cd]pyrene	**2,900**	**18**	**22**	**1,100**	**260**	**53**	**56**	**930**
2-Methylnaphthalene	**45,000**	**190**	**510**	**26,000**	**3800**	**870**	**1300**	NM
Naphthalene	**167,900**	**1,300**	**4,000**	**64,000**	**11000**	**1500**	**4300**	**21000**
Phenanthrene	**42,900**	**300**	**390**	**27,000**	**4200**	**1100**	**1300**	**8700**
Pyrene	**28,500**	**170**	**220**	**16,000**	**2600**	**650**	**740**	**4300**
Total PAH 17:	**413,000**	**2,710**	**6,083**	**194,600**	**32031**	**6681**	**10506**	**55920**

LEGEND:

- PROJECT LIMIT
- PROPERTY LINE
- MONITORING WELL
- MONITORING WELL - DAMAGED OR DESTROYED
- J — THE RESULT IS AN ESTIMATED VALUE
- ND — NOT DETECTED
- NM — NOT MEASURED

NOTES:

1. BOLD FONT INDICATES DETECTED COMPOUND.
2. RESULTS PRESENTED IN µg/L (MICROGRAMS PER LITER OR PARTS PER BILLION (PPB)).
3. CONSTITUENTS DETECTED AT LEAST ONCE WITHIN A GIVEN MONITORING WELL ARE PRESENTED IN THAT WELL'S DATA TABLE.
4. A SAMPLE COULD NOT BE COLLECTED FROM MW46 IN 2020 DUE TO AN OBSTRUCTION IN THE WELL, WHICH WAS CLEARED PRIOR TO THE 2021 MONITORING EVENT.

2022 Site Management Plan Annual Report
Nyack Former MGP Site
Nyack, New York

Orange and Rockland Utilities, Inc.
Spring Valley, New York

GEI Consultants

BASELINE AND POST-REMEDIATION GROUNDWATER QUALITY

Project 2202333 | December 2022 | Fig. 4

\\geiconsulta \\geiconsultants.com\data\Data_Storage\Working\O&R\2202333 Nyack MGP Annual SMP\00_CAD\Figures\2022 SMP\2202333_SMP_FIGS.dwg - 12/21/2022

Appendix A

Laboratory Chain-of-Custody Record and Form I Reports

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: MW46
Date Collected: 10/27/22 10:40
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3000**		10	2.0	ug/L			11/04/22 02:31	10
Ethylbenzene	**270**		10	3.0	ug/L			11/04/22 02:31	10
Toluene	**4.7**	**J**	10	3.8	ug/L			11/04/22 02:31	10
Xylenes, Total	**190**		20	6.5	ug/L			11/04/22 02:31	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 128*		*11/04/22 02:31*	*10*
4-Bromofluorobenzene	*90*		*76 - 120*		*11/04/22 02:31*	*10*
Dibromofluoromethane (Surr)	*92*		*77 - 124*		*11/04/22 02:31*	*10*
Toluene-d8 (Surr)	*101*		*80 - 120*		*11/04/22 02:31*	*10*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: MW44
Date Collected: 10/27/22 12:05
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1700**		5.0	1.0	ug/L			11/03/22 18:43	5
Ethylbenzene	**1300**		5.0	1.5	ug/L			11/03/22 18:43	5
Toluene	**23**		5.0	1.9	ug/L			11/03/22 18:43	5
Xylenes, Total	**1200**		10	3.3	ug/L			11/03/22 18:43	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 128*		*11/03/22 18:43*	*5*
4-Bromofluorobenzene	*97*		*76 - 120*		*11/03/22 18:43*	*5*
Dibromofluoromethane (Surr)	*101*		*77 - 124*		*11/03/22 18:43*	*5*
Toluene-d8 (Surr)	*100*		*80 - 120*		*11/03/22 18:43*	*5*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: MW43
Date Collected: 10/27/22 13:10
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.2**		1.0	0.20	ug/L			11/04/22 03:49	1
Ethylbenzene	**1.3**		1.0	0.30	ug/L			11/04/22 03:49	1
Toluene	**0.52**	**J**	1.0	0.38	ug/L			11/04/22 03:49	1
Xylenes, Total	**0.89**	**J**	2.0	0.65	ug/L			11/04/22 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 128*		*11/04/22 03:49*	*1*
4-Bromofluorobenzene	*93*		*76 - 120*		*11/04/22 03:49*	*1*
Dibromofluoromethane (Surr)	*98*		*77 - 124*		*11/04/22 03:49*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*11/04/22 03:49*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: DUP102722
Date Collected: 10/27/22 13:15
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.7**		1.0	0.20	ug/L			11/04/22 04:15	1
Ethylbenzene	**0.93**	**J**	1.0	0.30	ug/L			11/04/22 04:15	1
Toluene	**0.42**	**J**	1.0	0.38	ug/L			11/04/22 04:15	1
Xylenes, Total	ND		2.0	0.65	ug/L			11/04/22 04:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 128*		*11/04/22 04:15*	*1*
4-Bromofluorobenzene	*91*		*76 - 120*		*11/04/22 04:15*	*1*
Dibromofluoromethane (Surr)	*96*		*77 - 124*		*11/04/22 04:15*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*11/04/22 04:15*	*1*

