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Part I: Primary Recipient*: Remediation Program (* required)

For Remediation documents:	For PCB/LUST documents:
Primary Program*: Voluntary Remediation	UST Facility ID: (if applicable)
Rem ID*: 12390	Spill Case Number: (if known)

Part II: Site Information

Site Name*: Rockville Former Manufactured Gas Plant
Site Address*: 13 Maple Street
City/Town*: Rockville, Vernon State: CT Zip Code: 06066

Secondary Programs (complete as many as applicable for this document):

Program: Significant Environmental Hazard	Project ID: 13641
Program: Select Secondary Program	Project ID:
Program: Select Secondary Program	Project ID:
Program: Select Secondary Program	Project ID:

Provide Project ID for each secondary program if it is known.
Each program has a unique ID (i.e. Rem ID, Spill Case #, UST Facility ID, etc.)

Part III: Document Information (document type required for appropriate program[s] only)

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LUST/PCB*: LUST/PCB Document Type
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The Connecticut Light & Power Co. dba Eversource



GEI Consultants

2024 Annual Report

Rockville Former MGP Site

13 Maple Street, Vernon, Rockville, CT 06066

Submitted to:
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1. Introduction

On behalf of The Connecticut Light and Power Company (CL&P) dba Eversource Energy (Eversource), GEI Consultants, Inc. (GEI) prepared this 2024 Annual Report for the Rockville former manufactured gas plant (MGP) site located at 13 Maple Street, in the Rockville section of Vernon, Connecticut (Site). The Site location is shown on Fig. 1. This report serves as the annual update as required by the Voluntary Remediation Program (VRP). The report summarizes pertinent background information for the Site, identifies remaining data gaps, summarizes project tasks completed in the calendar year, summarizes the conceptual site model (CSM), and provides an updated schedule.

2. Background

2.1. Site Description

The 3.43-acre Site is bounded by a wooded lot, a church, and residential properties to the north, Maple Street to the east, the Hockanum River and West Main Street to the south, and residential properties with frontage on West Street (Route 527) to the west. The Site is currently used as an electrical substation, Eversource's Substation 14W. The substation is enclosed by a perimeter fence that limits access to authorized personnel only. The Inner Substation Area includes the active electrical substation infrastructure including high voltage power lines, towers, transformers, and electrical control houses. Subsurface electrical power supply ducts and substation grounding grid are located beneath a crushed gravel cover inside the Inner Substation Area. Access to the Inner Substation Area is restricted by a high security fence equipped with barbed wire. Eversource requires notification and specialized training prior to entry to the Inner Substation Area and appropriate escort by qualified personnel.

The remainder of the parcel outside the Inner Substation Area is referred to as the Outer Substation Area (Fig. 2). The Outer Substation Area includes a grassed area surrounding the eastern and northern sides of the Site. A series of electrical duct banks extend from the switch gear beyond the northeastern Inner Substation Area into the Outer Substation Area that feed distribution poles along the site boundary with Maple Street. The western portion of the Outer Substation Area is fenced area where a high-pressure gas regulator/control house was located prior to recent demolition. The Hockanum River is within the Outer Substation Area and abuts the Inner Substation Area to the south. Wooded and overgrown areas are located on the northern portion of the Site adjacent to the St. Joseph's Church paved parking lot and along the southern portion of the Site between the Hockanum River and West Main Street.

The Site is zoned "NR-10," which is a designation provided to historic district neighborhood parcels. Surrounding land use within a 500-foot radius includes mixed residential, commercial, and industrial land use, schools, and a church.

2.2. Site History

2.2.1. Operational History

The Site was formerly a MGP that operated from 1863 until the mid-1930s when gas production ceased. The original MGP consisted of a distillation works and a gas holder, with coal gas produced by the retort process. By 1877, a second gas holder was erected, as well as a 1.5-story brick building to house gas production. In 1890, three gas engines were installed and the coal-gas made on-Site was consumed by electrical generators for arc lighting. In the mid-1890s, the MGP was converted to make carbureted water-gas. A third gas holder was erected at the MGP in 1922. Gas production ceased prior to the mid-1930s.

The footprint of the former MGP structures is shown in Fig. 2. The former MGP was acquired by CL&P in 1935 and later converted to be used as an electrical substation and natural gas regulator station. The

operations of the gas regulator station were decommissioned in 2023 and the associated gas regulation shed was demolished in 2024.

2.2.2. Previous Environmental Reports and Site Status

Several investigations were conducted at the Site during the 1990s as identified below:

- MGP Site Investigation, March 1992, NUSCO
- MGP Off-Site Investigation Phase I Interim Report, May 1993, NUSCO
- MGP Off-Site Investigation, April 1994, NUSCO
- Human Health Risk Assessment, December 1994, NUSCO
- Field Summary Report, April 1995, NUSCO
- Analysis of Remedial Alternatives, October 1996, RETEC

On September 2, 2015, Eversource entered the Site into the VRP, pursuant to Connecticut General Statutes (CGS) 22a-133x, by submitting an Environmental Condition Assessment Form (ECAF) and fee to the CT DEEP. Acknowledgment of the ECAF and fee was provided in a letter from CT DEEP dated September 24, 2015. Since CT DEEP did not indicate that the Commissioner's review and approval of the investigation was required within 30 days of the date of their letter, the Site was automatically delegated to a Licensed Environmental Professional (LEP).

A data summary of the investigations listed above is provided in the ECAF and the "Site Status and Condition Report" prepared by GEI, both of which are dated August 31, 2015, and submitted to CT DEEP on September 2, 2015. A Water-Supply Well Receptor Survey was also performed as part of the ECAF; no wells were identified within a 500-foot radius of the Site.

Eversource retained Tighe & Bond as the LEP firm in December 2015. Tighe & Bond conducted various Site investigation activities and submitted Annual Reports to CT DEEP from December 2016 and December 2021. Sample locations associated with investigations performed by Tighe & Bond are shown on the attached Figure 3. CT DEEP Significant Environmental Hazard Forms were also submitted as required. In 2020, an Off-Site Soil Vapor Assessment was completed and submitted to the church pastor. In 2021, Exponent Ecological and Biological Sciences (Exponent) completed a Screening Level Ecological Risk Assessment (SLERA) that was submitted to CT DEEP. These activities have been summarized in prior annual reports.

In early 2022, Eversource once again retained GEI to plan and implement a Supplemental Phase II/III Environmental Site Assessment (ESA) Work Plan for the Site. On March 30, 2022, GEI provided a letter to CT DEEP indicating a change in the LEP of Record for the Site assigning the Mr. Jeffrey Holden (LEP#423) as the LEP of Record for the Site.

Annual reporting for the Site continued following supplemental Phase II/III investigation work completed in 2022. The 2022 Annual Report summarized the findings of the supplemental investigation which included the following:

- Drilling and well installation;
- SEH Delineation Sampling; and
- Sediment and Surface Water sampling.

As part of the 2022 Phase II/III ESA Work Plan, GEI completed four (4) quarters of groundwater sampling of a select list of monitoring wells including the downgradient wells installed as part of the work plan in 2022 to delineate the impacted groundwater plume. Monitoring work also included NAPL gauging and recovery at on-Site wells previously identified as having the potential to collect NAPL. The results of the quarterly groundwater monitoring and NAPL recovery efforts were summarized in the 2023 Annual Report.

Activities performed during 2024 are further discussed in Section 3.

2.3. Previously Identified Data Gaps and Status

Several data gaps were identified in 2022 based on GEI's understanding of the Site and prior investigation efforts. The Supplemental Phase II/III ESA Work Plan, the contents of which were summarized in the 2022 Annual Report submittal to CT DEEP, identified proposed activities to address these data gaps. The identified data gaps are summarized below, along with a summary of the status of each including 2024 updates to the first two bullets (in bold):

- Characterization of the nature and extent of the groundwater plume within the intermediate groundwater zone is needed to the west/northwest of MW-42M, which exceeds the Surface Water Protection Criteria (SWPC) for extractable total petroleum hydrocarbons (ETPH) and the Groundwater Protection Criteria (GWPC) for benzene and ETPH. **Additional wells were installed in 2022 and quarterly monitoring in 2023 was completed to delineate the affected groundwater area. Attached to this annual report is an Initial Notification for Intended Use of Alternative Groundwater Protection Criteria (GWPC), which describes the basis and rationale for the use of alternative GWPC values consistent with the Remediation Standard Regulations (RSRs) (see Section 3.2).**
- Additional groundwater data at St. Joseph's Church and proposed additional downgradient wells are needed to evaluate seasonal changes to constituents of concern (COCs) in groundwater downgradient of the Site. **Additional wells were installed in 2022 and quarterly monitoring in 2023 was completed to delineate the affected groundwater area. As indicated above, we are including an Initial Notification for Intended Use of Alternative (see Section 3.2).**
- Additional groundwater data at the northwestern and western portions of the Outer Substation Area is needed to evaluate seasonal changes to COCs in groundwater at monitoring wells MW-03DR and MW-39S. Wells RW-03M, MW-03DR, and MW 37S need to be gauged to evaluate if measurable volumes of tar have accumulated at these locations. **Additional monitoring of these wells was performed in 2024 (see Section 3).**
- Volatile organic compounds (VOCs) and petroleum-impacted groundwater in well MW-35S is within 15 feet of the ground surface of the electrical control house slab, thus warranting a soil vapor assessment beneath the control house. **Soil vapor testing was performed in the control**

house in March 2022. The detected concentrations of VOCs and ETPH were below both the RES VC and I/C VC for soil vapor and therefore meet the CT DEEP RSR Section 22a-133k-3(c)(1)(A) Alternative Demonstration of Compliance with Volatilization Criteria for Groundwater for Soil Vapor Below a Building. A summary memo was included as Appendix B to the 2022 Annual Report.

- Additional delineation of shallow soils (0 to 2 feet below ground surface) was needed around previous soil sample locations SB-76 and SB-78 to determine the extent of soil with benzo(a)pyrene concentrations exceeding the SEH Condition Notification Threshold Concentration. **The SEH Conditions have been delineated as discussed in Section 2.4. An annual SEH Status Update Form was submitted in 2024 (see Section 3.3).**
- The SLERA completed by Exponent in 2021 indicated a potential for Site-related COCs in the Hockanum River portion of the Site to present adverse ecological effects to benthic invertebrates, fish, and semi-aquatic wildlife. The SLERA recommended further evaluation in a Baseline Ecological Risk Assessment (BERA). GEI recommended the performance of a refined SLERA in lieu of a BERA and additional data collection would be required in support of this. **Additional data collection was performed in 2022 and a refined SLERA was submitted to CT DEEP on May 31, 2023 (see the 2023 Annual Report).**

As part of activities planned for 2025, the existing data gaps will be re-evaluated and initial planning to establish a remedy for the Site will be completed. The results of the data gap analysis will determine if the nature and extent of impacts associated with the former MGP site has been sufficiently defined. Any additional information required to select and design a remedy for the Site and to demonstrate compliance with the CT DEEP RSRs for soil, groundwater, and non-aqueous phase liquid (NAPL) impacts will likely be included as part of the remedial action plan (RAP) and/or a pre-design investigation for the Site.

2.4. Significant Environmental Hazard (SEH) Reporting Background

During sampling for the Phase III ESA in 2018, a sample was detected above CT DEEP's Significant Environmental Hazard Condition Notification Threshold Concentration of 30 mg/kg for benzo(a)pyrene (BaP). The sample was collected from surface soils at SS-102 located in the Inner Substation Area and was determined to be associated with historical fill. The exceedance was reported to CT DEEP in a SEH Notification Form (SEH ID:13641) on February 26, 2018. In response, CT DEEP issued an SEH Acknowledgment Letter on March 16, 2018, which stated that an immediate action to limit short-term risk was not required because the area was secured by permanent fencing. The letter required that the site investigation, remediation, and annual inspection reporting be continued in accordance with the plan provided in the SEH Notification Form.

Annual SEH Status Update Forms have been submitted to the CT DEEP since 2019 to provide an update on any SEH sampling, mitigation measures, and/or abatement activities. Additional locations exceeding the SEH Condition Threshold Concentration for BaP have been identified at the following locations and reported to the CT DEEP:

- In 2018, during the Phase III ESA, BaP washes were detected above the SEH Condition Notification Threshold Concentration in surficial soils at HA-01A, HA-02, and HA-03 located

around SS-102 and in the one-to-two-foot interval at HA-18 located in the Outer Substation Area.

- In 2020, on-going Phase III ESA sampling identified BaP above the SEH Condition Notification Threshold Concentration within historical fill in soil borings SB-76 and SB-78 located within the Inner Substation Area.
- In 2021, pre-characterization sampling to support the installation of a utility conduit duct bank found an SEH exceedance for BaP at OSS-4 in the Outer Substation Area. After excavation of the duct bank trench through the OSS-4 sample area, four sidewall samples including OSS-4NW, OSS-4NE, OSS-4SE and OSS-4SW, were collected from the trench. BaP results from these samples indicated the SEH condition was abated. The soils from the OSS-4 area were removed and disposed of offsite along with the other soils generated from the project under the same waste profile.

In March 2022, additional delineation sampling around SB-76 and SB-78 was performed. The additional sampling defined the limits of the SEH condition at boring SB-78 and approximately 18 tons of soil was excavated in May 2022, as summarized in the 2022 SEH Status Update Form submitted to the CT DEEP on May 25, 2022.

The March 2022 delineation sampling around boring SB-76 did not completely define the limits of the SEH condition in this area of the Site. Additional delineation sampling was completed in December 2022 which included collection of soil samples from the 0- to 1-foot and 1- to 2-foot depth intervals at an adjacent location SB-76A1 and submitted under chain-of-custody to Phoenix Laboratories for analysis of PAHs by EPA Method 8270D. The 2022 Annual Report indicated that the preliminary results for these samples were below SEH criteria. This was confirmed after receipt of final results and data quality review in 2023 such that the area around SB-76 is delineated as a result of the December 2022 sampling. The SEH sampling activities and data are further discussed in the 2023 CT DEEP SEH Status Update Form submitted to the CT DEEP on May 19, 2023. The remaining SEH conditions at the Site are within the outer or inner substation fence, inspected on an annual basis, and will be abated as part of the Site-wide remedy. The most recent SEH Status update was submitted to CT DEEP on May 22, 2024 (see Section 3.3).

3. 2024 Site Activities

This section summarizes key project-related activities performed from January 2024 through mid-December 2024, including the following:

- NAPL gauging and recovery.
- Gas Regulation Shed Demolition

Each of these is discussed in further detail in the following subsections.

3.1. NAPL Gauging & Recovery

GEI's 2022 Work Plan included NAPL gauging of certain monitoring wells where NAPL was previously detected. This monitoring effort was continued through 2024 to understand NAPL thickness and recovery trends and to periodically remove NAPL from the existing well network if present and recoverable. Initially, a comprehensive well gauging event was performed in January 2023 (discussed in the 2023 Annual Report) and one of its objectives was to obtain an updated assessment regarding the presence of NAPL in the monitoring well network. Wells that were initially identified to contain NAPL included MW-2D, MW-3D, MW-10D, MW-24S, and MW-32S (Figure 3), all of which contained a tar-like dense non-aqueous phase liquid (DNAPL) with the except for MW-32S, which was observed to contain light non-aqueous phase liquid (LNAPL). MW-32S was therefore included in the subsequent NAPL gauging and recovery program.

Table 1 summarizes the NAPL gauging and recovery data from 2024. As indicated, LNAPL was observed in monitoring well MW-32S during two out of the three of the events where it was gauged (April and August 2024). LNAPL thicknesses measured in MW-32S ranged from not detected to 0.25 feet. Approximately 0.5 gallons of LNAPL was recovered from the well in 2024. LNAPL was not detected in any other monitoring wells at the Site.

DNAPL was detected in the four wells listed above at thickness ranging from trace (< 0.01 feet) to 1.75 feet in MW-24S (August 2024). Recoverable DNAPL was removed from the wells during each event totaling approximately 2 gallons of DNAPL during 2024.

Recovered NAPL was contained on-Site in a 55-gallon drums pending waste characterization, off-Site transport, and disposal. We anticipate a waste shipment and disposal event in the first quarter of 2025.

3.2. Groundwater Compliance

The 2022 Work Plan included four rounds of quarterly groundwater monitoring at the Site following installation of the new wells. Quarterly groundwater monitoring was completed in 2023 and summarized in the 2023 Annual Report. This quarterly monitoring data combined with previous monitoring data completed from 2017 through 2023 indicate delineation of the impacted groundwater plume related to the Site. The following information summarizes the basis for delineation in shallow, intermediate and deep overburden groundwater:

Shallow Overburden Groundwater

Groundwater analytical data including sampling of downgradient shallow monitoring wells MW-40S, MW-42S, MW-43S, MW-44S and MW-45S indicate low or non-detectable concentrations below the GWPC and SWPC except for slight periodic exceedances of certain PAH compounds at monitoring wells MW-44S and MW-45S. Collectively, these results provide for delineation at or near laboratory detection limits or are attributed to unrelated downgradient sources. Specifically, PAH concentrations detected in monitoring wells MW-44S and MW-45S are likely associated with other PAH sources because the concentrations of PAHs at these locations are below detection levels in upgradient wells along the flow path between MW-45S and the Site (i.e., MW-31S, MW-26S, and MW-40S).

Intermediate Overburden Groundwater

Monitoring data from sampling of intermediate monitoring wells MW-43M, MW-44M and MW-45M indicate contaminant concentrations below the GWPC except for slight periodic exceedances of certain PAH compounds at monitoring wells MW-44M and MW-45M. These detected concentrations were below the associated SWPC. Similar to shallow groundwater described above, we note that downgradient conditions are likely impacted by other PAH sources because they are below detection levels in upgradient wells along the flow path between MW-45S and the Site (i.e., MW-31S, MW-26S, and MW-40S), and naphthalene (an MGP source indicator) did not exceed the GWPC in these downgradient monitoring wells.

Deep Overburden Groundwater

Monitoring data from sampling of deep overburden monitoring wells MW-13D (in 2018), and MW-29D (in 2019) indicate low PAH concentrations ranging from non-detect to 0.82 ug/L (naphthalene in MW-13D) at these downgradient locations. Monitoring well MW-26D did slightly exceed the GWPC for acenaphthylene during 2018 sampling events at concentrations of 0.55 µg/L (October 2018) and 1.2 µg/L (November 2018). However, these concentrations are only marginally above detection levels and functionally delineate the extent of the affected groundwater.

Based on the groundwater analytical data collected for the Site to date and downgradient conditions, we believe the Site groundwater plume has been adequately defined.

As noted above, attached to this Annual Report (Appendix B) is a preliminary notification of intent to utilize Alternative GWPC for the portion of the plume that falls within the GA groundwater classification area west of West Street. While we believe the extent of the Site-related groundwater plume is delineated based on the existing data, MW-42M is within the GA area and has consistently contained concentrations of one or more PAHs above GWPCs. Accordingly, for the purpose of demonstrating compliance with RSRs once remedial activities are completed, we are proposing to calculate alternative GWPC values applicable for the portion of the plume within the mapped GA groundwater classification area. This approach is described in additional detail in Appendix B, which also serves as an advanced Commissioner notification consistent with Section 22a-133k-3(d)(3) of the RSRs. While we understand all the conditions required by the RSRs for use of the alternative GWPC have not been satisfied, we anticipate all conditions will be met following remedial implementation at the Site. The attached Figures 4A through 4D are included as reference for understanding groundwater flow conditions.

3.3. Significant Environmental Hazard Activities

As mentioned in Section 2.3, BaP was detected in soil above the SEH Condition Notification Threshold Concentration of 30 mg/kg at sample location SB-76 (0 to 2 feet). Delineation of this SEH area was completed in December 2022 and summarized in the 2023 Annual Report and the 2023 CT DEEP SEH Status Update Form submitted to the CT DEEP on May 19, 2023 and attached to the 2023 Annual Report. A SEH Status Update Form was submitted on May 22, 2024, documenting the existing SEH conditions, a copy of which is included as Appendix A. As discussed in Section 2.3, the remaining SEH conditions at the Site are protected within the outer or inner substation fence and will be abated as part of the Site-wide remedy.

3.4. Regulator Station Abandonment and Demolition

In September 2023, Yankee Gas Services Company dba Eversource Energy abandoned a natural gas main located at the northeast corner of the Site within the Outer Substation Area (Fig. 2). The gas regulator station associated with this gas main was decommissioned and demolished on August 8, 2024. The building was properly abated prior to demolition and the waste was properly characterized, profiled, transported, and disposed off-Site at permitted disposal facilities. The foundation structure was removed, but no soil was generated as part of the work and remaining depressions were filled in with clean imported fill.

4. Conceptual Site Model

Tighe & Bond created a preliminary CSM summary table that was included in the 2021 Annual Report. That table was modified to reflect additional data/findings from activities previously performed in 2023 and with the understanding that groundwater concentrations are compliant with calculated alternate GWPC as described above in Section 3.2. The revised table is included as Table 2 of this Annual Report. Minor modifications/updates were made to this table to include comparison of the 2023 monitoring data regarding off-Site groundwater impacts (AOC #23) with alternative GWPC. However, none of the updates substantially change the CSM relative to the version included in the 2023 Annual Report and no additional data was generated in 2024 that was utilized for further updates.

A revised/updated CSM will be developed to identify releases, migration pathways, potential receptors, and risks of the environmental system at the Site. An updated CSM will be provided as part of the Comprehensive Phase III Report, and reflect the additional data and findings collected through the implementation of the 2022 Work Plan and any other collected data. In doing so, GEI intends to consolidate AOCs to provide a streamlined CSM to clearly document the three dimensional and temporal distribution of contaminants in the context of the geologic, hydrogeologic, and hydrologic framework of the Site.

5. Schedule

An approximate timeframe for the anticipated Site activities for 2025 is provided below. Timeframes are estimated based on recently completed activities and may be altered if additional data gaps are identified or delays are encountered. The schedule will be updated annually as new data is available.

Task	Details	Approximate Timeframe
1Q25 Well Gauging and NAPL recovery	NAPL gauging and recovery at previously selected locations	January 2025
2Q25 Well Gauging and NAPL recovery	NAPL gauging and recovery at previously selected locations	April 2025
3Q25 Well Gauging and NAPL recovery	NAPL gauging and recovery at previously selected locations	July 2025
4Q25 Well Gauging and NAPL Recovery	NAPL gauging and recovery at previously selected locations	October 2025
2025 SEH Status Update Form	To include any SEH-related activities performed since the 2024 SEH Status Update Form submittal	By June 1, 2025
2025 Annual Report	Submittal to CT DEEP to include a summary of all investigation tasks and results completed in the calendar year	End of December 2025
Comprehensive Phase III Report	To be prepared in 2025	Estimate submittal to CT DEEP in 3rd Quarter 2025

Tables

Table 1. Well Gauging and NAPL Summary

Table 2. Conceptual Site Model Summary

Table 1. Well Gauging and NAPL Summary
2024 Annual Report
Rockville Former MGP Site

Well ID	Location	Date:					4/8/2024					8/1/2024					11/14/2024				
		Monitoring Well Construction Details																			
		Top of Well Casing or Measuring Point Elevation (ft. NAVD 88)	Ground Elevation (ft. MSL)	Midpoint Elevation of Screen	Completion Depth (ft. below grade)	Screen Interval (ft. below grade)	Depth to water (ft.)	Groundwater and River Elevation (ft. NAVD88)	Total Depth (ft.)	LNAPL Thickness (ft.)	DNAPL Thickness (ft.)	Depth to water (ft.)	Groundwater and River Elevation (ft. NAVD88)	Total Depth (ft.)	LNAPL Thickness (ft.)	DNAPL Thickness (ft.)	Depth to water (ft.)	Groundwater and River Elevation (ft. NAVD88)	Total Depth (ft.)	LNAPL Thickness (ft.)	DNAPL Thickness (ft.)
Monitoring Well Locations																					
MW-1S	Overgrown Area-Outer Substation	259.37	261.15	236.15	30	20-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1D		259.59	261.24	191.24	75	65-75	27.34	232.25	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2S	Inner Substation	249.01	249.01	237.01	17	7-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2SR		247.10	247.48	235.48	17	7-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2D		247.62	249.01	222.01	32	22-32	7.74	239.88	31.08	-	-	9.89	237.73	31.05	-	0.52	11.56	236.06	31.00	-	Trace
MW-2BR		247.24	247.44	174.44	60	50-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3S	Wooded Area- Outer Substation	250.12	250.54	235.54	20	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RW-03M		252.24	-	225.24	32	22-32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3D		251.58	250.68	177.68	78	68-78	14.44	237.14	80.95	-	0.50	16.70	234.88	79.67	-	Trace	18.31	233.27	79.90	-	1.00
MW-3DR		252.58	250.68	171.68	84	74-84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3BR		252.73	249.14	154.14	100	90-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4S	Grassed Area- Outer Substation	249.25	248.81	238.81	15	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4SR		249.11	248.81	234.11	20	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4D		249.40	248.75	194.25	59.5	49.5-59.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5S	Inner Substation	244.74	246.37	236.37	15	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5D		244.56	246.32	223.32	28	18-28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6S	Grassed Area- Outer Substation	250.31	248.76	241.76	12	2-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6D		249.69	249.00	219.00	35	25-35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-7S		262.13	263.81	235.81	33	23-33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-7D		265.01	261.76	183.76	83	73-83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8S		248.43	248.56	238.56	15	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8SR		246.29	246.69	234.69	17	7-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-9S		254.17	255.75	235.75	25	15-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-9D		253.95	255.63	190.63	70	60-70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10S		257.82	259.42	239.42	25	15-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10SR		257.68	258.04	238.04	25	15-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10M		257.35	259.08	204.08	60	50-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10D		257.33	258.98	179.98	84	74-84	19.32	238.01	81.53	-	-	21.55	235.78	80.10	-	-	23.30	-	80.05	-	-
MW-10BR		257.33	257.57	162.57	100	90-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11S	West Main Street Parcel	252.17	251.20	238.70	17.5	7.5-17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11D		251.91	251.10	229.60	24	19-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-12S		251.54	250.80	239.80	16	6-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-12D		251.69	250.90	231.40	22	17-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-13S	St. Joseph Church Parking Lot	252.13	252.53	232.53	18.2	15-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-13M		252.16	252.45	216.95	30.5-40.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-13D		251.91	252.45	184.45	73	63-73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-14S		245.11	245.40	230.40	19.58	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-14M		245.62	245.40	217.40	33	23-33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-14D		244.90	245.36	173.36	76.21	67-77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-16S	Outer Substation Area	246.82	244.86	232.86	17	7-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-17S		245.72	246.01	234.01	17	7-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-18D		254.03	251.16	174.16	82	72-82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-19S	St. Joseph Church Parking Lot	251.88	252.16	233.16	24	14-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-20S		260.52	260.52	231.52	34	24-34	23.35	237.17	33.50	-	-	-	-	-	-	-	-	-	-	-	-
MW-21S		255.11	255.30	230.30	30	20-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-23S	USPS ROW	268.98	269.20	235.20	39	29-39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-24S	Grassed Area- Outer Substation	257.07	257.59	231.59	31	21-31	18.95	238.12	31.76	-	0.50	21.65	235.42	31.43	-	1.75	23.39	233.68	31.48	-	0.50
MW-25S		250.82	250.99	231.99	24	14-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-26S	Front of St. Joseph Convent	243.97	244.53	234.53	15	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-26D		244.28	244.45	175.45	74	64-74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-26BR		244.16	244.32	162.32	87	77-87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-27S	17 Maple Street	260.80	261.00	232.00	34	24-34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-28S	Maple Street ROW	263.85	264.11	232.11	37	27-37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1. Well Gauging and NAPL Summary
2024 Annual Report
Rockville Former MGP Site

