From:	Raby, Tami
To:	Spellman, John (DEC)
Cc:	BLAZICEK, TRACY; TERRELL, LEVIA; Saunders, Melissa; Howard, Walter; Floess, Carsten
Subject:	Groundwater Monitoring Well Network Review, Mechanicville Central Avenue Former Manufactured Gas Plant Site (NYSDEC Site: 546033)
Date:	Thursday, May 11, 2023 3:47:54 PM
Attachments:	image003.png report.546033.NYSEG_Mechancville_MW_Network_Review_11MAY2023.pdf

John,

Good afternoon. On behalf of New York State Electric & Gas Corporation (NYSEG), AECOM USA, Inc. (AECOM) is pleased to present the results of a groundwater monitoring well network review which AECOM was engaged by NYSEG to complete at the Mechanicville Central Avenue Former Manufactured Gas Plant site, located in Mechanicville, New York (NYSDEC Site: 546033).

Please confirm receipt.

Please feel free to contact me with any questions.

Thank you,
Tami

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she, her, hers

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May 11, 2023

Mr. John Spellman
New York State Department of
Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany
New York 12233-7014

Subject: Groundwater Monitoring Well Network Review, Mechanicville Central Avenue Former Manufactured Gas Plant Site (NYSDEC Site: 546033)

Dear Mr. Spellman,

On behalf of New York State Electric and Gas Corporation (NYSEG), AECOM USA, Inc. (AECOM) is pleased to present the results of a groundwater monitoring well network review which AECOM was engaged by NYSEG to complete at the Mechanicville Central Avenue Former Manufactured Gas Plant (MGP) site, located in Mechanicville, New York (the Site). A Site location plan is provided in **Figure 1** (**Attachment A**).

1. Background

The most recent Periodic Review Report (PRR; AECOM, 2021) recommended that a groundwater monitoring well network review be undertaken to assess the condition of the groundwater monitoring well network to identify:

- Wells that require rehabilitation to allow ongoing non-aqueous phase liquid (NAPL) or groundwater quality monitoring.
- Wells that may be recommended for decommissioning and removal from the Site Management Plan (SMP; AECOM, 2011) monitoring program.

2. Scope of Work

Table 1 below provides an overview of the groundwater monitoring well network review field program:

Date	Work Completed
July 26 – 27, 2021	Inspection and gauging (where possible) at a total of 40 groundwater monitoring well locations including: ➢ 10 wells in the shallow portion of the aquifer (overburden/unconsolidated formation wells: TW-2S, MW-1, MW-2, MW-10, MW-12, MW-12S, MW-17, MW-18, MW-25S and MW-30S) ➢ 18 wells in the intermediate portion of the aquifer (shallow bedrock wells: TW-1, TW-2I, TW-3, TW-4, MW-1I, MW-2I, MW-10I, MW-13, MW-15IR, MW-17I, MW-22IR, MW-25I, MW-29IR, MW-35I, MW-36I, MW-38I, MW-45I and MW-46I) ➢ 12 wells in the deep portion of the aquifer (deep bedrock wells: MW-1D, MW-10D, MW-17D, MW-20D, MW-30D, MW-32D, MW-33D, MW-36D, MW-38D, MW-39D, MW-40D and MW-42D)

Date	Work Completed
	➢ Stream observation.
August 13, 2021	Attend Site to locate well MW-46I and attempt to locate well TW-2I.
September 29, 2021	Attend Site to locate well MW-1 and MW-1I.
October 1, 2021	Attend Site to attempt to locate well TW-2I.
September 27, 2022	Inspection and gauging (where possible) of the same 40 groundwater monitoring wells inspected during the July 2021 inspection event, as summarized above.
September 28, 2022	Pump NAPL and groundwater from SMP monitoring wells TW-1 (10.3 gallons) and MW-45I (18.4 gallons) and non-SMP monitoring well MW-1I (35.8 gallons). The NAPL/water mixture was stored on-Site in two 55-gallon drums and subsequently properly disposed of by NYSEG.
April 4, 2023	Attend Site to evaluate wells MW-13, MW-25I and TW-2S, and attempt to locate wells TW-2I and MW-46I.

The outcomes of the above listed tasks are provided in the following sections.

3. Monitoring Well Inspection and NAPL Gauging Results

A Site plan showing monitoring well locations is provided in **Figure 2** (**Attachment A)**. A table with well details and observations from the latest well inspection and gauging event, conducted in September 2022, is provided in **Attachment B** and photologs from both the July 2021 and September 2022 well inspections are provided in **Attachment C**.