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: TRIP BLANK
Date Collected: 10/27/22 00:00
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.20	ug/L			11/02/22 23:00	1
Ethylbenzene	ND		1.0	0.30	ug/L			11/02/22 23:00	1
Toluene	ND		1.0	0.38	ug/L			11/02/22 23:00	1
Xylenes, Total	ND		2.0	0.65	ug/L			11/02/22 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 128*		*11/02/22 23:00*	*1*
4-Bromofluorobenzene	*104*		*76 - 120*		*11/02/22 23:00*	*1*
Dibromofluoromethane (Surr)	*115*		*77 - 124*		*11/02/22 23:00*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*11/02/22 23:00*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: MW46
Date Collected: 10/27/22 10:40
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**31**		10	1.1	ug/L		11/01/22 10:24	11/02/22 13:33	1
Acenaphthylene	**3.0**	**J**	10	0.82	ug/L		11/01/22 10:24	11/02/22 13:33	1
Anthracene	**2.1**	**J**	10	1.3	ug/L		11/01/22 10:24	11/02/22 13:33	1
Benzo[a]anthracene	ND		1.0	0.59	ug/L		11/01/22 10:24	11/02/22 13:33	1
Benzo[a]pyrene	ND		1.0	0.41	ug/L		11/01/22 10:24	11/02/22 13:33	1
Benzo[b]fluoranthene	ND		2.0	0.68	ug/L		11/01/22 10:24	11/02/22 13:33	1
Benzo[g,h,i]perylene	ND	*+	10	0.70	ug/L		11/01/22 10:24	11/02/22 13:33	1
Benzo[k]fluoranthene	ND		1.0	0.67	ug/L		11/01/22 10:24	11/02/22 13:33	1
Chrysene	ND		2.0	0.91	ug/L		11/01/22 10:24	11/02/22 13:33	1
Dibenz(a,h)anthracene	ND	*+	1.0	0.72	ug/L		11/01/22 10:24	11/02/22 13:33	1
Fluoranthene	**1.3**	**J**	10	0.84	ug/L		11/01/22 10:24	11/02/22 13:33	1
Fluorene	**9.8**	**J**	10	0.91	ug/L		11/01/22 10:24	11/02/22 13:33	1
Indeno[1,2,3-cd]pyrene	ND	*+	2.0	0.94	ug/L		11/01/22 10:24	11/02/22 13:33	1
Naphthalene	**81**		2.0	0.54	ug/L		11/01/22 10:24	11/02/22 13:33	1
Phenanthrene	**6.3**	**J**	10	1.3	ug/L		11/01/22 10:24	11/02/22 13:33	1
Pyrene	**1.9**	**J**	10	1.6	ug/L		11/01/22 10:24	11/02/22 13:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*56*		*46 - 139*	*11/01/22 10:24*	*11/02/22 13:33*	*1*
Nitrobenzene-d5 (Surr)	*62*		*52 - 137*	*11/01/22 10:24*	*11/02/22 13:33*	*1*
Terphenyl-d14 (Surr)	*54*		*22 - 150*	*11/01/22 10:24*	*11/02/22 13:33*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: MW44
Date Collected: 10/27/22 12:05
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	590		100	8.2	ug/L		11/01/22 10:24	11/02/22 13:54	10
Benzo[a]pyrene	1600		10	4.1	ug/L		11/01/22 10:24	11/02/22 13:54	10
Benzo[b]fluoranthene	1100		20	6.8	ug/L		11/01/22 10:24	11/02/22 13:54	10
Benzo[g,h,i]perylene	1000	*+	100	7.0	ug/L		11/01/22 10:24	11/02/22 13:54	10
Benzo[k]fluoranthene	340		10	6.7	ug/L		11/01/22 10:24	11/02/22 13:54	10
Chrysene	1800		20	9.1	ug/L		11/01/22 10:24	11/02/22 13:54	10
Dibenz(a,h)anthracene	260	*+	10	7.2	ug/L		11/01/22 10:24	11/02/22 13:54	10
Indeno[1,2,3-cd]pyrene	930	*+	20	9.4	ug/L		11/01/22 10:24	11/02/22 13:54	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*46 - 139*	*11/01/22 10:24*	*11/02/22 13:54*	*10*
Nitrobenzene-d5 (Surr)	*65*		*52 - 137*	*11/01/22 10:24*	*11/02/22 13:54*	*10*