Well ID	Location	Date:	Monitoring Well Construction Details					4/8/2024					8/1/2024					11/14/2024				
			Top of Well Casing or Measuring Point Elevation (ft. NAVD 88)	Ground Elevation (ft. MSL)	Midpoint Elevation of Screen	Completion Depth (ft. below grade)	Screen Interval (ft. below grade)	Depth to water (ft.)	Groundwater and River Elevation (ft. NAVD88)	Total Depth (ft.)	LNAPL Thickness (ft.)	DNAPL Thickness (ft.)	Depth to water (ft.)	Groundwater and River Elevation (ft. NAVD88)	Total Depth (ft.)	LNAPL Thickness (ft.)	DNAPL Thickness (ft.)	Depth to water (ft.)	Groundwater and River Elevation (ft. NAVD88)	Total Depth (ft.)	LNAPL Thickness (ft.)	DNAPL Thickness (ft.)
Monitoring Well Locations																						
MW-29S	St. Joseph Church Front Lawn		244.09	244.24	231.24	18	8-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-29D			244.00	244.31	174.31	75	65-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-30S	Rear of Substation		244.46	244.58	237.58	12	2-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-31S	West Street ROW		246.16	250.00	238.00	17	7-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-32S	Inner Substation		249.50	250.00	235.00	20	10-20	11.09	238.41	-	0.25	-	13.23	236.27	19.68	Trace	-	15.38	234.12	19.80	-	-
MW-33S			247.19	247.49	233.49	19	9-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-34S			247.09	247.39	237.39	15	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-35S			247.68	248.01	236.01	17	7-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-36S			246.36	246.66	236.66	15	5-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-37S	Outer Substation Area		260.21	265.05	142.05	28	18-28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-37D			260.77	265.05	185.05	85	75-85	23.14	237.63	88.51	-	-	-	-	-	-	-	-	-	-	-	-
MW-37BR			260.05	257.41	157.41	105	95-105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-38S	Rear of Substation		243.31	243.71	237.21	9	4-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-39S			243.76	243.41	236.91	9	4-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-40S	Front of school		245.19	-	230.19	20	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-41S	Front of St. Joseph Church		244.46	-	229.46	20	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-42S	NE of Windsor Ave and West St intersection		243.20	-	228.20	20	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-42M			243.21	-	210.21	38	28-38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-43S	SW of West St and Union St intersection		244.60	-	229.60	20	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-43M			244.70	-	215.70	34	24-34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-44S	Walgreens Parking Lot		243.01	243.54	228.54	20	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-44M			243.33	243.59	208.59	40	30-40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-45S	40 West Café Parking lot		244.20	244.47	229.47	20	10-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-45M			244.14	244.45	209.45	40	30-40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-46M	43 West Street		243.88	244.30	210.30	39	29-39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hockanum River Piezometers and Gauging Locations																						
RG-1 (River Gauge)	Hockanum River		245.12			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-1			244.54			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-1 River Level			244.54			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-1A			246.79			2 ft. below river bottom	1 to 2 ft. below river bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-1A River Level			246.79			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-2A			244.90			2 ft. below river bottom	1 to 2 ft. below river bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-2A River Level			244.90			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-3A			244.12			2 ft. below river bottom	1 to 2 ft. below river bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PZ-3A River Level			244.90			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SG-01			247.70					4.81	242.89	-	-	-	4.52	243.18	-	-	-	-	-	-	-	-
SG-02			247.48					4.75	242.73	-	-	-	4.64	242.84	-	-	-	-	-	-	-	-
SG-03			245.40					4.67	240.73	-	-	-	4.28	241.12	-	-	-	-	-	-	-	-
SG-04			241.72					4.79	236.93	-	-	-	4.46	237.26	-	-	-	-	-	-	-	-
SG-05			241.16					4.8	236.36	-	-	-	4.55	236.61	-	-	-	-	-	-	-	-

Notes:
NA -Not Applicable
* - Data Unavailable
"S" denotes a water table monitoring well (Shallow Groundwater Zone)
"M" denotes an intermediate monitoring well (Intermediate Groundwater Zone)
"D" denotes a deep monitoring well (Intermediate Groundwater Zone)
red text- indicates a well was destroyed or unusable.
Denotes product observed in the well : measured or observed during development or pumping.
Elevation for measuring point was surveyed by Kratzer Jones Associates in 2016 and 2017. Elevations in NAVD 88.
MSL- mean sea level-Elevations obtained from Eversource survey information: Rockville Manufactured Gas Plant Site Investigation Report dated March 1992
PZ-18

Table 2. Conceptual Site Model Summary
2024 Annual Report
Rockville Former MGP Site

AOC #	AOC Description	COCs	Possible Release Mechanisms and Migration Pathways	Potentially Affected Media	Previous Investigation Soil Locations	Phase II/III Soil Locations	Previous Investigation Groundwater Locations	Phase III Investigation Groundwater Locations	Previous COCs in Soil	Phase II/III COCs in Soil	Previous COCs in Groundwater	Phase III COCs in Groundwater	COCs in Surface Water	Investigation Status	Remediation Status
Rockville Former MGP Site (On-Site)															
1	Former Retorts/ Generating Room	VOCs (BTEX), SVOCs, Metals, Total Cyanide, ETPH	Coal and oil used to generate manufactured gas. By- products generated could include tar residues, coal ash, coke, complexed cyanide compounds during the production of gas. Materials could have been used as fill in the building foundation.	Surface soils Subsurface soils Groundwater	TB-34 TB-47	SB-07 SB-43 SB-44 SB-46 SB-47 SB-48 MW-35S SB-76 SB-77	MW-9S/ MW-9D	MW-9S/ MW-9D MW-35S	Subsurface Soil samples from MW-09 contained VOC (ethylbenzene), SVOCs above GB PMC, metals detected. Pesticides detected (GB PMC exempt) Fill observed (ash, brick) and tar sheen and odors on auger cuttings.	ETPH above RES and I/C DEC and GB PMC in SB-07, SB-47, and MW-35S ETPH above RES DEC in SB-43 and SB-46 PAHs above RES and I/C DEC and GB PMC in SB-07, SB-43, SB-46, SB-47, MW- 35S, SB-77 and SB-78. Benzo(a) pyrene above SEH Condition Threshold Concentration in SB-76. Fill observed (ash, brick, coal) in SB-07 Staining with petroleum odors (10-11.5 ft.) Tar impacts in SB-07: 16 to 25ft, 33-33.5ft., 39-40 ft. Tar impacts in SB-43 and SB-47 at 11-15ft. Tar impacts in SB-44 at 12-15ft and 24.5-26ft. Tar impacts in SB-46 10-37ft. Tar impacts MW-35S 8-20 ft. Petroleum odors in SB-77 4-6 ft. Fill observed in SB-76 0-4 ft. Fill observed in SB-77 0-2 ft. A soil vapor sample (SV-CH-1) taken from beneath the control house was below RES VC and I/C VC for VOCs and ETPH (Phase II/III ESA)	MW-9S: VOCs (xylenes), PAHs, metals, cyanide above SWPC MW-9D: PAHs and metals above SWPC	**Shallow:** MW-9S: ETPH, VOCs (1,2,4-trimethylbenzene and naphthalene), PAHs, cyanide above SWPC. ETPH detected above Res VC and I/C VC. MW-35S: ETPH , MA VPH, MA EPH and PAHs above SWPC. ETPH and MA VPH above Res VC. VOC (naphthalene) detected above the SWPC. **Deep:** MW-9D: VOC,ETPH and cyanide not detected. Naphthalene and metals detected below the SWPC.	Surface water (Hockanum River) upgradient of the AOC	Phase I ESA (2017) Phase II Investigation (1992) Phase III ESA (2016-2020) Phase II/III ESA (2022)	Remedial evaluation pending the completion of the Phase III investigation.
2	Former Purifying House	VOCs (BTEX), SVOCs, Metals, Total Cyanide, ETPH	Manufactured gas was passed through lime used to scrub impurities (sulphur/cyanide) from the gas (Purifier waste). Materials could have been used as fill in the building foundation.	Surface soils Subsurface soils Groundwater	TBX1 TB-3 TB-4 TB-5 TB-20 TB-21 TB-22	TP-01 TP-02 TP-03 SB-31 SB-52	MW-9S/ MW-9D	MW-9S/MW-9D	Soil samples from MW-09 contained VOC (ethylbenzene), SVOCs above GB PMC, metals detected. Pesticides detected (GB PMC exempt) Fill observed (brick) and sheen and strong odors on auger cuttings.	ETPH and PAHs above RES and I/C DEC and GB PMC in SB-31 and SB-52 DEC does not apply due to samples greater than 15'. PAHs above RES and I/C DEC and GB PMC, ETPH above RES DEC in TP-03. PAHs detected above RES and I/C DEC and GB PMC. Cyanide detected in all but SB-31. Fill observed (bricks, metal pieces, metal conduit, cast iron pipe, ash) Tar impacts in SB-31 and SB-52 15-31ft	MW-9S: VOCs (xylenes), PAHs, metals, cyanide above SWPC MW-9D: PAHs and metals above SWPC	**Shallow:** MW-9S: ETPH, VOCs (1,2,4-trimethylbenzene and naphthalene), PAHs, cyanide above SWPC. ETPH detected above Res VC and I/C VC. **Deep:** MW-9D: VOC,ETPH and cyanide not detected. Naphthalene and metals detected below the SWPC.	Surface water (Hockanum River) upgradient of the AOC	Phase I ESA (2017) Phase II Investigation (1992) Phase III ESA (2016-2020)	Remedial evaluation pending the completion of the Phase III investigation.
3	Former Gas Holder #1 [Gasometer-22,000 ft^3 Capacity]	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Residual tar droplets collected inside the bottom of the holder which is likely subgrade based upon its age (pre-1900 and boring refusal). Possible leaks or spills from the holder to the soils.	Surface soils Subsurface soils Groundwater	TB-18 (Refusal 13.6') TB-19 (Refusal 14') TB-6 (Refusal 15.5') TB-7 (Refusal 16.5') TB-45 CSS-4	SB-04 SB-05 SB-06 SB-29 SB-30 SB-31 SB-85 TP-04 TP-05	MW-10S MW-10M MW-10D	MW-9S MW-9D MW-10S MW-10M MW-10D MW-10BR MW-10SR MW-24S MW-32S	Surface soil: PAHs detected. Soil samples from MW-10 contained VOCs, SVOCs, pesticides above GB PMC but below the water table. Strong sheen and odor observed on auger cuttings. Fill observed TB-18 and TB-19.	ETPH above RES DEC in SB-29 and SB-30. ETPH and VOCs above RES & I/C DEC and/or GB PMC in SB-05, SB-06, SB-31, and TP-05. DEC does not apply to SB-05 due to sample depth greater than 15'. PAHs above RES and I/C DEC and/or GB PMC in SB-29, SB-30, and SB-31 Fill observed (ash, slag, and/or metal) in SB-06, SB-29, SB-30, SB-31, TP-04, TP-05 Heavily tar impacted soils within the Gas Holder #1 (5.75 to 14 feet). TCLP benzene in impacted above characteristic hazardous waste level in SB-85. Outside holder tar impacts observed in SB-04, SB-05 19.5- 39 feet, 44.5 ft. to 50 feet, 71 to 74 ft. and SB-31 from 11 to 31 ft and 47 to 49 ft	MW-9S: VOCs (xylenes), PAHs, metals, cyanide above SWPC MW-9D: PAHs and metals above SWPC MW-10S: VOCs and cyanide detected, PAHs and metals above SWPC. MW-10M: VOCs (xylenes) detected, PAHs and metals above SWPC MW-10D: SVOCs and metal (zinc) above SWPC	**Shallow:** MW-10SR: Not sampled due to visual observations of tar globules/ staining during development. Tar present in subsequent gauging. Tar present in MW-24S and MW-32S during development. MW-24S contained in subsequent gauging. **Intermediate:** MW-10M: ETPH, VOCs (naphthalene) detected and PAHs above SWPC **Deep:** MW-10D: Not sampled due to visual observations of tar globules/ staining during development **Bedrock:** MW-10BR: ETPH, PAHs , VOCs, and metals detected.	Surface water (Hockanum River) upgradient of the AOC	Phase I ESA (2017) Phase II Investigation (1992) Human Health Risk Assessment (1994) Phase III ESA (2016-2020)	Remedial evaluation pending the completion of the Phase III investigation.

Table 2. Conceptual Site Model Summary
2024 Annual Report
Rockville Former MGP Site

AOC #	AOC Description	COCs	Possible Release Mechanisms and Migration Pathways	Potentially Affected Media	Previous Investigation Soil Locations	Phase II/III Soil Locations	Previous Investigation Groundwater Locations	Phase III Investigation Groundwater Locations	Previous COCs in Soil	Phase II/III COCs in Soil	Previous COCs in Groundwater	Phase III COCs in Groundwater	COCs in Surface Water	Investigation Status	Remediation Status
4	Former Gas Holder #2 [Gasometer-22,000 ft^3 Capacity]	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Residual tar droplets collected inside the bottom of the holder which is likely subgrade based upon its age (pre-1900) and boring refusal. Possible leaks or spills from the holder to the soils.	Surface soils Subsurface soils Groundwater	TBX-4 TB-16 (Refusal 18') TB-17 TB-8 TB-9 TB-42	SB-02 SB-03 SB-04 SB-05 SB-28 SB-29 SB-73 SB-74 SB-75 SB-83 SB-84 TP-05 TP-06	MW-10S MW-10M MW-10D	MW-10S MW-10S2 MW-10M MW-10D MW-10BR MW-24S	Surface soil: PAHs detected. Soil samples from MW-10 contained VOCs, SVOCs, pesticides above GB PMC but below the water table Strong sheen and odor observed on auger cuttings (TB-16 and TB-17). Fill (bricks) observed in TB- 16.	PAHs, ETPH and VOCs above RES & I/C DEC and GB PMC in SB-03 and SB-05. PAHs and ETPH above GB PMC in SB-02. PAHs above RES and I/C DEC and/or GB PMC in SB-28, SB-29, and SB-73. SB-73 is in compliance with GB PMC through SPLP testing. Elevated PAHs detected in SB- 75 likely intersects the apparent seasonal high water table. Arsenic above RES and I/C DEC and benzene above GB PMC in SB-28. ETPH above RES DEC in SB-29 Total and SPLP benzene above GB PMC and 10X GWPC in SB-83 1 to 3 ft. Fill observed (ash, brick, coal) in SB-05, SB-28, and SB-29, TCLP benzene in impacted above characteristic hazardous waste level in SB-84. Fill (wood, glass, metal) observed in TP-05. Tar impacts: SB-02: 18 to 39 ft. SB-03: 10.5 to 15 ft. SB-04: 2.5-37 ft. 44.5-50 ft. SB-05: 19.5 to 39 ft., 71-74 ft. SB-28: 24-36.5 ft. TP-05: 5.75 -6.0 ft.	MW-10S: VOCs and cyanide detected, PAHs and metals above SWPC. MW-10M: VOCs (xylenes) detected, PAHs and metals above SWPC MW-10D: SVOCs and metal (zinc) above SWPC	**Shallow:** MW-10SR: Not sampled due to visual observations of tar globules/ staining during development **Deep:** MW-10M: ETPH, VOCs (naphthalene) detected and PAHs above SWPC MW-10D: Not sampled due to visual observations of tar globules/ staining during development. **Bedrock:** MW-10BR: ETPH, PAHs ,VOCs, and metals detected.	Surface water (Hockanum River) upgradient of the AOC	Phase I ESA (2017) Phase II Investigation (1992) Human Health Risk Assessment (1994) Phase III ESA (2016-2020)	Remedial evaluation pending the completion of the Phase III investigation.
5	Former Gas Holder #3 (Gasometer-110,000 ft^3 Capacity)	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Residual tar droplets collected inside the bottom of the holder which is likely a shallow subgrade based upon its age (post 1900). Possible leaks or spills from the holder to the soils.	Surface soils Subsurface soils Groundwater	SS-3A CSS-3 TB-13 (Refusal 8') TB-14 (Refusal 6.5')	TP-07	Groundwater not investigated. Water encountered inside the holder foundation.	MW-7S/MW-7D	Surface soils: PAHs and metals detected Fill observed	Surface soils: PAHs, cyanide and metals detected No visual impacts in soils.	Groundwater investigations not completed in AOC.	**Shallow :** MW-7S: ETPH and PAHs detected above the SWPC. VOCs and metals detected. **Deep:** MW-7D: PAHs, VOCs and metals detected	Surface water (Hockanum River) upgradient of the AOC	Phase I ESA (2017) Phase II Investigation (1992) Human Health Risk Assessment (1994) Phase III ESA (2016-2018)	Investigation completed. Soil remediation is not required. Groundwater impacts are likely associated with AOC-3 and AOC - 4 (Holder #1 and Holder #2). Groundwater impacts are addressed under site- wide groundwater AOC- 15.
6	Former Coal Shed	PAHs, Metals	Coal stockpiled for MGP could be present in the soils.	Surface soils Subsurface soils	Soils not investigated	SS-102 SS-103 SEH Invest. HA-01 HA-02 HA-03 HA-04 HA-05 HA-06 HA-07 HA-08 HA-09	Groundwater not investigated (within active transformer yard)	Groundwater not investigated (within active transformer yard)	No investigations completed in the AOC.	PAHs, ETPH, and lead above the RES and I/C DEC and GB PMC in SS-102. PCBs detected. Benzo (a) pyrene detected above the SEH Condition Notification Threshold Concentration. PAHs, ETPH, and arsenic above the RES and I/C DEC and/or GB PMC in SS-103. Cyanide detected. PAHs above the RES and I/C DEC in HA-01 through HA-09. SEH Threshold Notification Concentration for benzo(a)pyrene delineated HA-01, HA-2 and HA-03 above the threshold. Fill observed (coal, ash) in shallow soils below the trap-rock gravel cover to 2 feet below grade.	Groundwater investigations not completed in AOC.	Groundwater investigations not completed in AOC.	Surface water (Hockanum River) upgradient of the AOC	Phase I ESA (2017) Phase III ESA (2017-2018)	Delineation SEH soils for benzo (a) pyrene was completed in 2018. Remedial evaluation pending the completion of the Phase III investigation.

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7	Former Transformer House	PCBs, ETPH	Transformer use. Possible leaks or spills could have impacted soils.	Surface soils Subsurface Soils	Soils not investigated (within active transformer yard)	SS-100 SS-101 SB-44	Groundwater not investigated (within active transformer yard)	Groundwater not investigated (within active transformer yard)	No investigations completed in the AOC.	PAHs above RES and I/C DEC and GB PMC in SS-100. Arsenic above RES and I/C DEC in SS-100 and SS-101. ETPH and cyanide detected. Fill, coal and brick, encountered to 5 feet below grade in SB-44. ETPH and cyanide detected. Visual Impacts (Appear to be associated with AOC -1) 12- 15 ft.: Petroleum odor and sheen 24.5-26: Faint tar odor	Groundwater investigations not completed in AOC.	Groundwater investigations not completed in AOC.	Surface water (Hockanum River) upgradient of the AOC	Phase I ESA (2017) Phase III ESA (2018)	Remedial evaluation pending the completion of the Phase III investigation.
8	Current Substation	PCBs, ETPH, Metals,	Possible leaks or spills from transformers	Surface soils Subsurface Soils If significant release: groundwater	TB-34 TB-38 TB-39S TB-32 MW-8S	SS-100 to SS-106 HA-01 to HA-11 SB-43 SB-44	MW-8S	MW-2SR, MW-2D, MW-2BR, MW-5S, MW-5D, MW-8SR, MW-16S, MW-17S, MW-25S, MW-32S, MW-33S, MW-34S, MW-35S, MW-36S	PAHs and metals detected. Fill (sand) observed	Arsenic and ETPH above RES and I/C DEC in SS-100, SS-101, SS-104 and SS-106. PAHs, ETPH, and lead above the RES and I/C DEC and GB PMC in SS-102. PCBs detected. PAHs, ETPH, and arsenic above the RES and I/C DEC and/or GB PMC in SS-103. Cyanide detected. ETPH also above RES DEC, I/C DEC and GB PMC in SS-104 and Res DEC in SS- 106. PAHs above RES and I/C DEC and GB PMC in SS-100, SS-104, SS-105 and SS- 106. HA-01 through HA-07, HA-08 and HA-09: SEH investigation (See AOC 6) . PAHs above the RES and I/C DEC in HA-01 through HA-09. SEH Condition Notification Threshold Concentration for benzo(a)pyrene delineated see AOC-9. Fill observed in top 2 feet of soils. HA-09A: ETPH exceeds RES DEC, arsenic exceeds the RES and I/C DEC. PAHs exceed RES DEC, I/C DEC and GB PMC. Cyanide detected. PCBs not detected. HA-10: ETPH and PAHs exceed RES DEC, I/C DEC and GB PMC. Cyanide detected below RES DEC and GB PMC. Arsenic exceeds the RES and I/C DEC HA-11: Arsenic exceeds the RES and I/C DEC. ETPH detected. ETPH above RES DEC in MW-35S & MW-36S and above RES & I/C DEC in MW- 32S Arsenic above RES & I/C DEC in MW-35S and MW-36S PAHs above RES & I/C DEC and GB PMC in MW-32S, MW-33S, MW-34S, MW- 35S, and MW-36S. Benzo(a) pyrene detected above the SEH Condition Notification Threshold Concentration in SB-76 (0-2 ft.) and SB-78 (0-1 ft.) Visual Impacts (Appear to be associated with AOC -1) 12- 15 ft.: Petroleum odor and sheen 24.5-26: Faint tar odor	MW-8S: Metals detected above the SWPC. Cyanide detected.	**Shallow:** MW-2SR: Not sampled due to visual observations of tar globules (2017). PAHs detected above SWPC. VOC (naphthalene detected). MW-5S: PAHs detected above SWPC. ETPH detected above the SWPC, RES VC and I/C VC. VOCs, and metals detected. MW-8SR: PAHs detected above the SWPC. Elevated metals detected. Possibly associated with turbidity in sample. MW-16S: Metals and VOC (Chloroform) detected . MW-17S: VOCs (tetrachloroethene)and ETPH detected below SWPC. Metals detected. MW-33S: acenaphthylene detected above SWPC and ETPH above SWPC, RES VC and I/C VC. MW-34S; ETPH above SWPC, RES VC and I/C VC and PAHs (acenaphthylene, Benz(a)anthracene, chrysene) detected above the SWPC MW-35S: ETPH , MA VPH, MA EPH and PAHs above SWPC. ETPH and MA VPH above Res VC. VOC (naphthalene) detected above the SWPC. (associated with AOC-3). **Deep:** MW-2D: Not sampled due to visual observations of tar globules. MW-5D: Metals and ETPH detected **Bedrock:** MW-2BR: PAHs detected below the SWPC. Metals detected.	Surface water (Hockanum River) located adjacent but up gradient of location.	Phase I ESA (2017) Phase II Investigation (1992) Phase III ESA (2016-2020)	Phase III ESA and pre-design sampling is needed for this AOC. Remedial evaluation pending the completion of the Phase III investigation.