The following is noted with regard to monitoring well access at the time of the well network inspection conducted on September 27, 2022:

- Well TW-2I is located in the north-eastern portion of the Site adjacent to the Anthony Kill. This well could not be located on September 27, 2022. AECOM had previously attempted to locate this well on August 13, 2021 but was unsuccessful. The well is presumed to be buried under a layer of rip rap.
- AECOM could not locate well MW-46I during the September 27, 2022 inspection. During the previous inspection on August 13, 2021, AECOM located an open 6” steel pipe, presumed to be the top of the well casing (without curb box), buried under 15 inches of sand and gravel fill, and placed a temporary curb box over it for protection. There was a blockage in the pipe/casing at six inches below the top.
- The area in the vicinity of wells MW-17I and MW-17D has been repaved. Well MW-17D was located but well MW-17I is no longer present and the curb box may have been paved over.
- MW-20D is an upgradient well located off-Site on the property to the north of the Anthony Kill. The area in the vicinity of this well is overgrown with vegetation/brush making access for sampling difficult.
- MW-35I is a SMP NAPL monitoring well located on the same property as MW-20D. A trailer-mounted boat is parked over the MW-35I flush mount well head. While the well can be accessed for gauging it is inaccessible for servicing (if needed).

AECOM gauged accessible monitoring wells on September 27, 2022. The following is noted with regard to NAPL thickness:

- NAPL was recorded at:

  - Wells MW-1I, MW-45I and TW-1 with thickness of 102 inches, 39.6 inches, and 15.6 inches, respectively.
  - Well MW-10D with a thickness of two inches.

- A mixture of NAPL and groundwater was pumped from wells MW-1I (35.8 gallons), MW-45I (18.4 gallons) and TW-1 (10.3 gallons) on September 28, 2022. The NAPL/water mixture was stored on-Site in two 55-gallon drums.
- Measurable NAPL thickness was not observed in remaining monitoring wells gauged.

The following wells were noted to be damaged or potentially compromised:

Well ID	Observation
TW-2S	The 6” steel casing is bent and can’t take a J-plug (refer to July 2021 Photo 1, **Attachment C**). The well cap is labelled “TW-2I” which based on the depth gauged and its location is likely incorrect (should be TW-2S).
TW-2I	Unable to be located. Suspected to be buried under rip rap (refer July 2021 Photo 41, **Attachment C**).
MW-10	The PVC casing is damaged at approximately 6.9 feet below surface. Depth to water and bottom of well cannot be obtained (refer July 2021 Photo 7, **Attachment C**).
MW-17I	Unable to be located. Suspected to be paved over (refer September 2022 Photo 8, **Attachment C**).
MW-17D	The original steel well casing and open bedrock section was apparently “sleeved” in the past with a 2” PVC well. The PVC casing is loose (unsealed) and extends above the 6” steel casing so the annulus cannot be sealed. Additionally, the curb box cover does not sit flush and can’t be bolted (refer September 2022 Photos 7 and 8, **Attachment C**).
MW-18	Curb box lid (cover and ring) has separated from box skirt. It is possible to remove entire casing cover (refer July 2021 Photo 18, **Attachment C**).
MW-38I	Damaged curb box without cover (refer July 2021 Photo 34, **Attachment C**).
MW-40D	The curb box and PVC casing are damaged, and the concrete sidewalk section is fractured because of the curb box located near the sidewalk edge (refer September 2022, **Attachment C**).
MW-42D	Missing entire curb box (refer September 2022 Photo 17, **Attachment C**). Monitoring well remains an uncovered hole covered by rocks.
MW-45I	Damaged curb box (refer September 2022 Photo18, **Attachment C**).
MW-46I	Top of well casing is buried under approximately 15 inches of gravel and was noted to be blocked at 6 inches below the top of the well casing (refer August 2021 Photo 48, **Attachment C**). Top of well casing is covered with a NYSEG gas valve box.

Additionally, SMP monitoring wells MW-35I and MW-38I had measured total depths reduced by four feet and 20 feet, respectively, compared to the original installation depths. Non-SMP monitoring wells MW-1, MW-10, MW-13, MW-25S and MW-25I also have accumulated appreciable thicknesses of sediment. Several wells were also noted to be missing J-plugs.

Refer to **Attachment B** for additional details.

4. Recommendations

Attachment B presents recommendations for each well located on and off-Site as part of the field investigation noting that recommendations have been provided with reference to:

- Wells that require rehabilitation to allow ongoing NAPL or groundwater quality monitoring.
- Wells recommended for decommissioning and removal from the Site Management Plan (SMP; AECOM, 2011) monitoring program.