Terphenyl-d14 (Surr)	*41*		*22 - 150*	*11/01/22 10:24*	*11/02/22 13:54*	*10*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: MW43
Date Collected: 10/27/22 13:10
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	1.1	ug/L		11/01/22 10:24	11/02/22 10:19	1
Acenaphthylene	ND		10	0.82	ug/L		11/01/22 10:24	11/02/22 10:19	1
Anthracene	ND		10	1.3	ug/L		11/01/22 10:24	11/02/22 10:19	1
Benzo[a]anthracene	ND		1.0	0.59	ug/L		11/01/22 10:24	11/02/22 10:19	1
Benzo[a]pyrene	ND		1.0	0.41	ug/L		11/01/22 10:24	11/02/22 10:19	1
Benzo[b]fluoranthene	ND		2.0	0.68	ug/L		11/01/22 10:24	11/02/22 10:19	1
Benzo[g,h,i]perylene	ND	*+	10	0.70	ug/L		11/01/22 10:24	11/02/22 10:19	1
Benzo[k]fluoranthene	ND		1.0	0.67	ug/L		11/01/22 10:24	11/02/22 10:19	1
Chrysene	ND		2.0	0.91	ug/L		11/01/22 10:24	11/02/22 10:19	1
Dibenz(a,h)anthracene	ND	*+	1.0	0.72	ug/L		11/01/22 10:24	11/02/22 10:19	1
Fluoranthene	ND		10	0.84	ug/L		11/01/22 10:24	11/02/22 10:19	1
Fluorene	ND		10	0.91	ug/L		11/01/22 10:24	11/02/22 10:19	1
Indeno[1,2,3-cd]pyrene	ND	*+	2.0	0.94	ug/L		11/01/22 10:24	11/02/22 10:19	1
Naphthalene	ND		2.0	0.54	ug/L		11/01/22 10:24	11/02/22 10:19	1
Phenanthrene	ND		10	1.3	ug/L		11/01/22 10:24	11/02/22 10:19	1
Pyrene	ND		10	1.6	ug/L		11/01/22 10:24	11/02/22 10:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*46 - 139*	*11/01/22 10:24*	*11/02/22 10:19*	*1*
Nitrobenzene-d5 (Surr)	*71*		*52 - 137*	*11/01/22 10:24*	*11/02/22 10:19*	*1*
Terphenyl-d14 (Surr)	*77*		*22 - 150*	*11/01/22 10:24*	*11/02/22 10:19*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: DUP102722
Date Collected: 10/27/22 13:15
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**1.3**	**J**	10	1.1	ug/L		11/01/22 10:24	11/02/22 10:41	1
Acenaphthylene	ND		10	0.82	ug/L		11/01/22 10:24	11/02/22 10:41	1
Anthracene	ND		10	1.3	ug/L		11/01/22 10:24	11/02/22 10:41	1
Benzo[a]anthracene	ND		1.0	0.59	ug/L		11/01/22 10:24	11/02/22 10:41	1
Benzo[a]pyrene	ND		1.0	0.41	ug/L		11/01/22 10:24	11/02/22 10:41	1
Benzo[b]fluoranthene	ND		2.0	0.68	ug/L		11/01/22 10:24	11/02/22 10:41	1
Benzo[g,h,i]perylene	ND	*+	10	0.70	ug/L		11/01/22 10:24	11/02/22 10:41	1
Benzo[k]fluoranthene	ND		1.0	0.67	ug/L		11/01/22 10:24	11/02/22 10:41	1
Chrysene	ND		2.0	0.91	ug/L		11/01/22 10:24	11/02/22 10:41	1
Dibenz(a,h)anthracene	ND	*+	1.0	0.72	ug/L		11/01/22 10:24	11/02/22 10:41	1
Fluoranthene	ND		10	0.84	ug/L		11/01/22 10:24	11/02/22 10:41	1
Fluorene	ND		10	0.91	ug/L		11/01/22 10:24	11/02/22 10:41	1
Indeno[1,2,3-cd]pyrene	ND	*+	2.0	0.94	ug/L		11/01/22 10:24	11/02/22 10:41	1
Naphthalene	**0.66**	**J**	2.0	0.54	ug/L		11/01/22 10:24	11/02/22 10:41	1
Phenanthrene	ND		10	1.3	ug/L		11/01/22 10:24	11/02/22 10:41	1
Pyrene	ND		10	1.6	ug/L		11/01/22 10:24	11/02/22 10:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*61*		*46 - 139*	*11/01/22 10:24*	*11/02/22 10:41*	*1*
Nitrobenzene-d5 (Surr)	*71*		*52 - 137*	*11/01/22 10:24*	*11/02/22 10:41*	*1*
Terphenyl-d14 (Surr)	*76*		*22 - 150*	*11/01/22 10:24*	*11/02/22 10:41*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) - DL