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9	Historic Site Fill	VOCs, SVOCs, Metals, PCBs, ETPH	Historic placement of fill during the development of Site.	Surface soils Subsurface soils	TB-02, TB-03,TB-04, TB-06, TB-13, TB-14, TB-16, TB-17, TB-18, TB-19, TB-20, TB-21, TB-22, TB-27, TB-31, TB-32, TB-33, TB-34, TB-38, TB-39, TB-40, TB-42, TB-45, TB-47, MW-02D, MW-04D, MW 05S, MW- 05D, MW-10S, MW-10M, MW- 10D Historic fill was identified in multiple borings which overlap with other AOCs	On-site soils borings, SS-100 to SS-107, SB-76 to SB-83, TP-01 to TP-07, HA-01 to HA -18, SB-78A to D, SB-76A to D, SB-76A1 Historic fill was identified in multiple borings which overlap with other AOCs	Not Applicable	Not Applicable	Fill (i.e., ash and bricks observed)	Fill (i.e., ash, bricks, slag, metals, glass, building debris, coal, and site fill) and former MGP plant foundations observed in several Phase III investigation locations. Fill as deep as 15 ft. Concentrations of COCs including PAHs, ETPH, and metals above RSR criteria covered under separate AOCs. Concentrations of benzo (a) pyrene above SEH Threshold Notification Concentration delineated in SS-102, HA- 01A, HA-02 HA-03, HA-18, SB-76, SB-78 and SB-76A. The extent of SEH exceedances around SB-78 and SB-76 was delineated during sampling performed in March 2022 (SB-78A to D and SB-76A to D) and December 2022 (SB-76A1)	Wells screened below fill (See AOC-15)	Wells screened below fill (See AOC-15)	Surface water (Hockanum River) located adjacent but up gradient of location.	Phase I ESA (2017) Phase II Investigation (1992) Phase III ESA (2018-2020) Phase II/III ESA (2022)	Phase III ESA and pre-design sampling is needed for this AOC. Remedial evaluation pending the completion of the Phase III investigation. Soils in the vicinity of SB 78 were excavated and disposed of in May 2022.
10	Hockanum River Sediment	PAHs and Metals	Possible historic discharges to the river from the Site, historic discharges from up gradient industries, current storm water run-off and anthropogenic sources.	Sediment	R-Sed-A/B/C/D Sediments (A,B,C, D)	River Sediment Samples SED-01 SED-02 SED-03 SED-04 SED-05 SED-06 Outfall Sediment Samples SED-07 SED-08 SED-09 Background Sediment Samples SED-101 SED-102 SED-103 SED-104 SED-105	Not Applicable	SW-01 SW-02 SW-03 SW-04 Background Surface Water Samples SW-100 SW-101	PAHs and metals detected above sediment screening criteria. VOC (methylene chloride) detected.	River Sediment Samples ETPH, PAHs, and metals detected. Highest PAH concentrations were detected upstream at SED-01. ETPH detected in all sediment samples. Metals detected in all sediment samples. Elevated copper, lead and zinc detected in SED-06. SED-06A, B, C were collected in the vicinity of SED-06. Outfall Sediment Samples VOC (toluene), ETPH, PAHs and metals were detected. Background Sediment Samples PAHs, ETPH and metals detected in SED-101 through 105.	Not applicable	COCs not detected in groundwater. Barium detected below SWPC in adjacent monitoring wells.	Barium detected in all surface water samples. Chromium detected in SW-01 and SW-02, Zinc detected in SW- 01, SW-02, SW-03, and SW-04 Background surface water samples: Barium detected.	Phase I ESA (2017) Phase II Investigation (1992) Phase III Investigation (2017- 2020)	Investigation is completed. SLERA is currently being prepared and will be submitted to CTDEEP for review
11	Coal Tar impacts and Fill Observed at TB-33 (Southwestern portion of Site)	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Historic placement of fill.	Surface soils Subsurface Soils Groundwater	TB-33 TB-34 MW-5S MW-5D	SB-11 SB-36 SB-37 SB-38 SB-39 SB-40 SB-41 SB-42 SB-53 MW-16S MW-17S SB-69 SB-70 SB-71 MW-31S (boring)	MW-5S MW-5D	MW-5S MW-5D MW-16S MW17S MW-30S MW-38S MW-39S MW-31S	VOCs, PAHs and metals detected. Fill (sand) with tar observed.	ETPH and PAHs detected above RES and I/C DEC and GB PMC in SB-11. Naphthalene (VOC) detected above GB PMC and arsenic and lead detected above RES and I/C DEC in SB-11. Fill (Ash and Slag) observed in SB-11, SB-36, SB-39 ,SB-40, SB-40A, SB-69, SB- 70, SB-71 to approximately 5 feet. SB-11: Sheen and tar odor observed from 5 to 8 feet. SB-36: Tar odor 12 to 20 feet. Sheen 15 to 20 feet. SB-38: sheen and tar odor 10 to 11 feet. SB-40: sheen and tar odor 8 to 15 feet. SB-69: ETPH above RES & I/C DEC & GB PMC, arsenic above RES & I/C DEC 1 to 3 feet. PAHs above RES & I/C DEC & GB PMC 1 to 3 feet and 4 to 5 feet. SB-70: Arsenic above RES & I/C DEC. PAHs above RES & I/C DEC & GB PMC 3 to 4 feet. SB-71: ETPH above RES DEC & GB PMC 1 to 3 feet and 8 to 10 feet. PAHs above RES & I/C DEC & GB PMC 1 to 3 feet, 5 to 7 feet and 8 to 10 feet.	MW-5S: PAH (Acenaphthylene) detected above the SWPC. VOC (xylene) and metal (chromium) detected. MW-5D: VOC (Benzyl Alcohol) and metals detected above SWPC. SVOC (2-methylphenol) detected.	**Shallow:** MW-5S: ETPH and VOCs detected below SWPC. PAHs detected above SWPC. Metals detected. MW-16S: Metals and Chloroform (VOC) detected MW-17S: VOC (tetrachloroethene), ETPH detected below SWPC. Metals detected. MW-30S: ETPH and acenaphthylene above SWPC. ETPH above RES VC MW-31S: Metals detected MW-38S & MW-39S: Acenaphthylene above SWPC MW-39S: ETPH detected above the SPWC, RES VC and I/C VC **Deep:** MW-5D: Metals and ETPH detected	Surface water (Hockanum River) located adjacent but up gradient of location.	Phase I ESA (2017) Phase II Investigation (1992) Phase III Investigation (2016- 2018)	Remedial evaluation pending the completion of the Phase III investigation.

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12	Tar impacts and Fill Observed (Southeastern portion of Site)	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Historic placement of fill (AOC-13). Possible migration for spills or leaks from adjacent Retorts (AOC-1) or Purifying House (AOC- 2).	Surface soils Subsurface Soils Groundwater	CSS-5 TB-2 TB-3 TB-24 TB-28 MW-6S MW-6D	SB-08 SB-09 SB-09A SB-10 SB-24 SB-32 SB-33 SB-48 SB-49 SB-50 SB-51 SB-82 SS-107 SS-108 HA-17 HA-18 SB-76 to SB-82	MW-2S MW-2D MW-6S MW-6D	MW-2SR MW-2D MW-2BR MW-6S MW-6D	Surface Soil: PAHs exceeded the Res DEC and GB PMC. Subsurface soils: VOC(methylene chloride), SVOCs, cyanide, and metals detected. Fill (ash and sand fill), Tar impacts sheen observed.	PAHs detected above RES and I/C DEC and GB PMC in SB-08, SB-09A. PAHs detected above the RES DEC and GB PMC in SB-24. ETPH detected above RES DEC in SB-09A. Concentrations of PAHs and ETPH were detected above the RES DEC, I/C DEC and/or the GB PMC in SB-32 and SB-51. Concentrations of arsenic were detected in above the RES DEC and I/C DEC. HA-17: ETPH and cyanides detected. PAHs detected above the RES DEC., I/C DEC and GB PMC. Lead above the GB PMC. HA-18: ETPH, PAHs above the RES DEC/ I/C DEC and GB PMC. Benzo (a) pyrene above the SEH Threshold Notification Concentration. SB-76: to SB-82: PAHs above the RES DEC/ I/C DEC and GB PMC SB-79: Benzene above GB PMC 1-2 ft, PCE above GB PMC and RES DEC 1-2 ft, GB PMC 3-4 ft and 5-6 ft SB-81: Dieldrin above GB PMC 0-1 ft SB-82: ETPH above RES DEC, I/C DEC, and GB PMC 2-3 ft SB-08: Staining and fuel oil odor 11 to 2 ft. Staining and tar odor from 24 to 29 ft. SB-10: Sheen and tar odor 9 to 24.5 ft. SB-33: tar odor 7 to 11 ft. Sheen, blebs and tar odor 11.5- 20 ft. SB-50: Tar from 11-12 ft. Sheens and tar blebs were observed from 15 to 17 feet. sheens and tar odors were observed from 17 feet to 25 feet SB-51: petroleum orders and grey staining from 14 to 17 feet. Sheen, tar blebs and/or tar odors were observed from 17 to 20 feet. Fill (brick, glass, slag, and/or ash) observed in SB-08, SB-09A and SB-24, SB-32, SB-33, SB-48 to SB-51, and SB-76 to SB-82.	MW-2S: Dry. MW-2D: Metals and PAHs detected above the SWPC and VOCs (xylene and ethylbenzene detected). MW-6S: Metals detected above the SWPC. SVOC (bis2-ethylhexylphthalate) detected.	**Shallow:** MW-2SR: Not sampled due to visual observations of tar globules (2017). MW-6S: Naphthalene and metals detected below the SWPC. **Deep**: MW-6D: PAHs detected below SWPC. Metals detected. MW-2D: Not sampled due to visual observations of tar globules **Bedrock:** MW-2BR: PAHs detected below the SWPC. Metals detected.	Hockanum River located adjacent but up gradient of location.	Phase I ESA (2017) Phase II Investigation (1992) Human Health Risk Assessment (1994) Phase III Investigation (2016- 2020)	Remedial evaluation pending the completion of the Phase III investigation.
13	Possible Historic Fill to the south of the Hockanum River	PAHs	Possible historic placement of fill.	Surface Soil Subsurface Soil	SS-5A, SS5B, SS-5C, SS-5D TBX2 TB-63 and TB-64	SB-25 SB-26 SB-27 SB-54 SB-55 SB-56 SB-57	MW-11S MW-11D MW-12S MW-12D	MW-11S MW-11D MW-12S MW-12D	Surface soil and shallow subsurface soils: PAHs exceeded the RDEC, IDEC and GB PMC.	Surface Soil: PAHs detected above RES and I/C DEC and GB PMC in SB-25, SB-54 and SB-55. Cyanide was detected in SB-54 and SB-55, Metals were detected in SB-54, SB-55, SB-56, and SB-57. SPLP metals were detected in SB-54 and SB-57. Fill (slag and/or ash) observed in SB-26, SB-27, SB-54, SB-55, SB-56, and SB-57.	MW-11S/ MW-11D MW-12S / 12D No analytical data	**Shallow:** MW-11S/ MW-12S: Metals detected **Deep:** MW-11D/ MW-12D: Metals and/or pyrene (PAH) detected	Hockanum River located adjacent and downgradient.	Phase II Investigation (1992) Human Health Risk Assessment (1994) Phase III Investigation (2017- 2018)	Remedial evaluation pending the completion of the Phase III investigation.

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AOC #	AOC Description	COCs	Possible Release Mechanisms and Migration Pathways	Potentially Affected Media	Previous Investigation Soil Locations	Phase II/III Soil Locations	Previous Investigation Groundwater Locations	Phase III Investigation Groundwater Locations	Previous COCs in Soil	Phase II/III COCs in Soil	Previous COCs in Groundwater	Phase III COCs in Groundwater	COCs in Surface Water	Investigation Status	Remediation Status
14	Tar impacts and Fill Observed (Northern portion of Site)	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Impacted area to the north of former Gas Holders #1 and #2, Possible migration for spills or leaks from adjacent holders that migrated northward.	Surface soils Subsurface Soils Groundwater	TB-12, TB-36, TB-37,TB-40, TB-42 TB-46, TB- 49A,TB-50, TB-51, TB-52, TB-53, TB-54, TB-55 TB-55A, TB-56, TB-58 , TB-59, TB-60, TB-61, TB-62, MW-1, MW-3S, MW-3D, MW-4S, MW-7S TBX5, TBX6 SS-3B. SS3-C, SS3-E, SS3-D, SS1-C, CSS-1, CSS-2	SB-01 SB-12 SB-13 SB-20 SB-21 SB-22 SB-45 SB-59 SB-60 (off-site) SB-64 (off-site) SB-68 SB-73 SB-74 SB-75 MW-37S/D MW-03DR	MW-1S, MW-1D, MW-3S, MW-3D, MW-4S, MW-4D	MW-1S, MW-1D, MW-3S, MW-3D, MW-3DR MW-3BR, MW-4S, MW-4SR, MW-4D, MW-7S, MW-7D, MW-18D, MW-24S, MW-25S, MW-37D, MW- 37BR	Surface Soil: PAHs detected above the Res DEC and GB PMC. Metals and cyanide detected. Subsurface soils: SVOCs detected above the Res and I/C DEC and GB PMC and VOCs and pesticide (lindane) detected above the GB PMC. Metals detected. Fill observed and tar odors and tar sheen.	Shallow Subsurface Soils: PAHs detected in SB-21 above the RES DEC, I/C DEC and GB PMC. SPLP PAHs were not detected indicating PAHs are not leachable. PAHs detected in SB-22. PAHs, ETPH, VOCs, cyanide were not detected in SB-01, SB -12 and SB-13 in samples collected just above apparent water table. Elevated concentrations of ETPH, VOCs, and SVOCs detected in SB-13 (25.5- 27.5') below water table (~15ft.) SB-45: Metals detected SB-59: PAHs, Cyanide, and VOCs detected Fill observed: Brick observed at 0.5-3.0 ft. in SB-21 and SB-59. Tar impacts were encountered SB-12: from 25-30 ft. (Staining, sheen and coated soils) and 37.5-39ft. (Strong tar odor) SB-13: 20-39 ft. (Staining and heavily tar coated soils and odors) SB-01: 29 to 31 ft. Sheen and tar odor. SB-45: Tar odors 30-41 ft. Tar blebs observed from 30-38 ft. SB-59: Coal and slag 2-3 ft. Tar odors 30 to 45 ft. PAHs,VOCs, and cyanide detected (2 to 3) SB-60: Tar odor 40 to 45 ft. Naphthalene and Xylene (VOCs) detected. SB-64: No visual impacts or odors. MW-37S/D: Sheen and odors observed below water table. SB-68: Tar product observed (23-34 ft), sheen observed (23-59 ft). VOCs, PAHs, and ETPH detected MW-03DR: Tar product observed in auger cuttings (23')	**Shallow:** MW-1S:Metals detected above the SWPC. MW-3S: Metals and PAHs detected above the SWPC. VOCs detected. MW-4S: Metals detected above the SWPC. cyanide, VOCs (1,1,1-TCA) and SVOC (bis2-ethylhexylphthalate) detected. **Deep:** MW-1D: Metals detected above the SWPC. SVOCs detected. MW-3D: Metals detected above the SWPC. SVOCs and VOC (1,1,1-TCA) detected. MW4D: Lead detected above the SWPC.	**Shallow:** MW-4S: Cyanide, metals, VOCs, and PAHs detected MW-4SR: Acenaphthylene (PAH) detected above the SWPC. Cyanide detected. MW-25S: Cyanide, metals, and PAHs detected MW-3S/MW-7S: Metals and VOCs detected. PAHs and ETPH detected above the SWPC MW-1S: Metals, ETPH and PAHs detected above the SWPC. MW-24S: Measurable tar observed in well. **Deep:** MW-1D: ETPH and VOCs detected. PAHs and metals (copper and nickel) detected above the SWPC. MW-3DR: ETPH and acenaphthylene detected above SWPC. MW-4D/MW-7D: Metals detected. MW-18D: ETPH, VOCs, and PAHs detected above the SWPC. Metals detected. MW-37D: Metals detected. **Bedrock:** MW-3BR: PAH (acenaphthylene) above SWPC. ETPH and VOCs detected. Metals detected. MW-37BR: Metals and VOCs detected.	Hockanum River is located up gradient on - site	Phase I ESA (2017) Phase II (1990/1991) Human Health Risk Assessment (1994) Phase III ESA (1996-2020)	Additional Phase III ESA investigation is proposed to assess the seasonal groundwater conditions and assessment of the recoverability of tar. Remedial evaluation pending the completion of the Phase III investigation.
15	Site wide groundwater impacts	VOCs, SVOCs, Metals, PCBs, ETPH, Chromium, Barium, ETPH	Groundwater impacts from spills or leaks occurring at the site. Groundwater flows to the north away from the Hockanum River.	Groundwater	NA	NA	MW-1S, MW-1D, MW-2S, MW-2D, MW-3S, MW-3D, MW-4S, MW-4D, MW-5S, MW-5D, MW-6S, MW-6D, MW-8S, MW-9S, MW-9D, MW-10S, MW-10M, MW- 10D, MW-11S, MW-11D, MW-12S, MW-12D	MW-1S, MW-1D, MW-2SR, MW-2BR, MW-2D, MW-3S, MW-3BR, MW-4S, MW-4SR, MW-4D, MW-5S, MW-5D, MW-6S, MW-6D, MW-7S,MW-7D, MW-8SR, MW-9S, MW-9D, MW-10SR, MW-10M, MW- 10BR,MW-11S, MW-11D, MW-12S, MW-12D, MW-16S, MW-17S, MW-18D, MW-19S, MW-24S, MW-25S, MW-26S, MW-26D, MW-26BR, MW-27S, MW-28S, MW-29S, MW-29D, MW-30S, MW-33S, MW-34S, MW-35S, MW-36S, MW-37D, MW-37BR, MW- 38S, MW-39S	See AOCs above for site investigation information for soils	See AOCs above for site investigation information for soils	**Shallow:** ETPH, VOCs, PAHs, metals, and Cyanide above the SWPC. See above AOCs for individual wells **Deep:** ETPH, VOCs, PAHs, metals, and Cyanide above the SWPC.. See above AOCs for individual wells	**Shallow:** ETPH, VOCs, PAHs, and /or Cyanide above the SWPC. in MW-1S, MW-5S, MW7S, MW-8SR, MW-9S, and MW- 10M, MW-29S, MW-30S, MW-33S, MW-34S, MW-35S, MW-38S, and MW-39S. See above AOCs for individual well summary of COCs. Tar globules and staining observed in MW-2S, MW-10SR, and MW-24S during development. Measurable tar observed in MW-10SR and MW-24S **Deep:** VOCs, ETPH, PAH (acenaphthylene) above the SWPC in MW-18D. MW- 3DR: ETPH and acenaphthylene detected above SWPC. Tar globules and staining observed in MW-2D, MW-3D and MW-10D **Bedrock:** PAH (acenaphthylene) above SWPC [MW-3BR] . ETPH and VOCs detected. Metals detected. See AOCs above for individual well information.	Hockanum River is located up gradient on - site/ Losing Stream	Phase I ESA (2017) Phase II Investigation (1992) Phase III Investigation (2016- 2020)	Additional Phase III ESA investigation is proposed to assess the seasonal groundwater conditions

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Off-site AOCs															
16	Off-site Tar Impacts St. Josephs School/Church Parking Lot	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Tar impacted area to the north of the property line. Possible migration of impacts to the north from the MGP. Shallow fill possible in the development of the property.	Subsurface Soils Groundwater Surface soils	Soil Borings TB-113, TB-115, TB-116, TB-117, TB-118, TB-119, TB-120, TB-121, TB-125, TB-126, TB-127, TB-130 Surface Soil R426-A, R426-B, R426-C, R426-D R437-A R437-B, R437-C, R437-D R438-A, R438-B, R438-C, R438-D R446-A, R446-B, R446-C, R446-D R452-A, R452-B, R452-C, R452-D	SB-14, SB-15, SB-16, SB-17, MW-19S, MW-20S, SB-61, SB-62, SB-66, SB-67, MW-29D, MW-14M (Boring) MW-40S (Boring) MW-41S (Boring) MW-42S (Boring) MW-43S/M (Boring)	MW-13S, MW-13D, MW-14S, MW-14D	MW-13S, MW-13D, MW-14S, MW-14M, MW-14D, MW-19S, MW-20S, MW-21S, MW-26S, MW-26D, MW-26BR, MW- 29S, MW-29D, MW-40S, MW-41S, MW-42S, MW-42M, MW-43S, MW-43M	Subsurface soils: PAHs detected above the GB PMC VOCs (ethylbenzene, toluene, and xylene detected). Fill observed. Sheens and/or isolated lens of coal tar were observed in soil borings TB-115 through TB-120 and TB-126 at depths ranging between 21.6 to 42 feet below grade. Surface Soil: PAHs detected above the Res DEC and GB PMC along West Street	PAHs, ETPH, VOCs, cyanide were not detected in SB-14, SB-15, SB-16, SB-17 in samples collected just above apparent water table. EPTH, VOCs, and PAHs detected in the deep soil samples collected from SB-14 and MW-20S within tar-impacted intervals below the water table. SB-14: 20.5-23 ft. coated with tar material with tar odors. SB-61: 22.5-44 ft. tar blebs, odors, and sheen. SB-66: 20-30 ft. tar odors. SB-15: 31.5-34 ft. veins coated with tar. MW-20S: 35-38 ft. black stained and sheen with tar odor. No visual impacts in SB-62 and SB-67. Slight tar like odor observed in MW-29D, no visual impacts. Low level detections of benzene and naphthalene. Detections of tar-related VOCs in MW-40S, MW-41S, and MW-42S detected below the water table.	**Shallow:** MW-13S: Copper detected above the SWPC. Metals, SVOC (bis2-ethylhexylphthalate) detected .MW-14S: Metals detected **Deep:** MW-13D: Metals detected. MW-14D Metals detected. VOC (tetrachloroethylene) and SVOC (bis2-ethylhexylphthalate) detected.	**Shallow:** MW-13S: Metals and bis2-ethylhexylphthalate) MW-14S: PAHs, metals and cyanide detected. MW-19S: Metals detected MW-21S: Metals and PAHs detected MW-20S: Tar globules / staining in MW-20S. MW-29S: ETPH and benzene above SWPC and RES & I/C VC. Benzene and ETPH in compliance with the RES VC via soil vapor testing. Naphthalene above SWPC. MW-41S: ETPH was detected above SWPC and RES & I/C VC. ETPH is in compliance with the RES VC via soil vapor testing. Acenaphthylene above SWPC. PAHs, metals, and VOCs detected MW-42S: VOCs and ETPH not detected. Phenanthrene, barium, and chromium detected. MW-43S: VOCs and ETPH not detected. Phenanthrene and barium detected. MW-26S: ETPH , VOCs and PAHs not detected. Barium detected. **Intermediate:** MW-14M: ETPH above SWPC . Elevated concentrations of benzene and tar-related VOC detected. Acenaphthylene above SWPC. MW-42M: ETPH above GWPC and SWPC, Benzene above GWPC. PAHs, tar -related VOCs, metals (barium, thallium, zinc). detected **Deep:** MW-14D: ETPH, cyanide, Acenaphthylene (PAH) above SWPC. Metals and VOCs detected. MW-13D: Metals and naphthalene detected MW-26D: Acenaphthylene above SWPC. Metals and VOCs detected. MW-43M: VOCs, PAHs and ETPH not detected. Barium, nickel, and zinc detected. **Bedrock:** MW-26BR Naphthalene and barium detected	Hockanum River is located upgradient on-site and approximately 600 feet to the west.	Phase II (off-site) 1993 Phase III Investigation (2017-2020)	Additional Phase III ESA investigation is proposed to further assess seasonal groundwater conditions at St. Joseph's Church property and the extent of off-site groundwater impacts in intermediate groundwater zone.
17	Off-site Tar Impacts Maple Street ROW	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Impacted area within the Maple Street ROW from 15 to 32 feet. Possible migration of impacts from the Retorts (AOC-1) Former Gas Holders #1, #2, (AOCs 3,+). Possible off-site fuel oil impacted in TB-101 and TB- 103 from up gradient source of fuel oil.	Subsurface Soils Groundwater	TB-97, TB-99, TB-101, TB-103, TB-104, TB-105, TB-106, TB-111A, TB-11B, and TB-111C	SB-18, SB-19, SB- 64	Groundwater not investigated	MW-28S MW-23S	Subsurface Soils had concentrations of VOCs, SVOCs, pesticides (Aldrin, alpha- BHC, and 2-Hexanone) at concentrations above the GB- PMC but were located below the water table. Cyanide and metals were detected. Tar impacts (sheen and odors) encountered from 15 to 32 feet.	ETPH, VOCs, and PAHs detected in SB-18 above the GB PMC. The DEC does not apply to SB-18 due to the sample depth greater than 15'. SPLP VOCs and PAHs detected. Petroleum staining/ sheen and odors 19-23ft. Tar staining/ odors from 24-29 ft. ETPH and PAHs were detected above the RES and I/C DEC and GB PMC in SB-19. Petroleum staining/ sheen and odors 11-19 ft. Tar staining/ odors from 19-26.5 ft. ETPH, PAHs, and VOCs were not detected in SB-64 No visual impacts in SB-64	Groundwater not tested.	MW-23S: Metals detected MW-28S: Metals and naphthalene detected	Hockanum River located up gradient of location.	Phase II (off-site) 1993 Phase III Investigation (2018)	Off-site petroleum impacts are noted within the Maple Street ROW. Petroleum impacts also ere noted at #12 and #14 Maple Street. Impacts could be associated with former 1,000-gallon UST at former 8 Maple Street residence or other off-site source. Remedial evaluation impacts will be assessed in the Remedial Evaluation.

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18	Petroleum Impacts #12 and #14 Maple Street	VOCs (BTEX), SVOCs, ETPH	Petroleum-impacted soils from 15 to 27 feet below grade from an up gradient source that migrated via groundwater flow onto the properties.	Subsurface soils Groundwater	TB-203, TB-204, TB-206, TB-219, TB-221, TB-224 (#8 Maple Street) TB-200 and TB-217 (#12 Maple Street)	Not investigated during Phase III	Groundwater not investigated	MW-23S	Subsurface soils contained detections of PAHs. Boring log was not available during the CSM development.	Not investigated during Phase III	Groundwater not tested.	**Shallow:** Adjacent USPS ROW: MW-23S: VOC (chloroform) and metals detected below SWPC	Hockanum River located up gradient of location.	Phase II (off-site) 1994 Phase III Investigation (2018)	Phase I ESA identified a 1,000 leaking underground storage tank used for heating oil at the former 8 Maple Street Residence.
19	Suspected Fill #12 and #14 Maple Street	PAHs	PAHs detected in the shallow subsurface soils (TB-217) possibly from historic fill used in the development of the property.	Surface soils Subsurface soils	TB-217	Not investigated during Phase III	Groundwater not investigated	MW-23S	Subsurface soils contained detections of PAHs, with a detection of (Benzo (a)pyrene) above the Res DEC, I/C DEC and GB PMC. Boring log was not available during the CSM development to assess for presence of fill.	Not investigated during Phase III	Groundwater not tested.	**Shallow:** Adjacent USPS ROW: MW-23S: VOC (chloroform) and metals detected below SWPC	Hockanum River located up gradient of location.	Phase II (off-site) 1994 Phase III Investigation (2018)	Possible historic fill associated with the development of property or potential off-site source.
20	Off-site Tar Impacts (Residence #14 Maple Street)	VOCs (BTEX), SVOCs, Total Cyanide, ETPH	Tar-impacted soils (sheen and odor) between 30 and 37 feet. Tar migrated beneath Maple Avenue onto the western portion of the property.	Subsurface soils Groundwater	TB-207, TB-210, TB-211, TB-215, MW-15D	Not investigated during Phase III	MW-15S MW-15D	MW-23S	Subsurface soils contained detections of VOCs and PAHs at concentrations above the GB PMC. However, these impacts are likely below the water table and the GB PMC is not applicable.	Not investigated during Phase III	MW-15S: Metals and cyanide exceeded SWPC. VOC (MTBE detected). MW-15D: Metals detected above the SWPC.	**Shallow:** Adjacent USPS ROW: MW-23S: VOC (chloroform) and metals detected below SWPC	Hockanum River located up gradient of location.	Phase II (off-site) 1994 Phase III Investigation (2018)	Access to property was not provided. Tar impacts were assessed with a soil boring within Maple Street ROW (AOC-17) Remedial evaluation pending the completion of the Phase III investigation.
21	Off-site Surface Soils Maple Street School [PAHs Detected above RSR Criteria]	PAHs	PAHs detected in surface soils and shallow subsurface soils at the Maple Street School property.	Surface soils	R453, R454, R455, R456 R501-A, R-501-B, R-501-C, R-501-D R502-A, R-502-B, R-502-C, R-502-D R503-A, R-503-B, R-503-C, R-503-D R504-A, R-504-B, R-504-C, R-504-D R505-A, R-505-B, R-505-C, R-505-D R506-A, R-506-B, R-506-C, R-506-D	Not investigated during Phase III	Groundwater not investigated	Groundwater not investigated	Surface soils and shallow subsurface soils	Not investigated during Phase III	Groundwater not tested.	Groundwater not tested.	Hockanum River located up gradient of location.	Phase II-Surface Soil collection in 1995	Possible historic fill associated with the development of the school property or potential off-site source.
22	Off-site Surface Soils 175 Union Street [PAHs Detected above RSR Criteria]	PAHs	PAHs are detected in surface soils at nearby off-site properties (175 Union Street and Tolland AWC)	Surface soils	R426-A,R426-B,R426-C, R426-D R437-A,R437-B,R437-C, R437-D R438-A,R438-B,R438-C, R438-D R446-A,R446-B,R446-C, R446-D R452-A,R452-B,R452-C, R452-D RBG2-B and RBG2-C	Not investigated during Phase III	Groundwater not investigated	Groundwater not investigated	Surface soils and shallow subsurface soils	Not investigated during Phase III	Groundwater not tested.	Groundwater not tested.	Hockanum River located up gradient of location.	Phase II-Surface Soil collection in 1995	Possible historic fill associated with the development of the property or potential off-site source.

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23	Off-site Groundwater Impacts	VOCs	Groundwater impacts from spills or leaks occurring at the site and migrating offsite.	Groundwater	NA	See AOC 16	MW-13S, MW-13D, MW-14S, MW-14D, MW-15S, MW-15D, MW-19S, MW-20S, MW-21S, MW-23S	MW-13S, MW-13D, MW-14S, MW-14D, MW-19S, MW-20S, MW-21S, MW-23S, MW-26S, MW-26D, MW-26BR, MW- 27S, MW-28S, MW-30S, MW-31S, MW-40S, MW-41S, MW-42M, MW-42M, MW-43S, MW-43M, MW-44S, MW-44M, MW-45S, MW-45M, MW-46M Soil Vapor Assessment SV-01, SV-02, SV- 03, SV-05	Soils not assessed	See AOC 16	**Shallow:** Metals and cyanide detected above SWPC. VOCs and PAHs detected **Deep:** Metals detected above SWPC. VOCs and PAHs detected	**Shallow:** Tar globules / staining in MW-20S. MW-19S/MW-21S/MW-28S: metal and PAHs detected. MW-13S and MW-26S (Plasticizers detected -possible lab contamination) MW-27S: ETPH, metals, and naphthalene detected. MW-23S: Metals detected MW-14S: Cyanide, metals, and PAHs detected. MW-31S: Barium and nickel detected MW-29S: ETPH and benzene above SWPC and RES & I/C VC. Benzene and ETPH in compliance with the RES VC via soil vapor testing. Naphthalene above SWPC. MW-44S & MW-45S PAHs above GWPC MW-41S: ETPH was detected above SWPC and RES & I/C VC. ETPH is in compliance with the RES VC via soil vapor testing. Acenaphthylene above SWPC. PAHs, metals, and VOCs detected MW-42S: VOCs and ETPH not detected. Phenanthrene, barium, and chromium detected. MW-43S: VOCs and ETPH not detected. Phenanthrene and barium detected. MW-26S: ETPH , VOCs and PAHs not detected. Barium detected. **Intermediate:** MW-14M: ETPH above SWPC . Elevated concentrations of benzene and tar-related VOC detected. Acenaphthylene above SWPC. MW-42M: ETPH above GWPC and SWPC, Benzene above GWPC. PAHs, tar -related VOCs, metals (barium, thallium, zinc). detected. MW-43M: VOCs, PAHs and ETPH not detected. Barium, nickel, and zinc detected. MW-43M: Nickel above GWPC. MW-44M & MW-45M: PAHs above GWPC. **Deep:** MW-14D: metals and VOCs detected. ETPH, Cyanide, and PAHs detected above the SWPC. MW-26D metals and tar-related VOCs detected, PAH (acenaphthylene) detected above SWPC. ETPH not detected. **Bedrock:** MW-26BR Naphthalene and barium detected. VOCs and ETPH not detected.	Hockanum River is located upgradient on-site and approximately 275 feet to 400 feet to the west.	Phase II (off-site) 1994 Phase III ESA (2018-2023)	Additional Phase III ESA investigation completed to assess seasonal groundwater conditions at St. Joseph's Church property and to assess the nature and extent of groundwater impacts to the west of West Street. Downgradient conditions compliant with SWPC. Downgradient concentrations in groundwater are below the calculated alternate GWPC (intented to be utilized for compliance) and therefore, no furthur investigation is warranted.

Notes:
MGP = manufactured gas plant VOC = Volatile Organic Compound
BTEX = Benzene, toluene, ethyl benzene and xylenes ETPH- Extractable Total Petroleum Hydrocarbons PAH = Polycyclic Aromatic Hydrocarbon
TPH = Total Petroleum Hydrocarbons PCBs= Polychlorinated Biphenyls
SWPC = Surface Water Protection Criteria
Res DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial Commercial Direct Exposure Criteria
CSM = Conceptual site model, described by the Connecticut Department of Environmental Protection as "a representation of an environmental system that is used as a tool for understanding and for explaining to others the basis and rationale for site investigation and the conclusions drawn about the environmental conditions at a site. A CSM describes, explains, and provides and understanding of the nature and distribution of contaminants necessary to evaluate potential risks to human health and the environment. The CSM is an iterative approach to site characterization. The number of iterations and quantity and quality of information is a function of the complexity of site conditions and data quality objectives". This interim CSM is subject to change.
AOC = Area of concern, defined by the Connecticut Department of Environmental Protection as "locations or areas at a site where hazardous waste and or hazardous substances (including petroleum products) have been used, stored, treated, handled, disposed, spilled, and/or released to the environment."

Figures

Figure 1. Site Location Map

Figure 2. Site Layout and Historical Structures

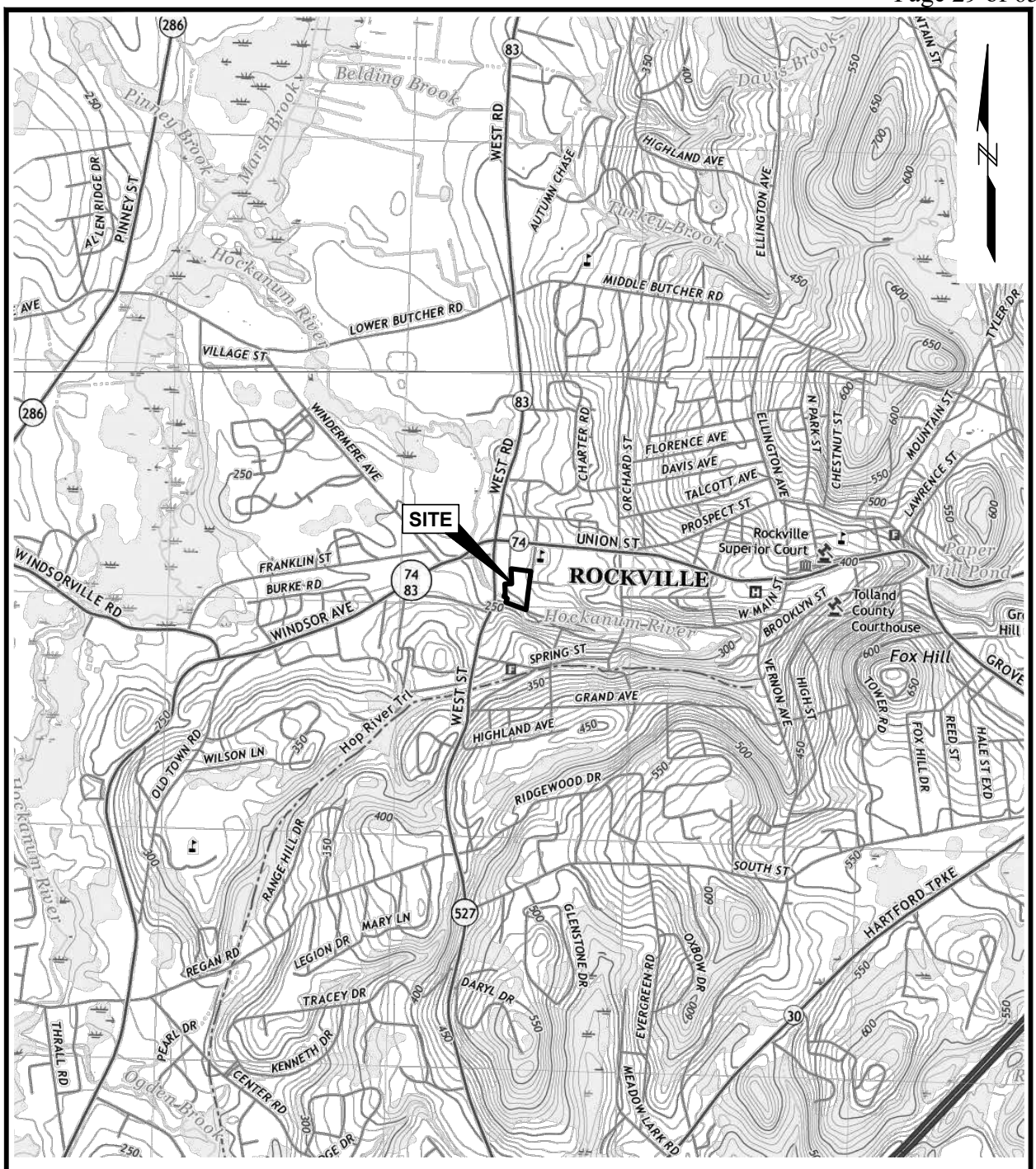
Figure 3. Phase II/III ESA and Previous Investigation Locations

Figure 4A. Shallow Groundwater Contour Plan

Figure 4B. Intermediate Groundwater Contour Plan

Figure 4C. Deep Groundwater Contour Plan

Figure 4D. Bedrock Groundwater Contour Plan



SOURCE:
MAP CREATED ROCKVILLE, CT QUADRANGLE, 7.5-MINUTE USGS TOPOGRAPHIC MAP, 2021 AND ELLINGTON, CT QUADRANGLE, 7.5-MINUTE USGS TOPOGRAPHIC MAP, 2021.

0 2000 4000

SCALE: 1" = 2000'

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Eversource Energy Berlin, Connecticut	Project 2200138	December 2024 Fig. 1

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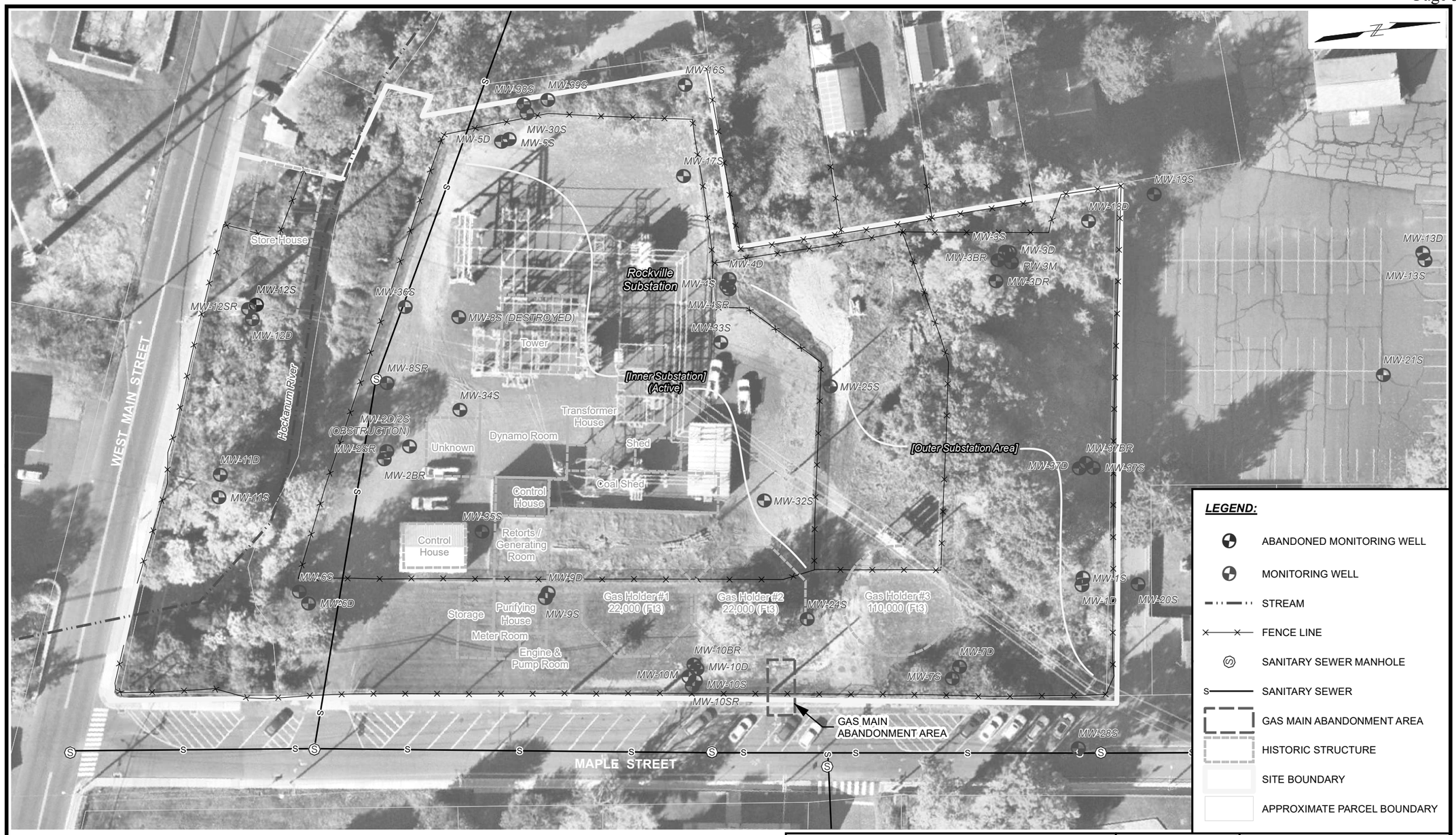

SOURCES:
1. DATA PROVIDED BY TIGHE & BOND.
2. NEARMAP IMAGERY DATED 10/12/2024.

0 50 100
SCALE, FEET

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Rockville, Vernon, Connecticut

Eversource Energy
Berlin, Connecticut

GEI Consultants

Project 2200138

SITE LAYOUT AND HISTORICAL STRUCTURES

December 2024 Fig. 2

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DOWNGRADIENT OFF-SITE SAMPLE LOCATIONS

0 100 200
SCALE: 1" = 200'

SOURCES:
1. DATA PROVIDED BY TIGHE & BOND.
2. NEARMAP IMAGERY DATED 10/12/2024.

0 30 60
SCALE, FEET

LEGEND:

PHASE II/III SITE INVESTIGATION

- NESTED WELL PAIR
- INTERMEDIATE WELL
- SOIL VAPOR POINT
- STAFF GAUGE
- SEDIMENT SAMPLE
- BACKGROUND SEDIMENT SAMPLE
- ADDITIONAL SEH DELINEATION SOIL
- SEH DELINEATION SOIL SAMPLE

PREVIOUS SITE INVESTIGATION

- ABANDONED MONITORING WELL
- MONITORING WELL
- SOIL BORING
- SURFACE SOIL
- TEST PIT
- SEDIMENT SAMPLE
- SURFACE WATER
- INDOOR AIR SAMPLE
- OUTDOOR AMBIENT AIR SAMPLE
- SUB-SLAB AIR SAMPLE
- STREAM
- FENCE LINE
- SITE
- HISTORIC STRUCTURE
- APPROXIMATE PARCELS

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Rockville Former MGP Site
Rockville, Vernon, Connecticut

Eversource Energy
Berlin, Connecticut

GEI Consultants

Project 2200138 | December 2024 | Fig. 3

PHASE II/III ESA AND PREVIOUS INVESTIGATION LOCATIONS

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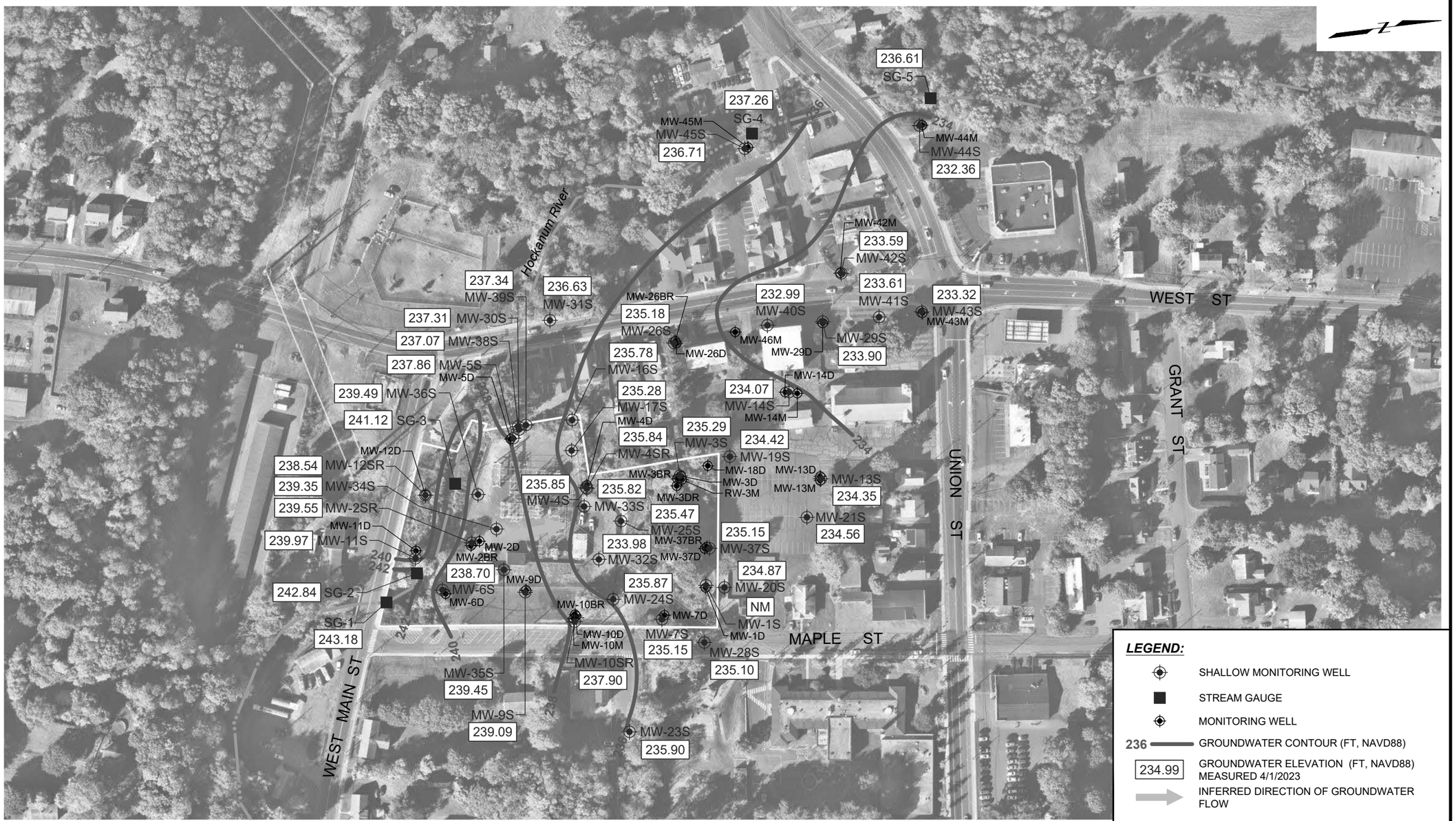


2024 Annual Report
Rockville Former MGP Site
Rockville, Vernon, Connecticut

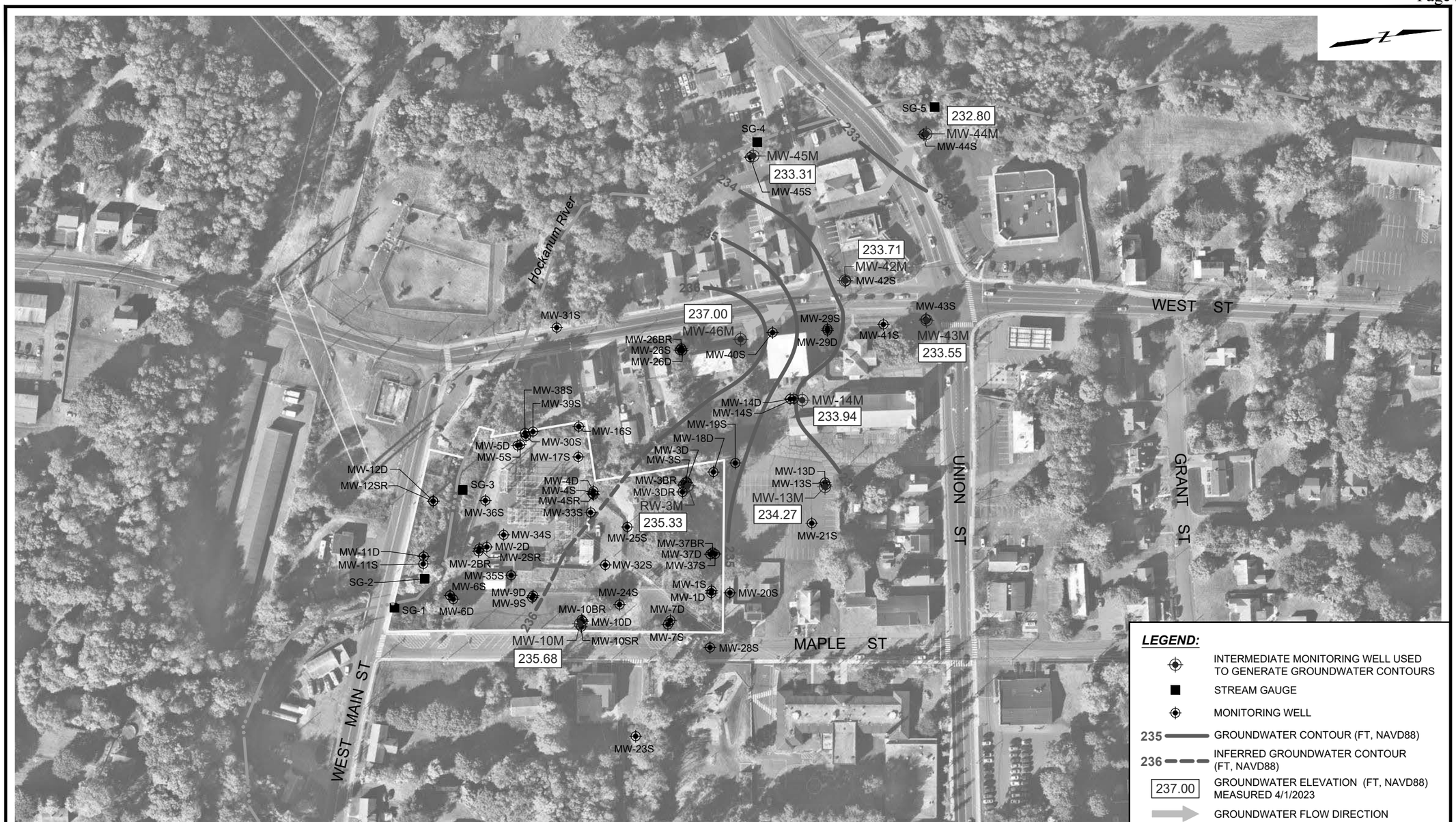
Eversource Energy
Berlin, Connecticut

GEI Consultants

SHALLOW GROUNDWATER CONTOUR PLAN

Project 2200138 | December 2024 | Fig. 4A

HERIOT, PAULA B:\Working\EVERSOURCE\2200138 Rockville MGP Supp. Ph II_III ESA\00_CAD\Figures\2024AR\4A_2200138_2024AR_GWS.dwg - 12/11/2024



2024 Annual Report
Rockville Former MGP Site
Rockville, Vernon, Connecticut

Eversource Energy
Berlin, Connecticut

GEI Consultants

INTERMEDIATE GROUNDWATER CONTOUR PLAN

Project 2200138 | December 2024 | Fig. 4B

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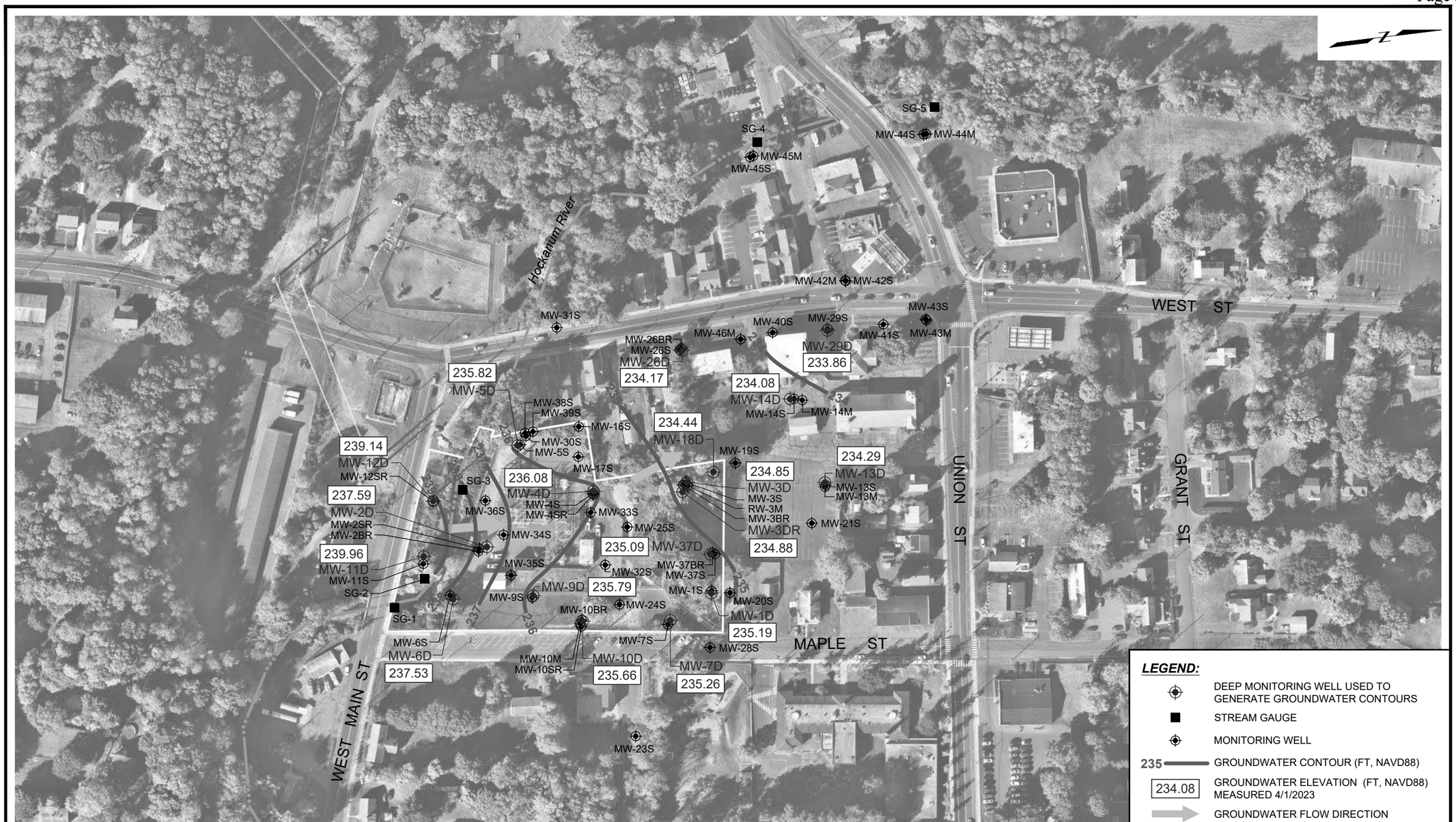