Client Sample ID: MW44
Date Collected: 10/27/22 12:05
Date Received: 10/28/22 16:30

Lab Sample ID: 180-147128-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	3900		2000	220	ug/L		11/01/22 10:24	11/02/22 17:30	200
Anthracene	2500		2000	260	ug/L		11/01/22 10:24	11/02/22 17:30	200
Benzo[a]anthracene	1900		200	120	ug/L		11/01/22 10:24	11/02/22 17:30	200
Fluoranthene	3400		2000	170	ug/L		11/01/22 10:24	11/02/22 17:30	200
Fluorene	2600		2000	180	ug/L		11/01/22 10:24	11/02/22 17:30	200
Naphthalene	21000		400	110	ug/L		11/01/22 10:24	11/02/22 17:30	200
Phenanthrene	8700		2000	260	ug/L		11/01/22 10:24	11/02/22 17:30	200
Pyrene	4300		2000	330	ug/L		11/01/22 10:24	11/02/22 17:30	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*0*	*S1-*	*46 - 139*	*11/01/22 10:24*	*11/02/22 17:30*	*200*
Nitrobenzene-d5 (Surr)	*0*	*S1-*	*52 - 137*	*11/01/22 10:24*	*11/02/22 17:30*	*200*
Terphenyl-d14 (Surr)	*0*	*S1-*	*22 - 150*	*11/01/22 10:24*	*11/02/22 17:30*	*200*