2024 Annual Report Rockville Former MGP Site Rockville, Vernon, Connecticut	GEI Consultants	DEEP GROUNDWATER CONTOUR PLAN
Eversource Energy Berlin, Connecticut	Project 2200138	December 2024 Fig. 4C

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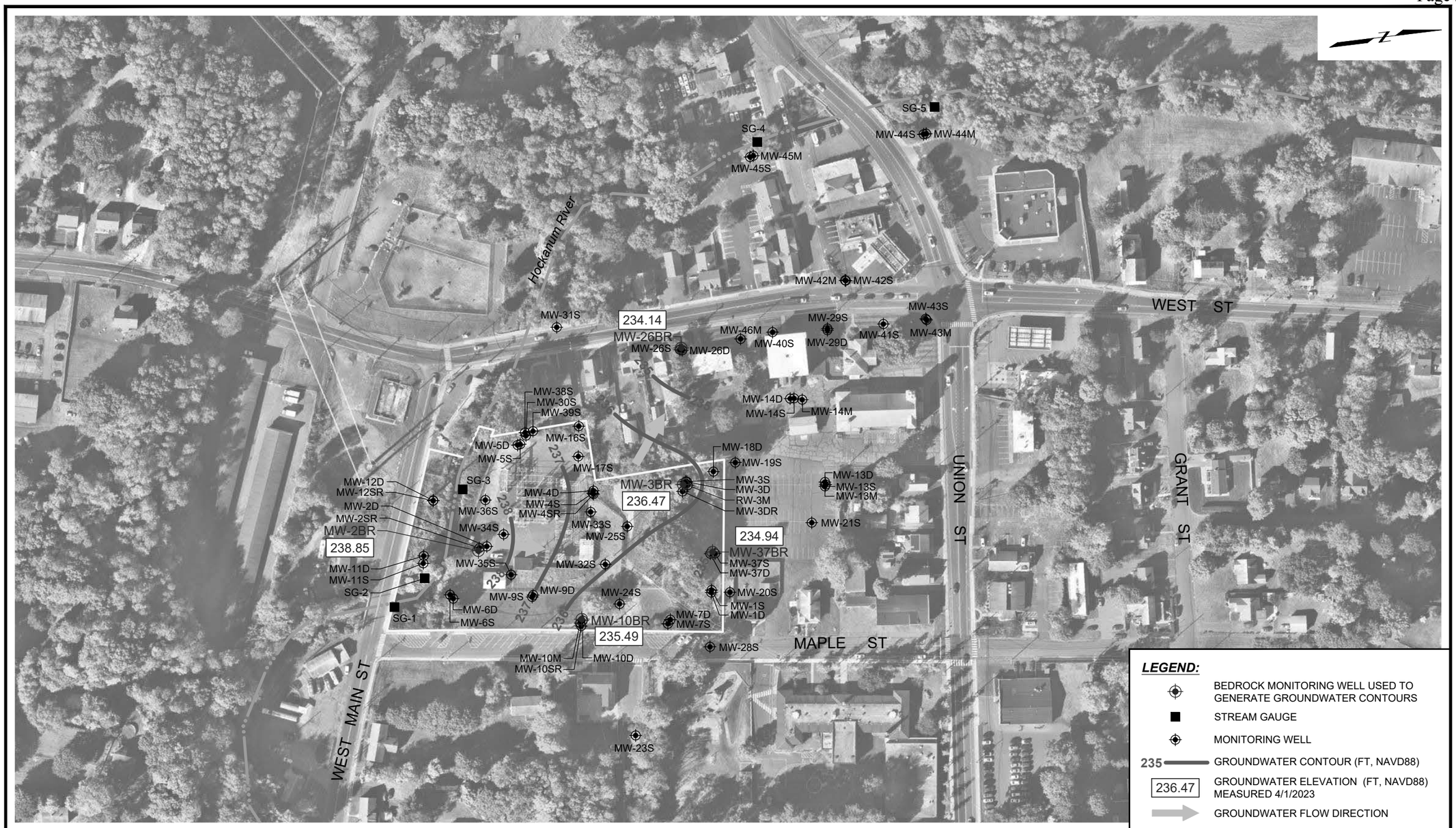

2024 Annual Report Rockville Former MGP Site Rockville, Vernon, Connecticut	GEI Consultants	BEDROCK GROUNDWATER CONTOUR PLAN
Eversource Energy Berlin, Connecticut	Project 2200138	December 2024 Fig. 4D

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Appendix A Significant Environmental Hazard Status Update Form: Soil

Electronic Transmittal Form for DEEP Remediation, LUST, and PCB Secure File Transfer (SFT)

DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
REMEDIATION DIVISION, PCB PROGRAM, AND
LEAKING UNDERGROUND STORAGE TANK COORDINATION PROGRAM
www.ct.gov/deep

This Electronic Transmittal Form must be completed and included as the cover sheet of your electronic document when uploading a document to the Connecticut SFT website. Requirements for Transmittals through the SFT website:

- Documents submitted through the SFT website must include all applicable figures, tables and laboratory data.
- Files must be formatted as PDF/A and use the appropriate naming convention:
  - For Remediation Filings: **REM_REMID #_SiteAddress_Town_DocumentType_DateofDocument**
  - For LUST Filings: **LUST_SiteAddress_Town_AbbreviationForDocumentType_DateofDocument**
  - For PCB Filings: **PCB_SiteAddress_Town_AbbreviationForDocumentType_DateofDocument**
  Example: LUST_1MainStreet_Hartford_ESA_01-01-2001
  Note: For **"**AbbreviationForDocumentType" use appropriate abbreviation at Transmittal of Documents
- If no Rem ID assigned (new filing) or REM ID is unknown leave field blank

Part I: Primary Recipient*: Remediation Program (* required)

For Remediation documents:	For PCB/LUST documents:
Primary Program*: Significant Environmental Hazard	UST Facility ID: (if applicable)
Rem ID*: 13641	Spill Case Number: (if known)

Part II: Site Information

Site Name*: Rockville Former Manufactured Gas Plant
Site Address*: 13 Maple Street
City/Town*: Rockville, Vernon State: CT Zip Code: 06066

Secondary Programs (complete as many as applicable for this document):

Program: Voluntary Remediation	Project ID: 12390
Program: Select Secondary Program	Project ID:
Program: Select Secondary Program	Project ID:
Program: Select Secondary Program	Project ID:

Provide Project ID for each secondary program if it is known.
Each program has a unique ID (i.e. Rem ID, Spill Case #, UST Facility ID, etc.)

Part III: Document Information (document type required for appropriate program[s] only)

Remediation*: SEH Status Update: Soil
LUST/PCB*: LUST/PCB Document Type
Date of Document*: 5/22/2024 Version: Final

Part IV: Submitter Information

Name*: Andrew (Drew) P. Blicharz
E-mail*: drew.blicharz@eversource.com
Name of business this document is being submitted on behalf of and contact person email: *
The Connecticut Light and Power Company dba Eversource Energy

Sustainability & Environmental Affairs Department
107 Selden Street, BMN2
Berlin, CT 06037

May 22, 2024

Monica Meschiatti
Remediation Division
Bureau of Water Protection and Land Reuse
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Reference: **Rockville Former Manufactured Gas Plant Site**
REM ID: 13641/SEH ID: 1075
Significant Environmental Hazard Status Update Form: Soil

Dear Ms. Meschiatti:

The Connecticut Light and Power Company dba Eversource Energy (Eversource) submits the enclosed *Significant Environmental Hazard (SEH) Status Update Form: Soil* for the Rockville Former Manufactured Gas Plant Site located at 13 Maple Street in Rockville, Vernon, Connecticut (the Site). An SEH Notification (SEHN) was submitted to the Connecticut Department of Energy and Environmental Protection (CT DEEP) on February 26, 2018. The SEHN reported that benzo(a)pyrene (BaP) was detected at a concentration that exceeded the SEH Condition Notification Threshold Concentration in shallow surficial soils (upper two feet) in a sample collected from SS-102 (0-6") during the Phase III Environmental Site Assessment (ESA). Additional SEH conditions in shallow surficial soils were later discovered at the Site during characterization or investigation activities. SEH conditions at OSS-4 and SB-78 were abated. SEH conditions at SB-76 and SB-76A1, HA-18, and an area characterized by HA-01 through HA-03 remain at the Site.

The attached *SEH Status Update Form: Soil* provides an annual update on the mitigation measures for existing SEH conditions in surficial soils, and representative photographs. These SEH conditions in the surficial soils, which are currently within an access-restricted fencing area, are proposed to be abated prior to or as part of the site-wide remedial action plan (RAP) which will be prepared once the Phase III environmental site assessment is completed at the Site.

Sincerely,
Eversource Energy Service Company

Andrew (Drew) P. Blicharz, LEP, CHMM
Senior Environmental Specialist – Remediation

Enclosure: Significant Environmental Hazard (SEH) Status Update Form: Soil
Cc: Kevin Neary, CT DEEP
Jeffrey Holden, LEP, GEI Consultants
Sean Connolly, GEI Consultants

Significant Environmental Hazard Status Update Form: Soil [Connecticut General Statutes (CGS) Section 22a-6u]

DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
BUREAU OF WATER PROTECTION & LAND REUSE
REMEDIATION DIVISION
79 ELM STREET
HARTFORD, CT 06106-5127 www.ct.gov/deep/remediation

Complete and submit this form, accompanied by attachments as requested, to meet the requirement under CGS section 22a-6u(k)(2) to provide a description of any continuing actions being taken to monitor, mitigate, or abate a Significant Environmental Hazard condition in surface soil.

RemID# **DEEP Use Only** SEH#

Part I – Site Identification

Identify the parcel at which a Significant Environmental Hazard (SEH) condition was identified:

Name of Site: Rockville Former MGP Site(REMID 13641/SEHID 1075

Address or Location: 13 Maple Street

City/Town: Rockville/Vernon State: CT Zip Code: 06066

Date(s) DEEP was notified: 2/26/18 DEEP Case Manager (if known): MONICA MESCHIATTI

Part II – SEH Information

A. SEH Condition Reported

☒ 30x Industrial/Commercial Direct Expose Criteria (DEC) (for industrial/commercial use, i.e. non-residential)

☐ 15x Industrial/Commercial DEC (for metals or PCBs at industrial/commercial properties that are within 300 feet of a current residential use)

☐ 15x Residential DEC (for current residential use)

B. Has the extent of the SEH condition been fully delineated horizontally and vertically in the top two feet of soil, pursuant to CGS section 22a-6u(d)(3)(A)?

Yes ☒ No ☐ Date report delineating SEH condition submitted: 5/19/23

C. A site map is attached depicting the specific locations and extent of the soil contamination, including contaminant concentrations that exceed SEH notification thresholds. ☒

Part III – SEH Mitigation Status Update

Describe any steps being taken to delineate, monitor, mitigate, and/or abate the SEH condition and any proposed future actions, pursuant to CGS section 22a-6u(d)(3).

A. Report Frequency

1. Annual reports are due on **June 1st** of each year using this form.
   This submittal is the annual report. ☒
2. **In the event that mitigation measures fail, a supplemental report, using this form, is required within 30 days of discovery of such event and must describe how this condition was addressed in C.4. below.** This submittal is a supplemental report. ☐

B. SEH Mitigation

1. Area that exceeds SEH soil notification thresholds is:

Covered by pavement maintained in good condition	YES ☐	NO ☒
Fenced off from the general public	YES ☒	NO ☐
Identified by posted warning signs	YES ☒	NO ☐

2. Provide any additional details of the mitigation measures taken to prevent exposure to the contaminated soil exceeding the SEH notification threshold. CHECK IF NONE ☐

Surficial soil with detections of benzo(a)pyrene (BaP) above the SEH Threshold Concentration including the SS-102, HA-01A, HA-02, HA-03, HA-18, and SB-76 areas remain secured within security fencing that has warning signs posted at the gated entrances to inform authorized visitors. The property is flagged in Eversource's internal GIS which informs Substation Operations personnel to contact Environmental personnel prior to intrusive work at the substation property.

C. Inspection and Maintenance of Mitigation Measures

1. List dates of inspection since last annual report (mm/dd/yy):

7/1/23	10/1/23	4/8/24	5/14/24

2. Checklist for inspection of mitigation measures for most recent inspection:

☐ Yes	☐ No	☒ NA	Cracking of asphalt or concrete?
☐ Yes	☒ No	☐ NA	Changes in surface profile (settling, potholes, roots)?
☐ Yes	☒ No	☐ NA	Exposed geotextile membrane or soil erosion?
☐ Yes	☒ No	☐ NA	New construction, paving, or landscaping?
☐ Yes	☒ No	☐ NA	Opening in fence that could allow access?
☒ Yes	☐ No	☐ NA	Warning signs present and legible?
☐ Yes	☐ No	☒ NA	Other conditions - describe:

3. Provide current photo documentation of mitigation measures.

Date of photos: 5/14/24 PHOTOS ATTACHED ☒

4. Describe any maintenance of mitigation measures that has been completed since the last report. CHECK IF NONE ☒

Part IV – SEH Abatement Update

A. Abatement Status

1. ☒ SEH condition has been abated (complete Part IV.B.) OSS-04 in 2021 and SB-78 in 2022. Reports below.
2. Date abatement plan (to be) submitted:
3. Anticipated date of completion of abatement:

B. Abatement Details

1. SEH condition has been abated such that notice would not be required under CGS section 22a-6u(k)(3) by:

   ☒ Removal of soil above notification threshold values in the top two feet of soil.

   ☐ Rendering the soil inaccessible as defined in the Remediation Standard Regulations ("RSRs," sections 22a-133k-1 through -3 of the Regulations of Connecticut State Agencies).

   ☐ Remediation of the release in accordance with the RSRs.

2. ☐ A report describing actions taken to permanently abate the SEH condition is attached.

   a. ☐ A table of analytical data that are the basis for determining that a SEH condition no longer exists is included in the attached report.

   b. ☐ A site map indicating the location of samples identifying that the SEH condition has been fully abated is included in the attached report.

3. If a report(s) has (have) already been submitted that documents the abatement of the SEH condition, list the reports below for reference. CHECK IF NONE ☐

Report Name	Preparer	Submittal Date (mm/dd/yy)	DEEP Unit Name (where submitted)
Annual Report	GEI	12/23/22	Remediation
Significant Environmental Status Update Form: Soil	Eversource	5/25/22	Remediation
2021 Voluntary Remediation Program Annual Report	Tighe & Bond	12/29/21	Remediation

Part V – Party Identification and Contact Information

A. Site Owner Has this information changed? Yes ☐ No ☒

Owner Name: The Connecticut Light and Power Company dba Eversource Energy

Contact Person: Andrew (Drew) P. Blicharz Title: Senior Environmental Specialist

Contact E-mail: drew.blicharz@eversource.com Contact Phone:860-665-5751 Ext.

Mailing Address: 107 Selden Street

City/Town: Berlin State:CT Zip Code: 06037

B. Environmental Consultant Has this information changed? Yes ☐ No ☒

Name: Jeffrey S. Holden Title: P.E., LEP

Firm: GEI Consultants, Inc.

E-mail: jholden@geiconsultants.com Phone: 607-216-8956 Ext.

Mailing Address: 1301 Trumansburg Road, Suite N

City/Town: Ithaca State: NY Zip Code: 14850

C. Entity Acting on Behalf of the Owner Has this information changed? Yes ☐ No ☒

If the person signing this form is not the site owner, describe that person's relationship to the site and its owner and enter contact information below. If an entity who is not the site owner is acting on behalf of the owner to mitigate or abate the hazard condition, provide details of this agreement.

Contact Name:

Contact Person: Title:

Contact E-mail: Contact Phone: Ext.

Mailing Address:

City/Town: State: Zip Code:

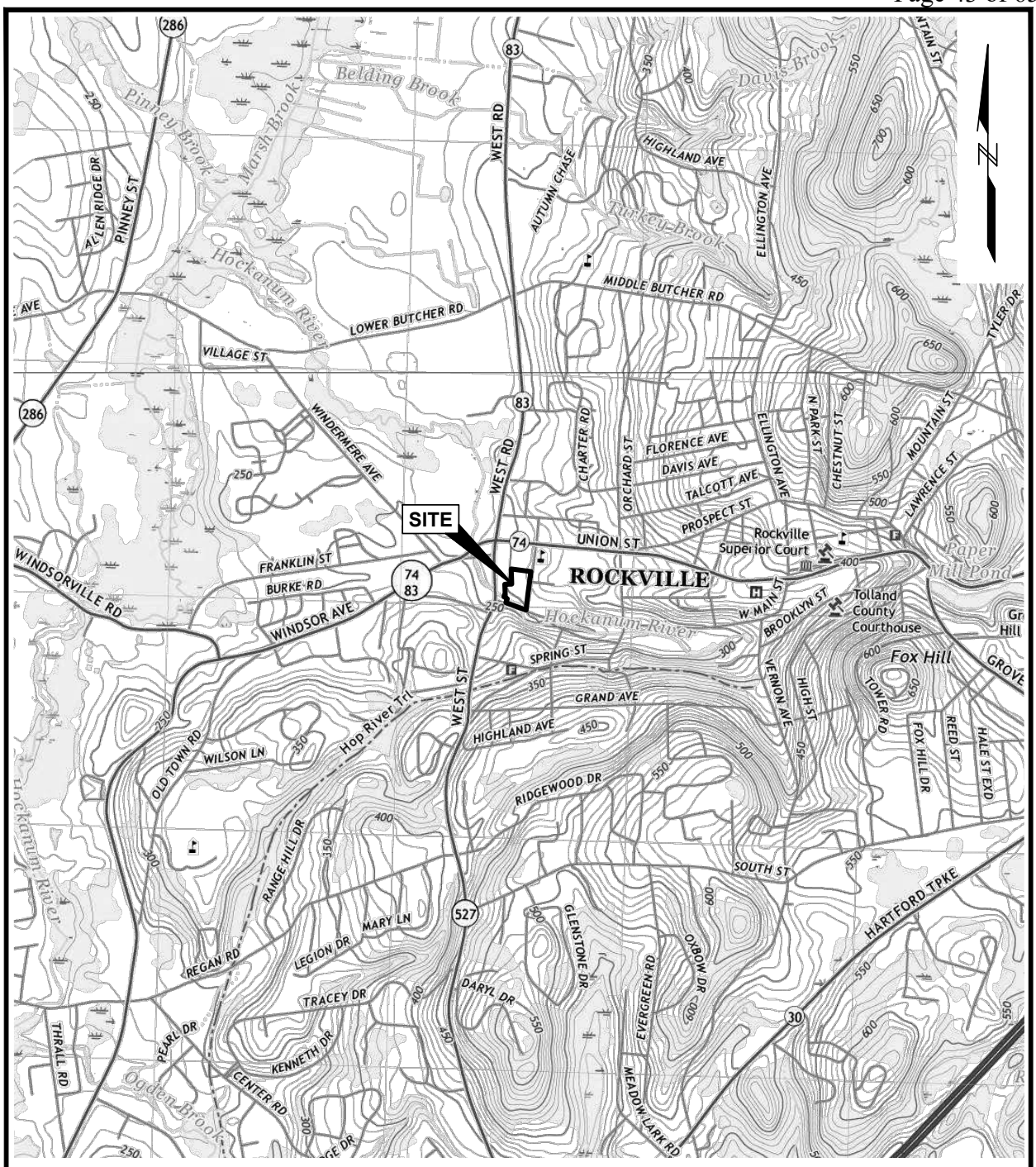
Part VI – Signature of Property Owner or Entity Acting on Owner's Behalf

"I have personally examined and am familiar with the information submitted in this document and all attachments, and certify that based on reasonable investigation the submitted information is true and accurate to the best of my knowledge and belief. I certify that this form is complete and accurate as prescribed by the Commissioner without alteration of the text."

Name: Andrew (Drew) P. Blicharz Title (if applicable): Senior Environmental Specialist

Signature Drew Blicharz Date: 5/22/24

SEND COMPLETED FORM TO: REMEDIATION DIVISION
<ATTN: CASE MANAGER, IF KNOWN>
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127



SOURCE:
MAP CREATED ROCKVILLE, CT QUADRANGLE, 7.5-MINUTE USGS TOPOGRAPHIC MAP, 2021 AND ELLINGTON, CT QUADRANGLE, 7.5-MINUTE USGS TOPOGRAPHIC MAP, 2021.

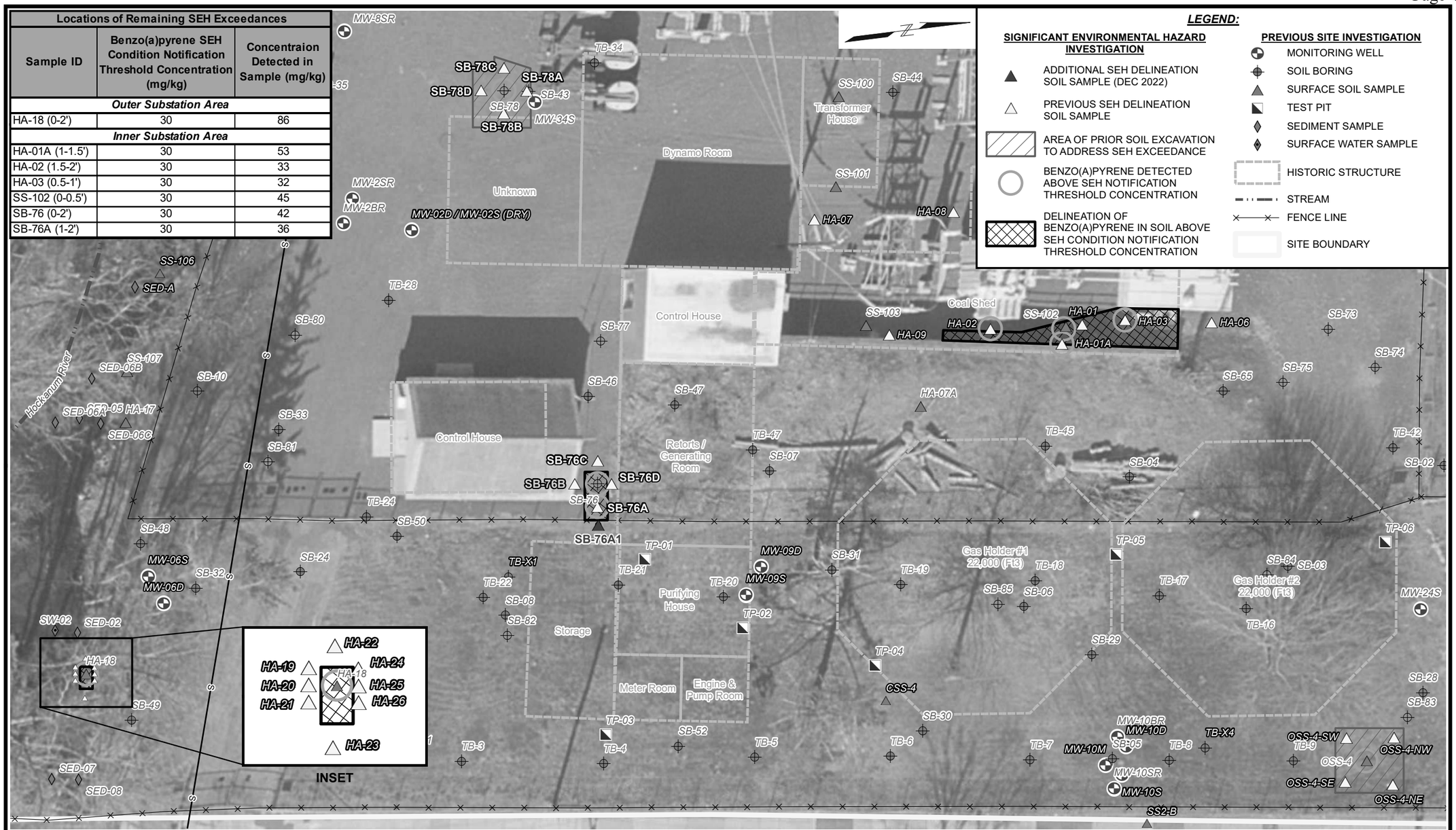
0 2000 4000

SCALE: 1" = 2000'

Significant Environmental Hazard Status Update Form: Soil Rockville Former MGP Site Rockville, Vernon, Connecticut	GEI Consultants	SITE LOCATION MAP
Eversource Berlin, Connecticut	Project 2200138	May 2024 Fig. 1

\\geiconsulta B:\Working\EVERSOURCE\2200138 Rockville MGP Supp. Ph II_III ESA\00_CAD\Figures\SEHSU\2023\2200138_SEHSU_SLM.dwg - 5/16/2023

Locations of Remaining SEH Exceedances		
Sample ID	**Benzo(a)pyrene SEH Condition Notification Threshold Concentration (mg/kg)**	**Concentraion Detected in Sample (mg/kg)**
Outer Substation Area		
HA-18 (0-2')	30	86
Inner Substation Area		
HA-01A (1-1.5')	30	53
HA-02 (1.5-2')	30	33
HA-03 (0.5-1')	30	32
SS-102 (0-0.5')	30	45
SB-76 (0-2')	30	42
SB-76A (1-2')	30	36



SOURCES:
1. ALL PREVIOUS SAMPLE LOCATION DATA PROVIDED BY TIGHE & BOND.
2. WORLD IMAGERY LAYER, Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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SCALE, FEET

Significant Environmental Hazard Status Update Form: Soil
Rockville Former MGP Site
Rockville, Vernon, Connecticut

Eversource
Berlin, Connecticut

GEI Consultants

SIGNIFICANT ENVIRONMENTAL HAZARD (SEH) INVESTIGATION AND EXCAVATION LOCATIONS

Project 2200138 | May 2024 | Fig. 2

J:\Projects\Eversource Energy\13 Maple St Rockville\SEHSU\2023\2200138_SEHSU_SEH.mxd

Rockville Former MGP
Significant Environmental Hazard Status Update Form: Soil
Address: 13 Maple Street, Rockville, Vernon, Connecticut

GEI Consultants

Photo Log Index – May 2024

Photo No. 1 – Signage at outer substation southern gate (facing west). ____ *1*
Photo No. 2 – Signage at outer substation northern gate (facing west). ____ *1*
Photo No. 3 – SEH condition area (SB-76 and SB-76A) within the inner substation fence (facing east). ____ *2*
Photo No. 4 – SEH condition area (SS-102, HA-01A, HA-02 and HA-03) within the inner substation beyond the retaining wall (facing north). ____ *2*
Photo No. 5 – SEH condition area (SS-102, HA-01A, HA-02 and HA-03) within the inner substation adjacent to the retaining wall (facing south). ____ *3*
Photo No. 6 – SEH condition area (HA-18) fenced off within wooded area of outer substation (facing south). ____ *3*

Rockville Former MGP
Significant Environmental Hazard Status Update Form: Soil
Address: 13 Maple Street, Rockville, Vernon, Connecticut



Photo No. 1 – Signage at outer substation southern gate (facing west).



Photo No. 2 – Signage at outer substation northern gate (facing west).

Rockville Former MGP
Significant Environmental Hazard Status Update Form: Soil
Address: 13 Maple Street, Rockville, Vernon, Connecticut



Photo No. 3 – SEH condition area (SB-76 and SB-76A) within the inner substation fence (facing west).



Photo No. 4 – SEH condition area (SS-102, HA-01A, HA-02 and HA-03) within the inner substation fence beyond the retaining wall (facing west).

Rockville Former MGP
Significant Environmental Hazard Status Update Form: Soil
Address: 13 Maple Street, Rockville, Vernon, Connecticut



Photo No. 5 – SEH condition area (SS-102, HA-01A, HA-02 and HA-03) within the inner substation adjacent to the retaining wall (facing south).



Photo No. 6 – SEH condition area (HA-18) fenced off within wooded area of outer substation (facing south).

Appendix B Initial Notification for Intended Use of Alternative Groundwater Protection Criteria

December 20, 2024
Project No. 2200138

Monica Meschiatti
Environmental Analyst 2
Remediation Division
Bureau of Water Protection and Land Reuse
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: Initial Notification for Intended Use of Alternative Groundwater Protection Criteria
Rockville Former Manufactured Gas Plant Site
REM ID: 13641
13 Maple Street, Vernon (Rockville), Connecticut

Dear Ms. Meschiatti:

On behalf of The Connecticut Light and Power Company (CL&P) dba Eversource Energy (Eversource), GEI Consultants, Inc. (GEI) has prepared this letter to provide written notice to the Connecticut Department of Energy and Environmental Protection (CTDEEP) of the planned use of alternative groundwater protection criteria (GWPC) for the Rockville former manufactured gas plant (MGP) site located at 13 Maple Street, in the Rockville section of Vernon, Connecticut (Site). The Site location is depicted on the Site Location Plan included as Figure 1.

This letter includes a brief project background followed by applicability and rationale for use of the alternative GWPC consistent with the notification requirements of Section 22a-133k-1(g) of the Remediation Standard Regulations (RSRs). We understand alternative GWPC are only applicable for Sites where soil source area remediation has been completed and we believe this request will be applicable following anticipated future soil remediation at the Site.

Project Location and Background

The former Rockville MGP is located on a 3.43-acre parcel of land that is currently used as an electrical substation (Eversource's Rockville 14W Substation). The substation is enclosed by a perimeter fence that limits access to authorized personnel only. The Inner Substation Area includes the active electrical substation infrastructure including high voltage power lines, towers, transformers, and electrical control houses. Subsurface electrical power supply ducts and a substation grounding grid are located beneath a crushed gravel cover inside the Inner Substation Area. Access to the Inner Substation Area is restricted by a high security fence equipped with barbed wire. Eversource requires notification and specialized training prior to entry to the Inner Substation Area and appropriate escort by qualified personnel. The

Outer Substation Area includes a grass-covered area along the eastern and northern sides of the property. The Hockanum River abuts the Inner Substation Area to the south. Wooded and brush-covered areas are located on the northern portion of the Site adjacent to the St. Joseph's Church paved parking lot and along the southern portion of the Site between the Hockanum River and West Main Street. Residential properties are located west of the Site and the Site is bounded by Maple Street and residential properties to the east. The attached Figure 2 depicts the Site layout.

On behalf of Eversource, GEI performed supplemental Phase II/III investigations at the Site between 2022 and 2023 that included additional well installations, gauging, and quarterly sampling. This additional investigation work was summarized in recent annual monitoring reports. The recent gauging data indicate that groundwater flows north-northwest from the Site. Groundwater at the former MGP site is classified as GB, although the impacted groundwater flows toward the GA-GB groundwater classification boundary (which follows West Street located west of the Site) and into the GA classification area.

One of the objectives of the supplemental Phase II/III investigations was to characterize the nature and extent of the groundwater plume within the intermediate groundwater zone to the west/northwest of MW-42M (Figure 4B). This well is located on the west side of West Street within the mapped GA groundwater classification area. Prior sampling at this well indicated potential Site-related impacts evidenced by exceedances of the SWPC for ETPH, naphthalene and acenaphthylene, and exceedance of the GWPC for ETPH, benzene, and naphthalene.

Additional intermediate monitoring wells to the west/northwest of MW-42 (MW-45M and MW-44M) were installed and sampled during the field activities for the Supplemental Phase II/III ESA. Analytical results from both wells indicated impacts were not detected during several sampling events and detected slightly above the GWPC during one event at each well, thus adequately delineating the groundwater plume to the west/northwest of MW-42M in the intermediate groundwater zone. The intermediate plume is also bounded to the north by MW-43M and MW-13M, and to the south by MW-46M which did not exceed RSRs.

The groundwater plume within the shallow zone also shows horizontal delineation based on the supplemental Phase II/III investigation results. It is bounded to the northwest by MW-40S, MW-42S, MW-43S, and MW-44S which all include sampling data below RSR criteria. While certain PAH GWPC exceedances were detected at MW-45S, those impacts are not considered to be Site-related because concentrations of these compounds are below detection levels or had trace detections in upgradient wells along the flow path between MW-45S and the Site (i.e., MW-31S, MW-26S, MW-40S, and MW-42S). Also, other potential PAHs sources exist near this well.

While we believe the extent of the Site-related groundwater plume is adequately delineated based on the existing data, MW-42M is within the GA area and exceeds GWPC values. Accordingly, for the purpose of demonstrating compliance with RSRs once remedial activities are completed, we are proposing to calculate alternative GWPC values applicable for the portion of the plume within the mapped GA groundwater classification area. The GA classified groundwater area northwest of the Site is mapped in CT DEEP's mapped area for potential use of the alternative GWPC such that the Alternative GWPC calculation approach under Section 22a-133k-3(d)(3) of the RSRs is anticipated to be applicable.

The following summarizes the conditions under which the alternative GWPC are applicable and how current or anticipated future Site conditions meet those conditions. We understand that releases to soil at the Site (source area) must be remediated, among other requirements of Section 22a-133k-3(d)(3) of the RSRs, before the alternative GWPC can be used.

Applicability for Use of the Alternative GWPC

As a result of historic and recent investigation work, compiled data indicate conditions at the Site meet, or will meet, the requirements of the RSRs regarding the use of Alternative GWPC for achieving groundwater compliance. The following summarizes the requirements of Section 22a-133k-3(d)(3) of the RSRs and a brief discussion describing how conditions at the Site comply, or are expected to comply, with these requirements.

- **22a-133k-3(d)(3)(A). The Site is within an area designated on the "Potential Alternative Groundwater Protection Criteria Map" in Appendix I.**

  A copy of the of the Potential Alternative GWPC Map showing the Site location and applicable areas is shown below. The Site itself is located within a designated GB classification area and note within the Alternative GWPC area. However, as indicated on the attached Figures 4A through 4C, overburden groundwater flows northwest from the Site to the approved alternative GWPC area. The area/wells for which the Alternative GWPC will apply include only those located within the designated area.



- **22a-133k-3(d)(3)(A)(i). Written notice of the use of alternative groundwater protection criteria (GWPC) is submitted to the commissioner in accordance with section 22a-133k-1(g) of the RSRs.**

  GEI is submitting this letter on behalf of Eversource indicating intent to utilize alternative GWPC upon complying with all conditions required for use of the alternative GWPC. An updated notice will be submitted to the Commissioner once all the conditions have been satisfied (i.e., once anticipated remedial activities have been implemented).

- **22a-133k-3(d)(3)(A)(ii). The calculated alternative GWPC shall not exceed 100 times the Groundwater Protection Criteria (GWPC) or the Residential Volatilization Criteria (RVC).**

  As further discussed below and shown in the attached Table 2, the alternative GWPC values that have been calculated do not exceed 100 times the GWPC or Residential Volatilization Criteria (RVC) for any of the constituents for which alternative criteria have been calculated with the exceptions of isopropylbenzene and lead. For lead, the 100 times the GWPC value of 2,500 µg/L was utilized for the alternative GWPC. For lead, the 100 times the GWPC value of 1.5 mg/L was utilized for the alternative GWPC.

- **22a-133k-3(d)(3)(A)(iii). Drinking water supply wells are not present on the Site or adjacent to the groundwater plume.**

  There are no drinking water supply wells on the Site, directly upgradient of the Site or on any properties downgradient of the Site. A well receptor survey was completed by Tighe & Bond as documented in the 2017 Annual Report dated January 2, 2017 and updated in the 2019 Voluntary Remediation Program Annual Report dated December 30, 2019. These findings were once again confirmed by file reviews performed in 2022. The survey and updates concluded that drinking water supply wells were not located on-Site or adjacent to the groundwater plume.

- **22a-133k-3(d)(3)(A)(iv). A public water supply distribution system is available within 500 feet downgradient and 200 feet in any direction of the plume.**

  According to the above referenced well receptor survey and recent observations and research, the Site, neighboring properties within 200 feet and 500 feet downgradient of the Site are connected to public water provided by the Connecticut Water Company. The attached Figure 3 depicts the Site and associated 200-foot and 500-foot radii around the plume. The attached Figures 4A through 4C show the inferred groundwater flow paths in shallow, intermediate, and deep overburden groundwater zones.

- **22a-133k-3(d)(3)(A)(v). All releases to soil that are a source of pollution resulting in the groundwater plume have been remediated.**

  Eversource plans to remediate the Site in the future under the Voluntary Remediation Program and therefore, this condition has not yet been satisfied. As indicated above, following remediation an updated notification regarding the use of alternate GWPC will be submitted to the Commissioner following remediation and demonstrating that all conditions for use of the Alternative GWPC have been met.

- **22a-133k-3(d)(3)(A)(vi). An alternative pollutant mobility criteria (PMC) has not been used for the substances for which an alternative GWPC is used.**

  There are no plans to utilize Alternative Pollutant Mobility Criteria (PMC) as part of the remedy for the Site.

- **22a-133k-3(d)(3)(A)(vii). The groundwater plume is a diminishing state plume.**

  As indicated below, recent groundwater sampling of downgradient monitoring wells indicate steady state or diminishing contaminant concentrations with the exception of naphthalene in monitoring well MW-42M. The naphthalene concentrations detected in MW-42M increased from 230 µg/L in January 2023 to 580 µg/L in October 2023. MW-42M was also sampled in December 2020 (after the well was installed) and naphthalene was detected at 200 µg/L, consistent with the concentrations detected in 2023. This increase in contaminant concentrations likely represent seasonal fluctuations and further sampling will confirm whether it is an increasing concentration trend. Following Site remediation, we anticipate contaminant concentrations to decrease. Post-remedial groundwater monitoring is anticipated to understand concentrations trends following Site remediation to confirm this condition is met.

- **22a-133k-3(d)(3)(A)(vii). The alternative GWPC is not used for contamination in bedrock.**

  The alternative GWPC is only used for contaminants detected in overburden groundwater.

For additional assessment of downgradient groundwater concentrations related to the use of an alternative GWPC, we have included the following data summary comparing detected contaminate concentrations in downgradient wells to the alternate GWPC.

2023 Groundwater Sampling Concentrations Compared to Alternative GWPC

As indicated above, GEI completed additional investigation work downgradient of the Site in 2023 that included well installation and quarterly groundwater sampling. The results of the groundwater sampling are documented in the 2023 Annual Report dated December 15, 2023. Data indicated certain polycyclic aromatic hydrocarbons (PAHs), extractable total petroleum hydrocarbons (ETPH) and metals including copper, lead, vanadium, and zinc exceeded the GWPC. The attached Table 1 includes this data but also compares the results to our calculated alternate GWPC. The calculated alternative GWPC are summarized in the attached Table 2. These values were calculated as prescribed in Section 22a-133k-3(d)(3) of the RSRs using the following calculations:

Calculation For Semi-Volatile Organic Compounds, Inorganics, and Pesticides:

Alternative GWPC = WSF * RSC * DEC * USF
- WSF (water to soil concentration factor) = 0.02 mg/L/mg/kg
- RSC (relative source contribution) = 0.2
- DEC (Residential Direct Exposure Criteria) = varies by compound in mg/kg
- UCF (unit conversion factor) = 1,000 µg/mg

Calculation For Volatile Organic Compounds:

Alternative GWPC = TAC * HV * ER * MC / f * WFR
- TAC (Residential Target Indoor Air Concentration) = varies by compound in µg/m^3
- HV (house volume) = 1,000 m3
- ER (air exchange rate per day) = 134 times per day
- MC (mixing coefficient) = 0.33
- F (fraction of substance concentration volatilized) = 0.5 unitless
- WFR (water flow rate) = 3,183 L/day

As indicated in Table 1, concentrations of PAHs, ETPH and metals in downgradient monitoring wells do not exceed the alternate GWPC except for benzene and n-propylbenzene at monitoring wells MW-14M and MW-41S. MW-14M and MW-41S are located downgradient from the Site and within the designated GB classification area. Monitoring wells farther downgradient (i.e., MW- 42S/M, MW-44S/M, and MW-45S/M) are located within the current GA groundwater classification area and comply with the alternate GWPC. Given that downgradient plume concentrations are compliant with the alternate GWPC, we anticipate utilizing the alternate GWPC for assessing groundwater compliance for the Site in the GA classified area.

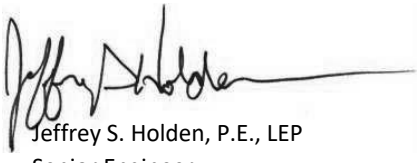
We trust the data provided in this document meets the needs of the Department and we look forward to continuing to work with you.

Sincerely,

GEI Consultants, Inc.



Sean Connolly
Project Manager



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\\geiconsultants.com\data\Data_Storage\Working\EVERSOURCE\2200138 Rockville MGP Supp. Ph II_III ESA\DOCUMENTS\2024 Annual Report\Final\Appendix B - Initial Notification for Use of Alt GWPC\20241220_2200138 Initial Notification for Use of Alt GWPC FINAL.docx

Attachments:

- Table 1 – Summary of Groundwater Analytical Results – Alternative GWPC Comparison
- Table 2 – Summary of Alternative GWPC Calculation
- Figure 1 – Site Location Map
- Figure 2 – Site Layout and Historical Structures
- Figure 3 – Monitoring Wells Within Plume Radius
- Figure 4A – Shallow Groundwater Contour Plan
- Figure 4B – Intermediate Groundwater Contour Plan
- Figure 4C – Deep Groundwater Contour Plan

Table 1. Summary of Groundwater Analysis Results
Alternative Groundwater Protection Criteria Comparison
Rockville Former MGP Site

						Sample Name	MW-3DR			MW-13M				DUP011023	MW-14M				MW-29S				MW-39S		MW-40S			
						Sample Date	4/7/2023	7/11/2023	10/16/2023	1/10/2023	4/4/2023	7/12/2023	10/16/2023	1/10/2023	1/10/2023	4/4/2023	7/12/2023	10/16/2023	1/12/2023	4/5/2023	7/14/2023	10/18/2023	7/11/2023	10/18/2023	1/12/2023	4/7/2023	7/12/2023	10/19/2023
						Parent Sample								MW-13M														
Analyte	Units	GWPC	Alternative GWPC	Res GWVC	I/C GWVC	SWPC																						
BTEX	ug/L																											
Benzene		1	92	215	530	710	< 0.70	< 0.70 J	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	**820**	**1000**	**660**	**820**	**5.2**	**9.8**	**17**	**41**	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70
Toluene		1000	5835	23500	50000	4000000	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**2.8**	< 20	< 5.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		700	1473	50000	50000	580000	**2.3**	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**570**	**550**	**290**	**460**	< 1.0	**1.9**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		530	6113	21300	50000	270*	**1.1**	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**130**	**130**	**61**	**96**	< 1.0	**5.7**	**9.3**	**22**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m/p-Xylene		530	6113	21300	50000	270*	**2.9**	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**49**	**62**	**22**	**38**	< 1.0	< 1.0	< 1.0	**1.2**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene		530	6113	21300	50000	270*	**4.0**	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**179.0**	**192**	**83.0**	**134**	< 1.0	**5.7**	**9.3**	**23.2**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Other Volatile Organic Compounds	ug/L																											
n-Butylbenzene		350*	2028	1600*	21800*	10000*	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.2**	< 20	< 5.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Cymene (4-Isopropyltoluene)		25*	1862	870*	2100*	200*	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.1**	< 20	< 5.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene		25*	2500	900*	2200*	210*	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**29**	**24**	**20**	**22**	**4.0**	**4.8**	**5.7**	**15**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene		50*	1334	1200*	2900*	10000*	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**9.8**	< 20	**5.5**	< 20	< 1.0	< 1.0	< 1.0	**1.7**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene (PCE)		5	139	340	810	88	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 5.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		140*	258	940*	12800*	150*	**5.8**	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**56**	**50**	**26**	**43**	< 1.0	< 1.0	**4.1**	**1.2**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		140*	258	730*	10000*	260*	**2.1**	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**7.4**	< 20	< 5.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polycyclic Aromatic Hydrocarbon	ug/L																											
Acenaphthene		420*	4000	30500*	50000*	150*	**8.9**	< 0.47	< 0.48	< 0.47	< 0.50	< 0.51	< 0.47	< 0.48	**110**	**90**	**40**	**82**	**21**	**25**	**33**	**37**	**2.0**	**1.3**	< 0.47	< 0.48	< 0.48	< 0.47
Acenaphthylene		420	4000	NE	NE	0.3	**15**	**0.64**	**0.58**	< 0.28	< 0.30	< 0.30	< 0.28	< 0.29	**1.7**	**1.4 J**	**0.87**	**1.5**	**0.38**	**0.78**	**0.57**	**0.56**	**3.0**	**5.5**	< 0.28	< 0.29	< 0.29	< 0.28
Anthracene		2000	4000	NE	NE	110000	**4.6**	< 0.47	< 0.48	< 0.47	< 0.50	< 0.51	< 0.47	< 0.48	**5.2**	**5.0**	**3.3**	**4.4**	< 0.49	< 0.48	**0.63**	< 0.49	**1.9**	**1.6**	< 0.47	< 0.48	< 0.48	< 0.47
Benzo(a)anthracene		0.06	4	NE	NE	0.3	**1.6**	< 0.05	**0.39**	< 0.05	< 0.05	**0.06**	< 0.05	< 0.05	**0.20**	**0.42**	**0.26**	**0.18**	< 0.05	< 0.05	< 0.05	< 0.05	**0.24**	**0.38**	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene		0.08	4	NE	NE	0.3	**0.72**	< 0.07	**0.25**	< 0.07	< 0.07	**0.10**	< 0.07	< 0.07	< 0.07	**0.13**	**0.13**	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	**1.2**	**2.8**	< 0.07	< 0.07	< 0.07	< 0.07
Benzo(k)fluoranthene		0.5	34	NE	NE	0.3	**0.88**	< 0.28	**0.32**	< 0.28	< 0.30	< 0.30	< 0.28	< 0.29	< 0.28	< 0.28	< 0.29	< 0.29	< 0.29	< 0.29	< 0.28	< 0.29	**0.80**	**0.78**	< 0.28	< 0.29	< 0.29	< 0.28
Benzo(g,h,i)perylene		0.48*	34	NE	NE	150*	**0.69**	< 0.45	< 0.46	< 0.45	< 0.48	< 0.48	< 0.45	< 0.46	< 0.45	< 0.45	< 0.47	< 0.47	< 0.47	< 0.46	< 0.45	< 0.47	**2.1**	**4.3**	< 0.45	< 0.46	< 0.46	< 0.45
Benzo(a)pyrene		0.2	4	NE	NE	0.3	**1.9**	< 0.19	**0.64**	< 0.19	< 0.20	< 0.20	< 0.19	< 0.19	< 0.19	**0.37**	**0.21**	< 0.20	< 0.20	< 0.19	< 0.19	< 0.19	**1.4**	**4.8**	< 0.19	< 0.19	< 0.19	< 0.19
Chrysene		4.8*	336	NE	NE	0.54*	**1.2**	< 0.47	< 0.48	< 0.47	< 0.50	< 0.51	< 0.47	< 0.48	< 0.47	< 0.47	< 0.49	< 0.49	< 0.49	< 0.48	< 0.47	< 0.49	< 0.51	< 0.69	< 0.47	< 0.48	< 0.48	< 0.47
Dibenz(a,h)anthracene		N/A	4	NE	NE	0.3*	**0.15**	< 0.09	< 0.10	< 0.09	< 0.10	< 0.10	< 0.09	< 0.10	< 0.09	< 0.09	< 0.10	< 0.10	< 0.10	< 0.10	< 0.09	< 0.10	**0.41**	**0.78**	< 0.09	< 0.10	< 0.10	< 0.09
Fluoranthene		280	4000	NE	NE	3700	**5.2**	< 0.47	**0.58**	< 0.47	< 0.50	< 0.51	< 0.47	< 0.48	**5.3 J**	**5.1**	**4.1**	**4.4**	**0.51**	**0.53**	**0.73**	**0.75**	< 0.51	< 0.69	< 0.47	< 0.48	< 0.48	< 0.47
Fluorene		280	4000	NE	NE	140000	**9.3**	< 0.47	< 0.48	< 0.47	< 0.50	< 0.51	< 0.47	< 0.48	**25**	**16**	**11**	**17**	**1.9**	**1.8**	**1.2**	**2.9**	**1.5**	**1.8**	< 0.47	< 0.48	< 0.48	< 0.47
Indeno(1,2,3-cd)pyrene		0.1*	4	NE	NE	0.54*	**0.83**	< 0.09	**0.25**	< 0.09	< 0.10	< 0.10	< 0.09	< 0.10	< 0.09	**0.13**	**0.11**	< 0.10	< 0.10	< 0.10	< 0.09	< 0.10	**2.0**	**4.0**	< 0.09	< 0.10	< 0.10	< 0.09
2-Methylnaphthalene		28*	1080	1000*	13100*	62*	**33**	< 0.47	< 0.48	< 0.47	< 0.50	< 0.51	< 0.47	< 0.48	**49 J**	**49**	**12**	**42**	< 0.49	< 0.48	< 0.47	< 0.49	< 0.51	< 0.69	< 0.47	< 0.48	< 0.48	< 0.47
Naphthalene		280	4000	NE	NE	210*	**120**	< 0.47	< 0.48	< 0.47	< 0.50	< 0.51	< 0.47	< 0.48	**1200 J**	**870**	**260**	**810**	< 0.49	**1.9 J**	**12**	**49**	< 0.51	< 0.69	< 0.47	< 0.48	< 0.48	< 0.47
Phenanthrene		200	4000	NE	NE	14	**16**	< 0.06	**0.63**	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	**16**	**13**	**7.9**	**14**	**1.4**	**1.4**	**1.5**	**0.43**	**0.11**	**0.10**	< 0.06	< 0.06	< 0.06	< 0.06
Pyrene		200	4000	NE	NE	110000	**6.8**	< 0.47	**0.83**	< 0.47	< 0.50	< 0.51	< 0.47	< 0.48	**6.5**	**6.1**	**5.1**	**5.2**	< 0.49	**0.58**	**0.81**	**0.81**	< 0.51	< 0.69	< 0.47	< 0.48	< 0.48	< 0.47
Total Metals	mg/L																											
Antimony		0.006	0.108	NE	NE	86	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.006	< 0.005	< 0.005	< 0.005	< 0.006
Arsenic		0.05	0.4	NE	NE	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	**0.007**	< 0.004	< 0.004	< 0.004	< 0.004
Barium		1	18.8	NE	NE	2.2*	**0.105**	**0.105**	**0.102**	**0.283**	**0.266**	**0.281**	**0.280**	**0.276**	**0.243**	**0.237**	**0.183**	**0.224**	**0.085**	**0.360**	**0.154**	**0.172**	**0.089**	**0.168**	**0.070**	**0.081**	**0.095**	**0.082**
Beryllium		0.004	0.008	NE	NE	0.004	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium		0.005	0.136	NE	NE	0.006	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.002**	< 0.001	< 0.001	< 0.001	< 0.001
Chromium		0.05	0.4	NE	NE	NE	**0.002**	< 0.001	**0.002**	**0.002**	**0.002**	< 0.001	**0.001**	**0.001**	**0.003**	**0.003**	< 0.001	**0.003**	< 0.001	**0.014**	< 0.001	< 0.001	**0.011**	**0.036**	< 0.001	**0.001**	**0.002**	< 0.001
Copper		1.3	10	NE	NE	0.048	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.018**	< 0.005	< 0.005	**0.015**	**0.053**	< 0.005	< 0.005	< 0.005	< 0.005
Lead		0.015	1.5	NE	NE	0.013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.001**	**0.003**	**0.003 J**	**0.002**	**0.003 J**	< 0.001	**0.006 J**	< 0.001	< 0.001	**0.011**	**0.060**	< 0.001	< 0.001	< 0.001	< 0.001
Mercury		0.002	0.08	NE	NE	0.0004	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Nickel		0.1	5.6	NE	NE	0.88	< 0.001	< 0.001	**0.002**	**0.003 J**	**0.004**	**0.003**	**0.001**	**0.062 J**	**0.003**	**0.004**	**0.002**	**0.002**	< 0.001	**0.015**	< 0.001	< 0.001	**0.008**	**0.028**	< 0.001	< 0.001	**0.002**	< 0.001
Selenium		0.05	1.36	NE	NE	0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Silver		0.036	1.36	NE	NE	0.012	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium		0.005	0.0216	NE	NE	0.063	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vanadium		0.05	1.88	NE	NE	0.27*	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	**0.005**	**0.004**	< 0.002	**0.004**	< 0.002	**0.021**	< 0.002	< 0.002	**0.018**	**0.051**	< 0.002	< 0.002	**0.003**	< 0.002
Zinc		5	80	NE	NE	0.123	< 0.005	< 0.004	**0.006**	**0.006**	< 0.005	< 0.004	< 0.004	**0.006**	**0.010**	**0.009 J**	**0.024**	**0.010**	< 0.004	**0.038 J**	**0.005**	**0.004**	**0.162**	**0.409**	< 0.004	< 0.004	**0.014**	< 0.004
Cyanides	mg/L																											
Total Cyanide		0.2	5.6	NE	NE	0.052	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	**0.019**	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
ETPH																												
C9-C36	mg/L	0.25	2	-	-	0.25	< 0.066	< 0.067	< 0.071	< 0.067	< 0.066	< 0.066	< 0.068	< 0.067	**2.1 J**	**2.2**	**1.3**	**1.4 J**	**0.13 J**	**0.61**	**0.34**	**0.55**	**0.61**	**0.76**	< 0.071 J	< 0.066	< 0.067	< 0.066

Notes:
mg/L = milligrams/liter
ug/L = micrograms per liter or parts per billion (ppb)
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

Amended Remediation Standard Regulations (RSRs) of the Regulations of Connecticut State Agencies (RCSA) 22a-133k-1 through 22a-133k-3. The effective date of the amended RSRs is June 27, 2013 used in combination with 2018 CAPS where the RSR criteria are not available.