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Yousef Alaglabawi	Lab PM: Dunlap, David A	Carrier Tracking No(s):	COC No: 180-85834-16149.1
Client Contact: Ms. Wendy Moore	Phone:	E-Mail: David.Dunlap@et.eurofinsus.com	State of Origin: NY	Page: Page 1 of 1
Company: GEI Consultants, Inc.	PWSID:			Job #: 180 - 147128
Address: 1301 Trumansburg Road Suite N	Due Date Requested:			
City: Ithaca	TAT Requested (days): 15 work day			
State, Zip: NY, 14850	Compliance Project: Δ Yes Δ No			
Phone: 607-216-8966(Tel)	PO #: Purchase Order not required			
Email: wmoore@geiconsultants.com	WO #:			
Project Name: 2202333.1.1, Nyack	Project #: 18016296			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - BTEX	8270E - PAHs & 2-methylnaphthalene	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N		
MW 46	10/27/22	1040	G	Water			X	X		
MW 44		1205	G	Water			X	X		
MW 43		1310	G	Water			X	X		
DUP 102722		1315	G	Water			X	X		
				Water						
				Water						

180-147128 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10/28/22 1645	GEI		10/28/22 10:49	ET
2		10/28/22 16:50	GEI		10/28/22 1620	UPS
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: NO CS

Cooler Temperature(s) °C and Other Remarks: IR#9 T1/14 1.2/1.2

Ver: 01/16/2019

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11/14/2022

Appendix B

Site Inspection Form (Including Photographic Record)

SITE INSPECTION FORM

Nyack Former Manufactured Gas Plant Site

SITE INSPECTION DATE: 10/18/2022 **TIME OF ARRIVAL**: 10:54 a.m.

DEPARTURE: 12:10 p.m.

WEATHER: Mostly cloudy, high 40s °F, low 50s °F.

Orange and Rockland Representative(s): None

INSPECTION TYPE: **Annual Inspection** or **Emergency Inspection**

(if emergency indicate event that required an inspection): Annual SMP Inspection for 2022

Engineering controls – cover and site utilities.

Are the Institutional Controls in place, performing properly, and remain effective?

Yes

Does the Site comply with NYSDEC-approved Site Management Plan? Yes

Has ownership of the property changed since the last inspection? No

(Verify with Real Estate and Survey Departments)

Owner continues to be TZ Vista.

Are there any changes to intended site use (Restricted Residential, Commercial Or Industrial) which would affect the SMP or institutional controls? Yes

The site is planned to be developed by TZ Vista. It is GEI's understanding that development will be for commercial and residential use. The project has not been approved by local agencies as of the date of this inspection. The schedule for development is unknown.

Is site used for agricultural purpose or vegetable gardens? Yes / (No)

SITE INSPECTION FORM

Nyack Former Manufactured Gas Plant Site

Is groundwater used as source of potable or process water onsite Yes / (No)

If yes to the above – does water go through the necessary water quality treatment? N/A

Is solidified material visible, or is there any evidence of damage to solidified soil from frost and wave action? Yes / (No)

Not visible during ebb tide towards low tide at 11:26 a.m. (Tarrytown NOAA station)

Are the Engineering Controls in place, performing properly, and remain effective?

Surface Cover Intact (i.e. no evidence of erosion, excavations), including concrete sidewalk and paved street west of the site? (Yes) / No

GENERAL SITE OBSERVATIONS:

Have there been any changes to the property since the last inspection? (i.e. new equipment, residential buildings or facilities, changes in site topography, erosion, etc.) (Yes) / No

There does not appear to have been any construction activities since last inspection. However, equipment remains onsite (as shown in the attached photos). Minor erosion was observed at the drain outfall pipe at the southeast corner of the site at the north end of the Hudson Vista parking lot (photo is included in attached photo log; additional erosion (minor) noted from 2021 inspection). Additionally, there appears to be storage of boating equipment onsite from the adjacent boat club to the north just on the other side of the property fence line. However, this does not appear to be affecting the environmental controls for the site.

NOTE:

Inspections should be made a minimum once a year and within 5 days of an emergency, such as a natural disaster or an unforeseen failure or damage to the building occurs. Inspections will be conducted by Consolidated Edison (or their agent) and results reported to NYSDEC.

COMPLETED BY: Sean DiBartolo, P.E.	**SIGNATURE:** Sean DiBartolo
GEI Consultants, Inc., P.C.	

GEI Consultants

PHOTOGRAPHIC RECORD

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 1
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: North

Comments:
Upper Terrace

Photo No.: 2
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Northwest

Comments:
Upper Terrace

GEI Consultants

PHOTOGRAPHIC RECORD

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 3
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: East

Comments:
Upper Terrace

Photo No.: 4
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: East

Comments:
Lower Terrace and Hudson River Area

GEI Consultants

PHOTOGRAPHIC RECORD

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 5
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: North

Comments:
Lower Terrace

Photo No.: 6
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Southwest

Comments:
Lower Terrace

GEI Consultants

PHOTOGRAPHIC RECORD

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 7
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: South

Comments:
Lower Terrace towards Hudson Vista Parking Lot

Photo No.: 8
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: North

Comments:
Hudson Vista Associates Parcel lower parking lot portion of surface cover

GEI Consultants

PHOTOGRAPHIC RECORD

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 9
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Northeast

Comments:
Lower Terrace and Riprap Slope

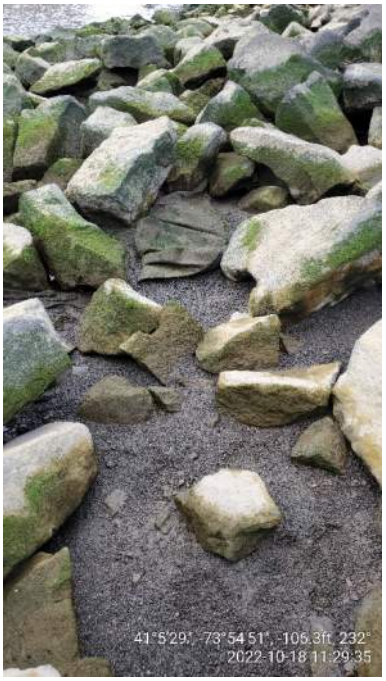

Photo No.: 10
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Southeast

Comments:
Riprap Slope at Hudson River at Low Tide

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 11
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Southwest

Comments:
Riprap Slope at Hudson River at Low Tide

Photo No.: 12
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Northeast

Comments:
Riprap Slope at Hudson River at Low Tide

GEI Consultants

PHOTOGRAPHIC RECORD

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 13
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Northwest

Comments:
Stormwater CMP Outfall at North end of Hudson Vista Parking Lot

Photo No.: 14
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: South

Comments:
Perimeter fence at Gedney Street

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 15
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Northeast

Comments:
Perimeter fence at Gedney Street

Photo No.: 16
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Southwest

Comments:
Perimeter fence at Main Street (upper left side of photo) and Gedney Street (upper right side of photo)

GEI Consultants

PHOTOGRAPHIC RECORD

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 17
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: Southwest

Comments:
Perimeter fence at Hudson Vista Associates Parcel lower parking lot.

Photo No.: 18
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: North

Comments:
Perimeter fence at Hudson Vista Associates Parcel lower parking lot.

GEI Consultants

PHOTOGRAPHIC RECORD

Company: Orange and Rockland Utilities, Inc.
Project: 2022 SMP Inspection, Nyack Former MGP Site

Photo No.: 19
Photographer: S. DiBartolo
Date: 10/18/2022
Direction: West

Comments:
Storage of boating equipment on Property. North perimeter fence does not extend onto the riprap slope and the site can be accessed from adjacent boat club to the north.