Alterntative GWPC are calculated as perscribed in Section 22a-133k-3(d)(3) of the RSRs.

* indicates value is obtained from 2018 Technical Support Document (TSD) for Common Additional Polluting Substances (CAPS)

GWPC = Ground Water Protection Criteria means the concentrations identified in in Appendix A to RCSA sections 22a-133k-1 through 22a-133k-3.
I/C GWVC = Industrial/Commercial groundwater volatilization criteria means the concentrations identified in in Appendix A to RCSA sections 22a-133k 1 through 22a-133k-3.
Res GWVC = Residential groundwater volatilization criteria means the concentrations identified in in Appendix A to RCSA sections 22a-133k-1 through 22a-133k-3.
SWPC = Surface Water Protection Criteria criteria means the concentrations identified in in Appendix A to RCSA sections 22a-133k-1 through 22a-133k-3.

CAS No. = Chemical Abstracts Service Number
NE = Not Established

Bolding indicates a detected result concentration
Shading and bolding indicates that the detected concentration is above the CT RSR it was compared to
Orange highlighting indicates the detected concentration exceeds the Alternate GWPC.

Validation Qualifiers:
< = The analyte was not detected at a concentration above the specified laboratory reporting limit.
J = The result is an estimated value.

Monitoring wells MW-42S andMW-42M were inaccessible and not sampled in August 2023 due to construction work being conducted at the adjacent gas station.

Monitoring well MW-39S was only sampled in July and October 2023 due to an inadequate amount of

Table 1. Summary of Groundwater Analysis Results
Alternative Groundwater Protection Criteria Comparison
Rockville Former MGP Site

						Sample Name	MW-41S				MW-42S			DUP-01	MW-42M			MW-43S				MW-43M			
						Sample Date	1/12/2023	4/6/2023	7/14/2023	10/18/2023	1/12/2023	4/6/2023	10/18/2023	4/6/2023	1/12/2023	4/6/2023	10/18/2023	1/11/2023	4/6/2023	7/14/2023	10/19/2023	1/11/2023	4/6/2023	7/14/2023	10/19/2023
						Parent Sample								MW-42S											
Analyte	Units	GWPC	Alternative GWPC	Res GWVC	I/C GWVC	SWPC																			
BTEX	ug/L																								
Benzene		1	92	215	530	710	**170**	**110**	**170**	**160**	< 0.70	< 0.70	< 0.70	< 0.70	**12**	**17**	**30**	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70
Toluene		1000	5835	23500	50000	4000000	**1.3**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.1**	**2.3**	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		700	1473	50000	50000	580000	**43**	**35**	**42**	**30**	< 1.0	< 1.0	< 1.0	< 1.0	**94**	**110**	**250**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		530	6113	21300	50000	270*	**5.4**	**4.7**	**5.4**	**3.5**	< 1.0	< 1.0	< 1.0	< 1.0	**30**	**40**	**88**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m/p-Xylene		530	6113	21300	50000	270*	**1.4**	< 1.0	**1.1**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**5.6**	**9.2**	**60**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene		530	6113	21300	50000	270*	**6.8**	**4.7**	**6.5**	**3.5**	< 1.0	< 1.0	< 1.0	< 1.0	**35.6**	**49.2**	**148**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Other Volatile Organic Compounds	ug/L																								
n-Butylbenzene		350*	2028	1600*	21800*	10000*	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Cymene (4-Isopropyltoluene)		25*	1862	870*	2100*	200*	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene		25*	2500	900*	2200*	210*	**10**	**6.1**	**12**	**9.7**	< 1.0	< 1.0	< 1.0	< 1.0	**8.5**	**11**	**21**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene		50*	1334	1200*	2900*	10000*	**2.4**	**1.6**	**3.1**	**2.4**	< 1.0	< 1.0	< 1.0	< 1.0	**2.5**	**3.8**	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene (PCE)		5	139	340	810	88	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene		140*	258	940*	12800*	150*	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**17**	**27**	**48**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		140*	258	730*	10000*	260*	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.4**	**1.6**	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polycyclic Aromatic Hydrocarbon	ug/L																								
Acenaphthene		420*	4000	30500*	50000*	150*	**31**	**32**	**27**	**31**	< 0.49	< 0.49	< 0.47	< 0.48	**51**	**76**	**64**	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.47
Acenaphthylene		420	4000	NE	NE	0.3	**1.5**	**1.9**	**1.5**	**1.4**	< 0.29	< 0.29	< 0.28	< 0.29	**1.1**	**1.3**	**1.2**	< 0.29	< 0.29	< 0.28	< 0.29	< 0.28	< 0.29	< 0.28	< 0.28
Anthracene		2000	4000	NE	NE	110000	**0.70**	**0.76**	**0.66**	**0.56**	< 0.49	< 0.49	< 0.47	< 0.48	**2.6**	**4.5**	**4.1**	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.47
Benzo(a)anthracene		0.06	4	NE	NE	0.3	**0.11**	**0.08**	**0.10**	**0.09**	< 0.05	**0.07**	< 0.05	< 0.05	< 0.05	< 0.05	**0.05**	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene		0.08	4	NE	NE	0.3	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	< 0.07
Benzo(k)fluoranthene		0.5	34	NE	NE	0.3	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.28	< 0.29	< 0.30	< 0.28	< 0.30	< 0.29	< 0.29	< 0.28	< 0.29	< 0.28	< 0.29	< 0.28	< 0.28
Benzo(g,h,i)perylene		0.48*	34	NE	NE	150*	< 0.46	< 0.46	< 0.47	< 0.46	< 0.47	< 0.47	< 0.45	< 0.46	< 0.48	< 0.45	< 0.48	< 0.46	< 0.47	< 0.45	< 0.46	< 0.45	< 0.47	< 0.45	< 0.45
Benzo(a)pyrene		0.2	4	NE	NE	0.3	< 0.19	< 0.19	< 0.19	< 0.19	< 0.20	< 0.19	< 0.19	< 0.19	< 0.20	< 0.19	< 0.20	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.20	< 0.19	< 0.19
Chrysene		4.8*	336	NE	NE	0.54*	< 0.48	< 0.48	< 0.49	< 0.48	< 0.49	< 0.49	< 0.47	< 0.48	< 0.52	< 0.47	< 0.50	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.47
Dibenz(a,h)anthracene		N/A	4	NE	NE	0.3*	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.09	< 0.10	< 0.10	< 0.09	< 0.10	< 0.10	< 0.10	< 0.09	< 0.10	< 0.09	< 0.10	< 0.09	< 0.09
Fluoranthene		280	4000	NE	NE	3700	**2.2**	**1.6**	**2.1**	**2.2**	< 0.49	< 0.49	< 0.47	< 0.48	**1.4**	**1.8**	**2.1**	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.47
Fluorene		280	4000	NE	NE	140000	**6.9**	**7.6**	**7.2**	**7.9**	< 0.49	< 0.49	< 0.47	< 0.48	**8.2**	**19**	**18**	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.47
Indeno(1,2,3-cd)pyrene		0.1*	4	NE	NE	0.54*	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.09	< 0.10	< 0.10	< 0.09	< 0.10	< 0.10	< 0.10	< 0.09	< 0.10	< 0.09	< 0.10	< 0.09	< 0.09
2-Methylnaphthalene		28*	1080	1000*	13100*	62*	< 0.48	< 0.48	< 0.49	< 0.48	< 0.49	< 0.49	< 0.47	< 0.48	**2.9 J**	**4.7 J**	**34**	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.47
Naphthalene		280	4000	NE	NE	210*	**1.3 J**	**2.6 J**	**0.97**	**0.49**	< 0.49	< 0.49	< 0.47	< 0.48	**230**	**250 J**	**580**	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.47
Phenanthrene		200	4000	NE	NE	14	**1.9**	**1.8**	**1.9**	**1.4**	< 0.06	**0.21 J**	< 0.06	< 0.06 J	**12**	**24**	**22**	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Pyrene		200	4000	NE	NE	110000	**2.5**	**1.9**	**2.5**	**2.3**	< 0.49	< 0.49	< 0.47	< 0.48	**1.8**	**2.4**	**2.7**	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.47
Total Metals	mg/L																								
Antimony		0.006	0.108	NE	NE	86	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005	< 0.005	< 0.006
Arsenic		0.05	0.4	NE	NE	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Barium		1	18.8	NE	NE	2.2*	**0.265**	**0.476**	**0.245**	**0.237**	**0.061**	**0.149**	**0.064**	**0.154**	**0.182**	**0.176**	**0.184**	**0.211**	**0.199**	**0.202**	**0.202**	**0.365**	**0.354**	**0.342**	**0.317**
Beryllium		0.004	0.008	NE	NE	0.004	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium		0.005	0.136	NE	NE	0.006	< 0.001	**0.002**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium		0.05	0.4	NE	NE	NE	< 0.001	**0.020**	< 0.001	< 0.001	< 0.001	**0.008**	< 0.001	**0.010**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.012**	**0.003**	< 0.001	< 0.001
Copper		1.3	10	NE	NE	0.048	< 0.005	**0.032**	< 0.005	< 0.005	< 0.005	**0.012**	< 0.005	**0.016**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.012**	**0.006**	< 0.005	< 0.005
Lead		0.015	1.5	NE	NE	0.013	< 0.001	**0.007 J**	< 0.001	< 0.001	**0.001**	**0.005 J**	< 0.001	**0.004 J**	< 0.001	**0.003 J**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.006**	**0.003 J**	< 0.001	< 0.001
Mercury		0.002	0.08	NE	NE	0.0004	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Nickel		0.1	5.6	NE	NE	0.88	< 0.001	**0.019**	< 0.001	< 0.001	< 0.001	**0.006**	< 0.001	**0.008**	**0.002**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.012**	**0.104**	< 0.001	< 0.001
Selenium		0.05	1.36	NE	NE	0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Silver		0.036	1.36	NE	NE	0.012	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium		0.005	0.0216	NE	NE	0.063	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vanadium		0.05	1.88	NE	NE	0.27*	< 0.002	**0.015**	< 0.002	< 0.002	< 0.002	**0.005 J**	< 0.002	**0.010 J**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	**0.012**	< 0.002	< 0.002	< 0.002
Zinc		5	80	NE	NE	0.123	< 0.004	**0.051**	< 0.004	< 0.004	< 0.004	**0.024 J**	< 0.004	**0.039 J**	< 0.004	< 0.005	< 0.004	< 0.004	< 0.004	< 0.004	**0.005**	**0.041**	**0.015 J**	< 0.004	< 0.004
Cyanides	mg/L																								
Total Cyanide		0.2	5.6	NE	NE	0.052	< 0.010	< 0.010	< 0.010	< 0.010	< 0.020	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
ETPH																									
C9-C36	mg/L	0.25	2	-	-	0.25	**0.35 J**	**0.76**	**0.69**	**0.40**	< 0.071 J	< 0.068	< 0.068	< 0.068	**0.54 J**	**0.94**	**1.5**	< 0.067	< 0.067	< 0.066	< 0.066	< 0.069	< 0.067	< 0.071	< 0.066

Notes:
mg/L = milligrams/liter
ug/L = micrograms per liter or parts per billion (ppb)
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

Amended Remediation Standard Regulations (RSRs) of the Regulations of Connecticut State Agencies (RCSA) 22a-133k-1 through 22a-
effective date of the amended RSRs is June 27, 2013 used in combination with 2018 CAPS where the RSR criteria are not available.

Alterntative GWPC are calculated as perscribed in Section 22a-133k-3(d)(3) of the RSRs.

* indicates value is obtained from 2018 Technical Support Document (TSD) for Common Additional Polluting Substances (CAPS)

GWPC = Ground Water Protection Criteria means the concentrations identified in in Appendix A to RCSA sections 22a-133k-1 through 2
I/C GWVC = Industrial/Commercial groundwater volatilization criteria means the concentrations identified in in Appendix A to RCSA secti
1 through 22a-133k-3.
Res GWVC = Residential groundwater volatilization criteria means the concentrations identified in in Appendix A to RCSA sections 22a-1
through 22a-133k-3.
SWPC = Surface Water Protection Criteria criteria means the concentrations identified in in Appendix A to RCSA sections 22a-133k-1 thr
133k-3.

CAS No. = Chemical Abstracts Service Number
NE = Not Established

Bolding indicates a detected result concentration
Shading and bolding indicates that the detected concentration is above the CT RSR it was compared to
Orange highlighting indicates the detected concentration exceeds the Alternate GWPC.

Table 1. Summary of Groundwater Analysis Results
Alternative Groundwater Protection Criteria Comparison
Rockville Former MGP Site

						Sample Name	MW-44S				MW-44M				MW-45S				DUP-01	MW-45M				DUP-1	MW-46M			
						Sample Date	1/11/2023	4/7/2023	7/12/2023	10/17/2023	1/11/2023	4/7/2023	7/12/2023	10/17/2023	1/11/2023	4/7/2023	7/11/2023	10/19/2023	10/19/2023	1/11/2023	4/7/2023	7/11/2023	10/19/2023	7/11/2023	1/12/2023	4/4/2023	7/12/2023	10/19/2023
						Parent Sample													MW-45S					MW-45S				
Analyte	Units	GWPC	Alternative GWPC	Res GWVC	I/C GWVC	SWPC																						
BTEX	ug/L																											
Benzene		1	92	215	530	710	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70
Toluene		1000	5835	23500	50000	4000000	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		700	1473	50000	50000	580000	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		530	6113	21300	50000	270*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m/p-Xylene		530	6113	21300	50000	270*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene		530	6113	21300	50000	270*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Other Volatile Organic Compounds	ug/L																											
n-Butylbenzene		350*	2028	1600*	21800*	10000*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Cymene (4-Isopropyltoluene)		25*	1862	870*	2100*	200*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene		25*	2500	900*	2200*	210*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene		50*	1334	1200*	2900*	10000*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene (PCE)		5	139	340	810	88	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	**1.4**	**2.5**	**3.0**	**2.1**
1,2,4-Trimethylbenzene		140*	258	940*	12800*	150*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene		140*	258	730*	10000*	260*	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Polycyclic Aromatic Hydrocarbon	ug/L																											
Acenaphthene		420*	4000	30500*	50000*	150*	< 0.49	< 0.50	< 0.51	< 0.47	< 0.48	< 0.49	< 0.51	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.50	< 0.49
Acenaphthylene		420	4000	NE	NE	0.3	< 0.29	< 0.30	< 0.30	< 0.28	< 0.29	< 0.29	< 0.31	< 0.29	< 0.29	< 0.29	< 0.28	< 0.28	< 0.28	< 0.29	< 0.29	< 0.28	< 0.29	< 0.28	< 0.29	< 0.28	< 0.30	< 0.29
Anthracene		2000	4000	NE	NE	110000	< 0.49	< 0.50	< 0.51	< 0.47	< 0.48	< 0.49	< 0.51	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.50	< 0.49
Benzo(a)anthracene		0.06	4	NE	NE	0.3	< 0.05	< 0.05	**0.16**	< 0.05	< 0.05	< 0.05	**0.24**	< 0.05	**0.15**	< 0.05	**0.10**	**0.08**	**0.08**	< 0.05	**0.08**	< 0.05	< 0.05	**0.08**	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene		0.08	4	NE	NE	0.3	< 0.07	< 0.07	**0.17**	< 0.07	< 0.07	< 0.07	**0.20**	< 0.07	**0.09**	< 0.07	**0.07**	**1.1 J**	**0.10 J**	< 0.07	**0.16**	< 0.07	< 0.07	**0.21**	< 0.07	< 0.07	< 0.07	< 0.07
Benzo(k)fluoranthene		0.5	34	NE	NE	0.3	< 0.29	< 0.30	< 0.30	< 0.28	< 0.29	< 0.29	< 0.31	< 0.29	< 0.29	< 0.29	< 0.28	**0.42**	< 0.28	< 0.29	< 0.29	< 0.28	< 0.29	< 0.28	< 0.29	< 0.28	< 0.30	< 0.29
Benzo(g,h,i)perylene		0.48*	34	NE	NE	150*	< 0.47	< 0.48	< 0.48	< 0.45	< 0.46	< 0.47	< 0.48	< 0.46	< 0.46	< 0.46	< 0.45	< 0.45	< 0.45	< 0.46	< 0.47	< 0.45	< 0.46	< 0.45	< 0.47	< 0.45	< 0.48	< 0.47
Benzo(a)pyrene		0.2	4	NE	NE	0.3	< 0.20	< 0.20	**0.22**	< 0.19	< 0.19 J	< 0.20	**0.24**	< 0.19	< 0.19	< 0.19	< 0.19	**0.35**	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.20	< 0.19	< 0.20	< 0.19
Chrysene		4.8*	336	NE	NE	0.54*	< 0.49	< 0.50	< 0.51	< 0.47	< 0.48	< 0.49	< 0.51	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.50	< 0.49
Dibenz(a,h)anthracene		N/A	4	NE	NE	0.3*	< 0.10	< 0.10	< 0.10	< 0.09	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.09	**0.24**	< 0.09	< 0.10	< 0.10	< 0.09	< 0.10	< 0.09	< 0.10	< 0.09	< 0.10	< 0.10
Fluoranthene		280	4000	NE	NE	3700	< 0.49	< 0.50	< 0.51	< 0.47	< 0.48	< 0.49	< 0.51	< 0.48	**0.54**	< 0.48	< 0.47	< 0.47	< 0.47	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.50	< 0.49
Fluorene		280	4000	NE	NE	140000	< 0.49	< 0.50	< 0.51	< 0.47	< 0.48	< 0.49	< 0.51	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.50	< 0.49
Indeno(1,2,3-cd)pyrene		0.1*	4	NE	NE	0.54*	< 0.10	< 0.10	**0.12**	< 0.09	< 0.10	< 0.10	**0.11**	< 0.10	< 0.10	< 0.10	< 0.09	**0.14**	< 0.09	< 0.10	**0.10**	< 0.09	< 0.10	**0.12**	< 0.10	< 0.09	< 0.10	< 0.10
2-Methylnaphthalene		28*	1080	1000*	13100*	62*	< 0.49	< 0.50	< 0.51	< 0.47	< 0.48	< 0.49	< 0.51	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.50	< 0.49
Naphthalene		280	4000	NE	NE	210*	< 0.49	< 0.50	< 0.51	< 0.47	< 0.48	< 0.49	< 0.51	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.50	< 0.49
Phenanthrene		200	4000	NE	NE	14	< 0.06	< 0.06	**0.11**	< 0.06	< 0.06	< 0.06	< 0.06	**0.06**	**0.07**	**0.09**	**0.14**	**0.11**	**0.12**	< 0.06	< 0.06	< 0.06	< 0.06	**0.14**	< 0.06	< 0.06	< 0.06	< 0.06
Pyrene		200	4000	NE	NE	110000	< 0.49	< 0.50	< 0.51	< 0.47	< 0.48	< 0.49	< 0.51	< 0.48	< 0.48	< 0.48	< 0.47	< 0.47	< 0.47	< 0.48	< 0.49	< 0.47	< 0.48	< 0.47	< 0.49	< 0.47	< 0.50	< 0.49
Total Metals	mg/L																											
Antimony		0.006	0.108	NE	NE	86	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.006	< 0.006	< 0.005	< 0.005	< 0.005	< 0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.006
Arsenic		0.05	0.4	NE	NE	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	**0.009**	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Barium		1	18.8	NE	NE	2.2*	**0.031**	**0.065**	**0.038**	**0.059**	**0.060**	**0.069**	**0.047**	**0.058**	**0.056**	**0.046**	**0.043**	**0.043**	**0.043**	**0.056**	**0.092**	**0.049**	**0.057**	**0.043**	**0.128**	**0.107**	**0.116**	**0.154**
Beryllium		0.004	0.008	NE	NE	0.004	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium		0.005	0.136	NE	NE	0.006	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium		0.05	0.4	NE	NE	NE	**0.001**	**0.004**	< 0.001	**0.003**	**0.012**	**0.017**	< 0.001	**0.007**	**0.008**	**0.002**	**0.005**	**0.004**	**0.004**	**0.006**	**0.013**	**0.003**	**0.004**	**0.005**	**0.002**	**0.001**	< 0.001	< 0.001
Copper		1.3	10	NE	NE	0.048	< 0.005	< 0.005	< 0.005	< 0.005	**0.010**	**0.008**	< 0.005	**0.006**	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	**0.005**	**0.011**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Lead		0.015	1.5	NE	NE	0.013	**0.001**	< 0.001	< 0.001	< 0.001	**0.004**	< 0.002	< 0.001	**0.002 J**	**0.006**	< 0.001	**0.003**	< 0.001	**0.002 J**	**0.003**	< 0.002	**0.002**	< 0.001	**0.002**	< 0.001	< 0.001	< 0.001	< 0.001
Mercury		0.002	0.08	NE	NE	0.0004	< 0.0002	< 0.0002	< 0.0002	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Nickel		0.1	5.6	NE	NE	0.88	**0.003**	**0.007**	< 0.001	**0.012**	**0.008**	**0.010**	**0.002**	**0.004**	**0.008**	**0.002**	**0.005 J**	**0.002**	**0.002**	**0.015**	**0.005**	**0.001**	**0.001**	**0.002 J**	**0.002**	**0.001**	< 0.001	**0.001**
Selenium		0.05	1.36	NE	NE	0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Silver		0.036	1.36	NE	NE	0.012	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium		0.005	0.0216	NE	NE	0.063	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vanadium		0.05	1.88	NE	NE	0.27*	< 0.002	**0.002**	< 0.002	< 0.002	**0.013**	**0.016**	< 0.002	**0.006**	**0.012**	**0.004**	**0.007**	**0.006**	**0.007**	**0.004**	**0.010**	**0.002**	**0.002**	**0.008**	< 0.002	< 0.002	< 0.002	< 0.002
Zinc		5	80	NE	NE	0.123	< 0.004	< 0.005	< 0.004	< 0.004	**0.024**	**0.030 J**	< 0.004	**0.012**	**0.018**	< 0.006	**0.011**	**0.014**	**0.015**	**0.007**	**0.015 J**	**0.006**	**0.006**	**0.012**	**0.006**	< 0.004	< 0.004	< 0.004
Cyanides	mg/L																											
Total Cyanide		0.2	5.6	NE	NE	0.052	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
ETPH																												
C9-C36	mg/L	0.25	2	-	-	0.25	< 0.066	< 0.069	< 0.071	< 0.067	< 0.067	< 0.067	< 0.066	< 0.067	< 0.066	< 0.070	< 0.066	< 0.067	< 0.067	< 0.067 J	< 0.067	< 0.067	< 0.068	< 0.066	< 0.070 J	< 0.25	< 0.066	< 0.067

Notes:
mg/L = milligrams/liter
ug/L = micrograms per liter or parts per billion (ppb)
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

Amended Remediation Standard Regulations (RSRs) of the Regulations of Connecticut State Agencies (RCSA) 22a-133k-1 through 22a- effective date of the amended RSRs is June 27, 2013 used in combination with 2018 CAPS where the RSR criteria are not available.

Alterntative GWPC are calculated as perscribed in Section 22a-133k-3(d)(3) of the RSRs.

* indicates value is obtained from 2018 Technical Support Document (TSD) for Common Additional Polluting Substances (CAPS)

GWPC = Ground Water Protection Criteria means the concentrations identified in in Appendix A to RCSA sections 22a-133k-1 through 2
I/C GWVC = Industrial/Commercial groundwater volatilization criteria means the concentrations identified in in Appendix A to RCSA secti
1 through 22a-133k-3.
Res GWVC = Residential groundwater volatilization criteria means the concentrations identified in in Appendix A to RCSA sections 22a-1
through 22a-133k-3.
SWPC = Surface Water Protection Criteria criteria means the concentrations identified in in Appendix A to RCSA sections 22a-133k-1 thr
133k-3.

CAS No. = Chemical Abstracts Service Number
NE = Not Established

Bolding indicates a detected result concentration
Shading and bolding indicates that the detected concentration is above the CT RSR it was compared to
Orange highlighting indicates the detected concentration exceeds the Alternate GWPC.

TABLE 2
Summary of Alternative Groundwater Protection Criteria (GWPC) Calculations
Rockville Former Manufactured Gas Plant Site
13 Maple Street, Vernon (Rockville), Connecticut

Remediation Standard Regulations
Section 22a-133k-3(d)(3)

For semi-volatile organic substances, inorganics, & pesticides:
Alternative GWPC = WSF X RSC X DEC X UCF

WSF (water to soil concentration factor) = 0.02 mg/l / mg/kg
RSC (relative source contribution) = 0.2
DEC (Residential Direct Exposure Criteria) = varies by compound in mg/kg
UCF (unit conversion factor) = 1,000 ug/mg

Compound	RDEC	Alternative GWPC		100x GWPC	
	(mg/kg)	(ug/l)	(mg/l)	(ug/l)	(mg/l)
Acenaphthene	1000	4,000	4	42,000	42
Acenaphthylene	1000	4,000	4	42,000	42
Anthracene	1000	4,000	4	200,000	200
Benzo(a)anthracene	1	4	0.004	6	0.006
Benzo(b)fluoranthene	1	4	0.004	8	0.008
Benzo(k)fluoranthene	8.4	34	0.0336	50	0.050
Benzo(g,h,i)perylene	8.4	34	0.0336	48	0.048
Benzo(a)pyrene	1	4	0.004	20	0.020
Chrysene	84	336	0.336	480	0.480
Dibenz(a,h)anthracene	1	4	0.004	10	0.010
Fluoranthene	1000	4,000	4	28,000	28
Fluorene	1000	4,000	4	28,000	28
Indeno(1,2,3-cd)pyrene	1	4	0.004	10	0.010
2-Methylnaphthalene	270	1,080	1.08	2,800	2.8
Naphthalene	1000	4,000	4	28,000	28
Phenanthrene	1000	4,000	4	20,000	20
Pyrene	1000	4,000	4	20,000	20
Antimony	27	108	0.108	600	0.6
Arsenic	10	40	0.04	5,000	5
Barium	4700	18,800	18.8	100,000	100
Beryllium	2	8	0.008	400	0.4
Cadmium	34	136	0.136	500	0.5
Chromium	100	400	0.4	5,000	5
Copper	2500	10,000	10	130,000	130
Lead	400	1,600	1.6	1,500	1.5
Mercury	20	80	0.08	200	0.2
Nickel	1400	5,600	5.6	10,000	10
Selenium	340	1,360	1.36	5,000	5
Silver	340	1,360	1.36	3,600	3.6
Thallium	5.4	22	0.0216	500	0.5
Vanadium	470	1,880	1.88	5,000	5
Zinc	20000	80,000	80	500,000	500
Total Cyanide	1400	5,600	5.6	20,000	20
ETPH	500	2,000	2	25,000	25

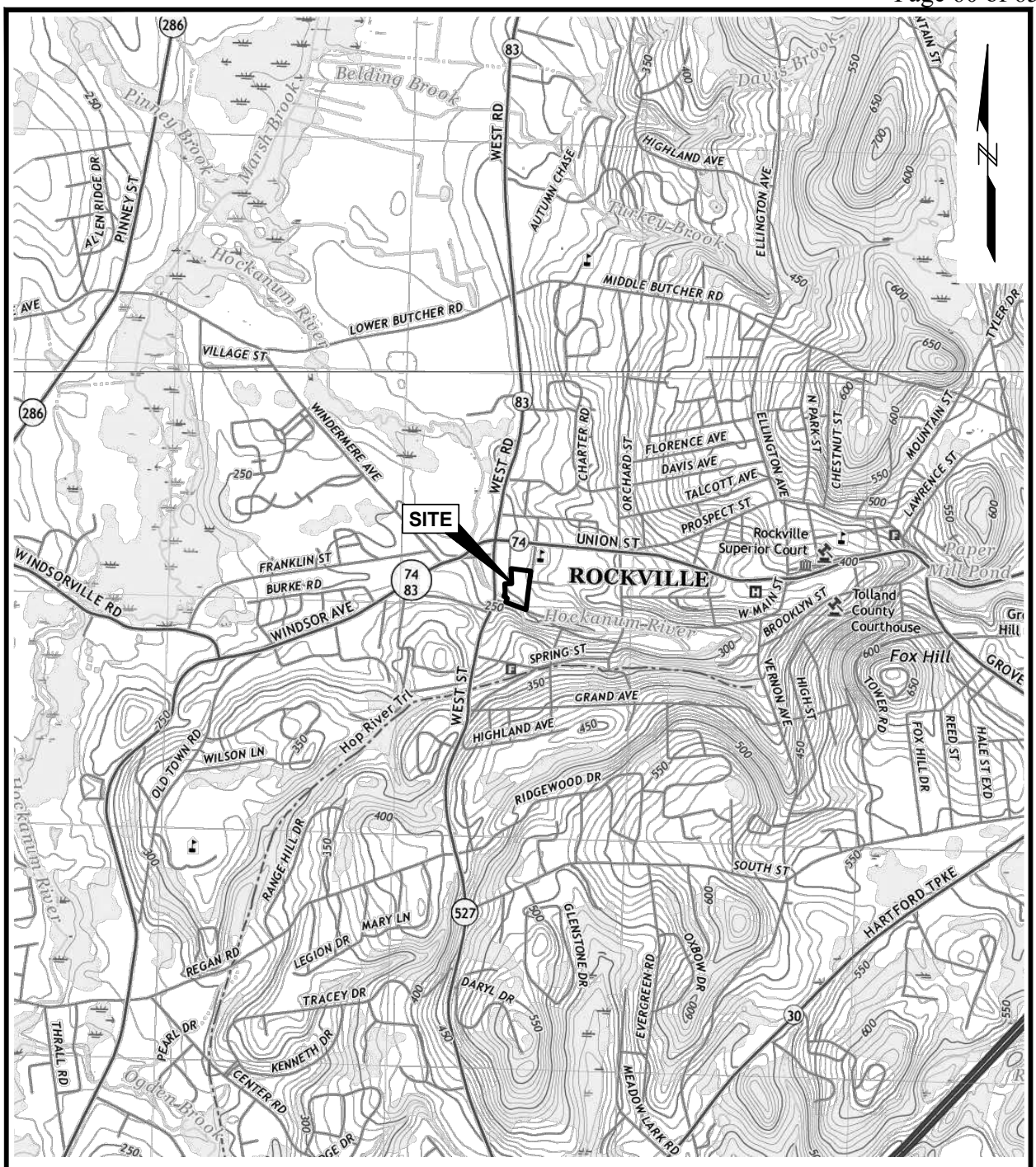
Notes:
RDEC = Residential Direct Exposure Criteria
mg/kg = milligrams per kilogram
ug/l = micrograms per liter
mg/l = milligrams per liter

For volatile organic substances:
Alternative GWPC = TAC X HV X ER X MC / f X WFR

TAC (Target Indoor Air Concentration) = varies by compound in ug/m^3
HV (house volume) = 1,000 m^3
ER (air exchange rate per day) = 134 times per day
MC (mixing coefficient) = 0.33
f (fraction of substance concentration volatilized) = 0.5 unitless
WFR (water flow rate) = 3,183 L/day

Compound	TAC	Alternative GWPC	100x GWPC
	(ug/m^3)	(ug/l)	(ug/l)
Benzene	3.3	92	100
Toluene	210	5,835	100,000
Ethylbenzene	53	1,473	70,000
o-Xylene	220	6,113	53,000
m/p-Xylene	220	6,113	53,000
Total Xylene	220	6,113	53,000
n-Butylbenzene	73	2,028	35,000
p-Cymene (4-Isopropyltoluene)	67	1,862	2,500
Isopropylbenzene	120	3,334	2,500
n-Propylbenzene	48	1,334	5,000
Tetrachloroethene (PCE)	5	139	500
1,2,4-Trimethylbenzene	9.3	258	14,000
1,3,5-Trimethylbenzene	9.3	258	14,000

Notes:
TAC = Target Indoor Air Concentration from Proposed Revisions to Connecticut's Remediation Standard Regulations Volatilization Criteria, March 2003 with the exception of n-proplbenzene which was from 2018 Recommended Numerical criteria for Common APS and Certain Alternative Criteria.
ug/m^3 = micrograms per cubic meter
ug/l = micrograms per liter



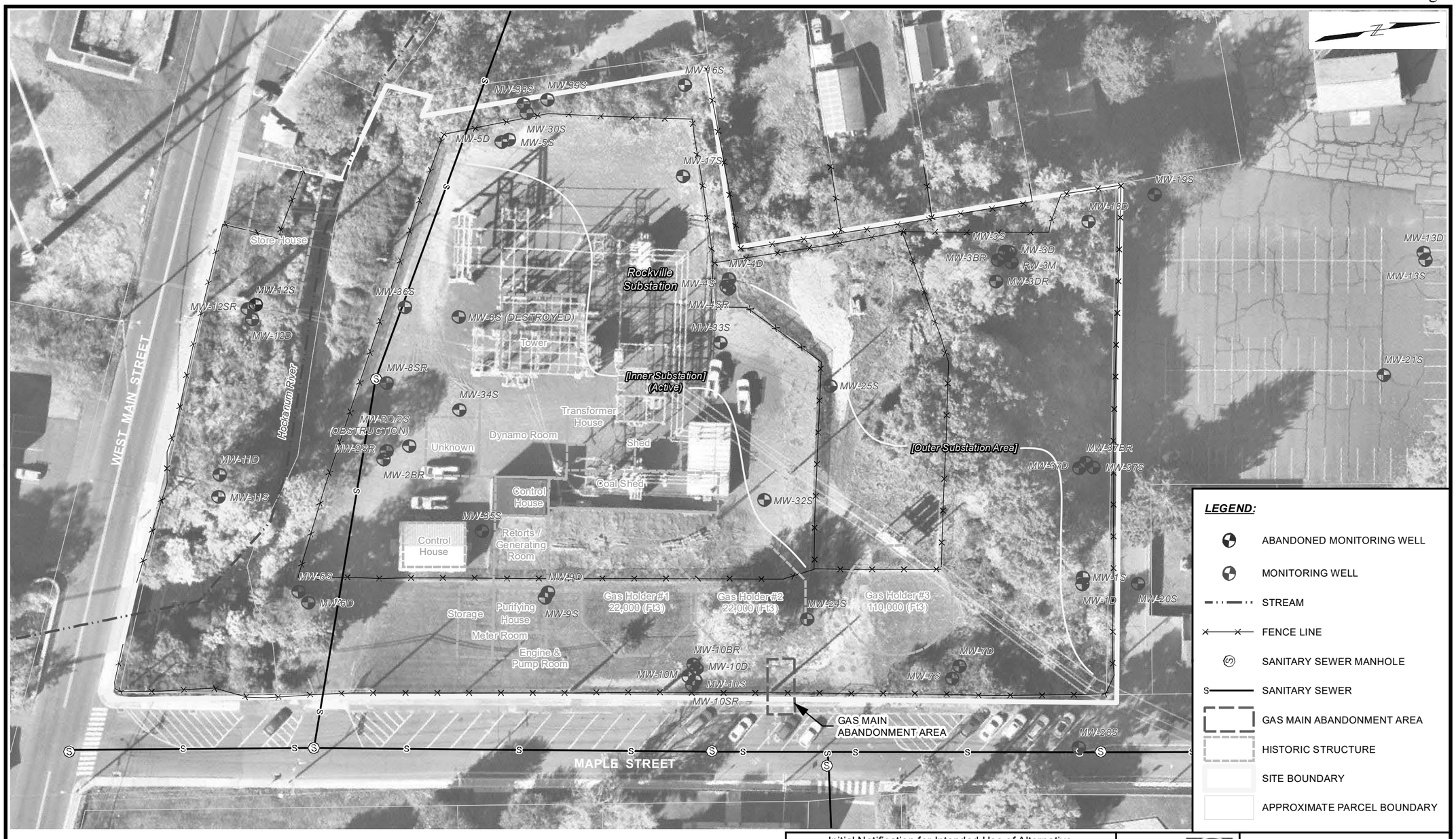
SOURCE:
MAP CREATED ROCKVILLE, CT QUADRANGLE, 7.5-MINUTE USGS TOPOGRAPHIC MAP, 2021 AND ELLINGTON, CT QUADRANGLE, 7.5-MINUTE USGS TOPOGRAPHIC MAP, 2021.

0 2000 4000

SCALE: 1" = 2000'

Initial Notification for Intended Use of Alternative Groundwater Protection Criteria Rockville Former MGP Site Rockville, Vernon, Connecticut	GEI Consultants	SITE LOCATION MAP
Eversource Energy Berlin, Connecticut	Project 2200138	December 2024 Fig. 1

---- B:\Working\EVERSOURCE\2200138 Rockville MGP Supp. Ph II_III ESA\00_CAD\Figures\GWPC\1_2200138_GWPC_SLM.dwg - 12/16/2024



SOURCES:
1. DATA PROVIDED BY TIGHE & BOND.
2. NEARMAP IMAGERY DATED 10/12/2024.

0 50 100
SCALE, FEET

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Eversource Energy
Berlin, Connecticut

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SITE LAYOUT AND HISTORICAL STRUCTURES

Project 2200138 | December 2024 | Fig. 2

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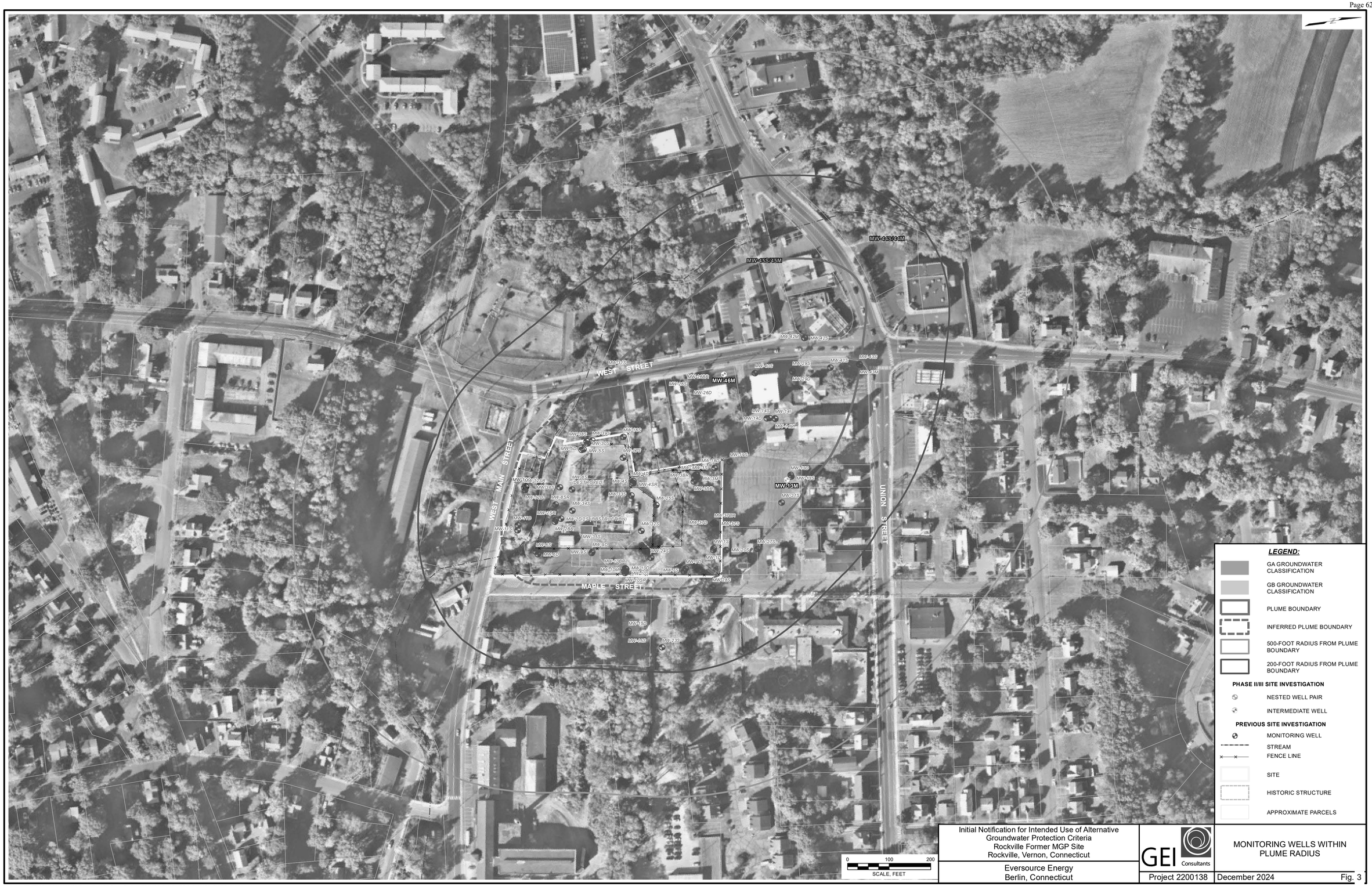

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MONITORING WELLS WITHIN PLUME RADIUS

December 2024 Fig. 3

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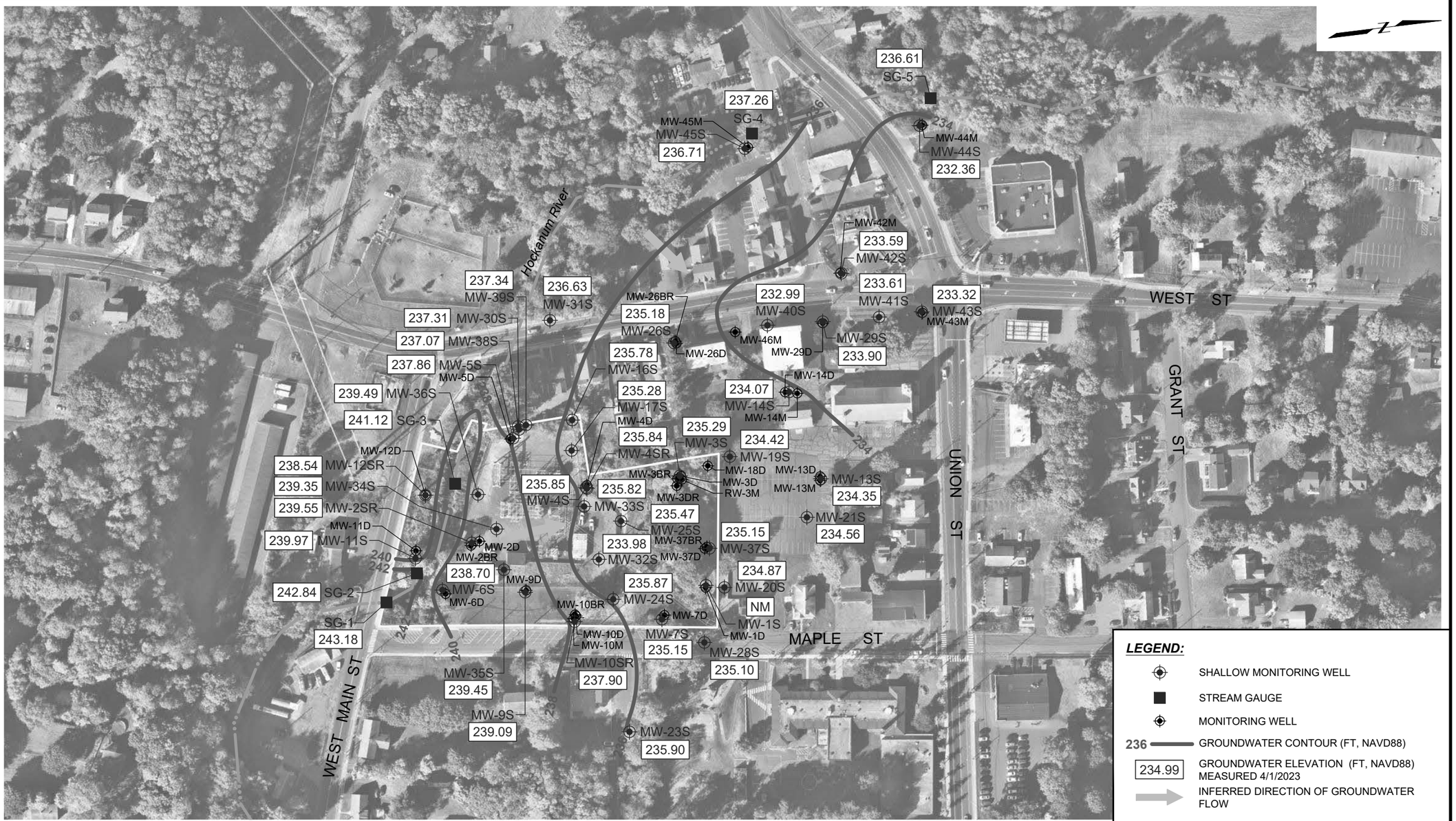

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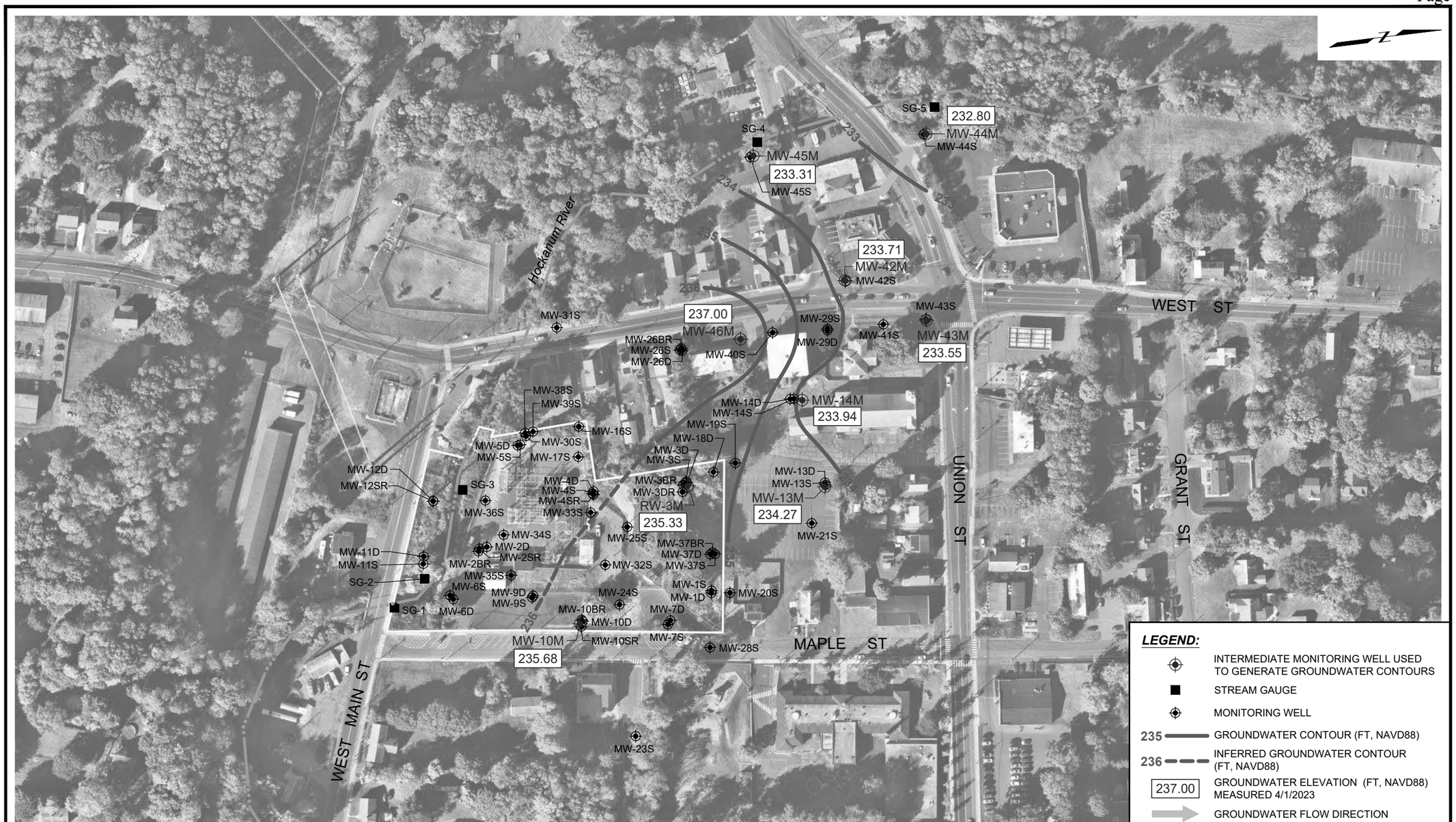
SHALLOW GROUNDWATER CONTOUR PLAN

Project 2200138 | December 2024 | Fig. 4A

HERIOT, PAULA B:\Working\EVERSOURCE\2200138 Rockville MGP Supp. Ph II_III ESA\00_CAD\Figures\GWPC\4A_2200138_GWPC_GWS.dwg - 12/16/2024



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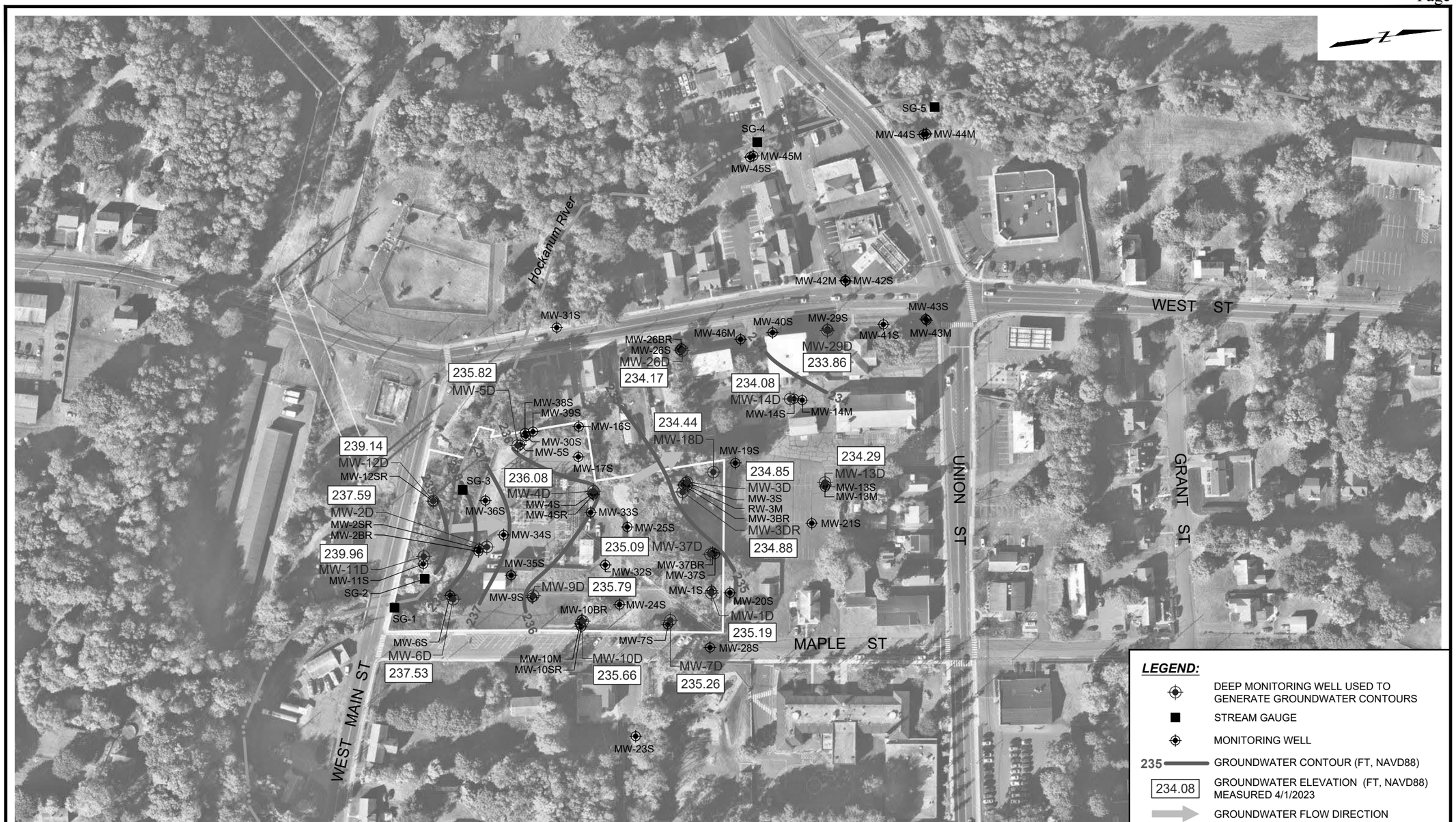
INTERMEDIATE GROUNDWATER CONTOUR PLAN

Project 2200138 | December 2024 | Fig. 4B

HERIOT, PAULA B:\Working\EVERSOURCE\2200138 Rockville MGP Supp. Ph II_III ESA\00_CAD\Figures\GWPC\4B_2200138_GWPC_GWI.dwg - 12/16/2024



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DEEP GROUNDWATER CONTOUR PLAN

Project 2200138 | December 2024 | Fig. 4C

HERIOT, PAULA B:\Working\EVERSOURCE\2200138 Rockville MGP Supp. Ph II_III ESA\00_CAD\Figures\GWPC\4C_2200138_GWPC_GWD.dwg - 12/16/2024