The following recommendations are provided for wells comprising the SMP monitoring program:

- Rehabilitate damaged or potentially compromised wells including:
  - TW-2S: Sleeve with 2" PVC well with screen and sand-pack spanning open hole interval and seal/grout annulus to surface.
  - MW-17I: Remove over-pavement, replace curb box flush with asphalt pavement surface and redevelop, if needed.
  - MW-17D: Replace inner 2" PVC well and complete installation with sand-pack and grout seal to surface.
  - MW-42D and MW-45I: Install new curb box and redevelop.
  - MW-35I: Attempt to remove sediment (~4 ft.) from well (rotary drill rig may be required) and redevelop. Will require property owner to move the trailer-mounted boat.
  - MW-38I: Attempt to remove sediment (20 ft.) from well (rotary drill rig likely required), redevelop, and install new curb box. Alternative is to drill out, decommission, and install replacement well.
  - MW-46I: Drill out blockage from casing/borehole to original well depth (75 ft. bgs) and redevelop. Extend casing to surface and install new curb box. If attempts to rehabilitate fail, decommission well (grout to surface) and replace monitoring location with well TW-4.
- Mobilize a mini-excavator to Site to move rip rap that is suspected to cover well TW-2I. Once the well is exposed and gauging can be undertaken, recommendation will be made to rehabilitate the well (if required).
- Clear brush annually in proximity to well MW-20D to allow unrestricted access. If continued maintenance of this off-Site well is problematic, consider replacing with on-Site upgradient well MW-32D
- For well MW-40D, due to its location near the curb edge of the NYS Route 4 sidewalk (which is fractured), repair of the damaged curb box would require replacement of the entire sidewalk section. This is not advised as a new sidewalk section could refracture. Since downgradient well MW-42D (approx. same depth) has yielded NAPL in the past and is a SMP NAPL monitoring well, continued sampling of MW-40D is not considered to be necessary. It is recommended that MW-40D be decommissioned by grouting to surface.

The following recommendations are provided for non-SMP monitoring wells:

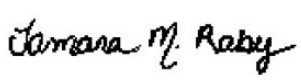
- For well MW-1I, based on the thickness of NAPL measured (102 inches) and volume of NAPL/water mixture removed (35.8 gallons) in September 2022:
  - The SMP should be updated to include MW-1I in the SMP NAPL monitoring well network.
  - NAPL gauging and removal (if necessary) should be conducted in this well on a quarterly basis for one year, and the results used to recommend an appropriate frequency for future NAPL gauging and recovery events for the well.
- Seven bedrock wells that are in good condition and should be retained and maintained for annual water level and periodic NAPL thickness gauging include: TW-4, MW-10I, MW-15IR, MW-22IR, MW-29IR, MW-30D and MW-32D. Wells TW-4 and MW-32D may be needed in the future to replace SMP groundwater monitoring wells MW-46I and MW-20D, respectively.

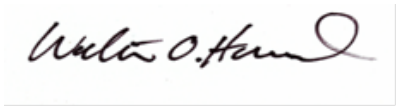
- Total depth measurements in wells MW-13 and MW-25I indicated significant accumulation in both wells. Although these wells are not used for SMP monitoring, as shallow bedrock wells, they would be useful for groundwater level and periodic NAPL gauging and therefore, attempts should be made to remove the sediment from these wells and maintain them.
- Shallow bedrock well MW-18 has a damaged road box, has ~4 ft. of sediment accumulation and is not used for monitoring. This well should be decommissioned.
- Shallow overburden monitoring wells MW-1, MW-10 and MW-30S are located around the perimeter of an area of remaining potentially impacted soil, according to the SMP. Attempts should be made to retain these wells in the event they are needed for future groundwater monitoring in this area. Well MW-1 has ~4 ft. of sediment accumulation that needs to be removed, well MW-10 has an obstruction at 6.5 ft. below surface that should be identified and removed, and well MW-30S is in acceptable condition.
- Three shallow overburden wells that are in a variety of condition but are not used or needed for Site monitoring should be decommissioned. These wells include MW-12, MW-12S, and MW-25S.
- Wells MW-34D and MW-44I have been decommissioned and the SMP monitoring program currently references these wells. It is recommended that the SMP be updated to remove reference to these monitoring locations.

After recommendations in this letter are accepted and subsequently implemented, the SMP will be updated to reflect changes accordingly.

If you have any questions regarding this correspondence, please feel free to contact Tamara Raby on (716) 870-3446 or at tamara.raby@aecom.com.

Yours sincerely,





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Attachments:
Attachment A - Figures
Attachment B - Groundwater Monitoring Well Network Review
Attachment C – 2021 and 2022 Photolog

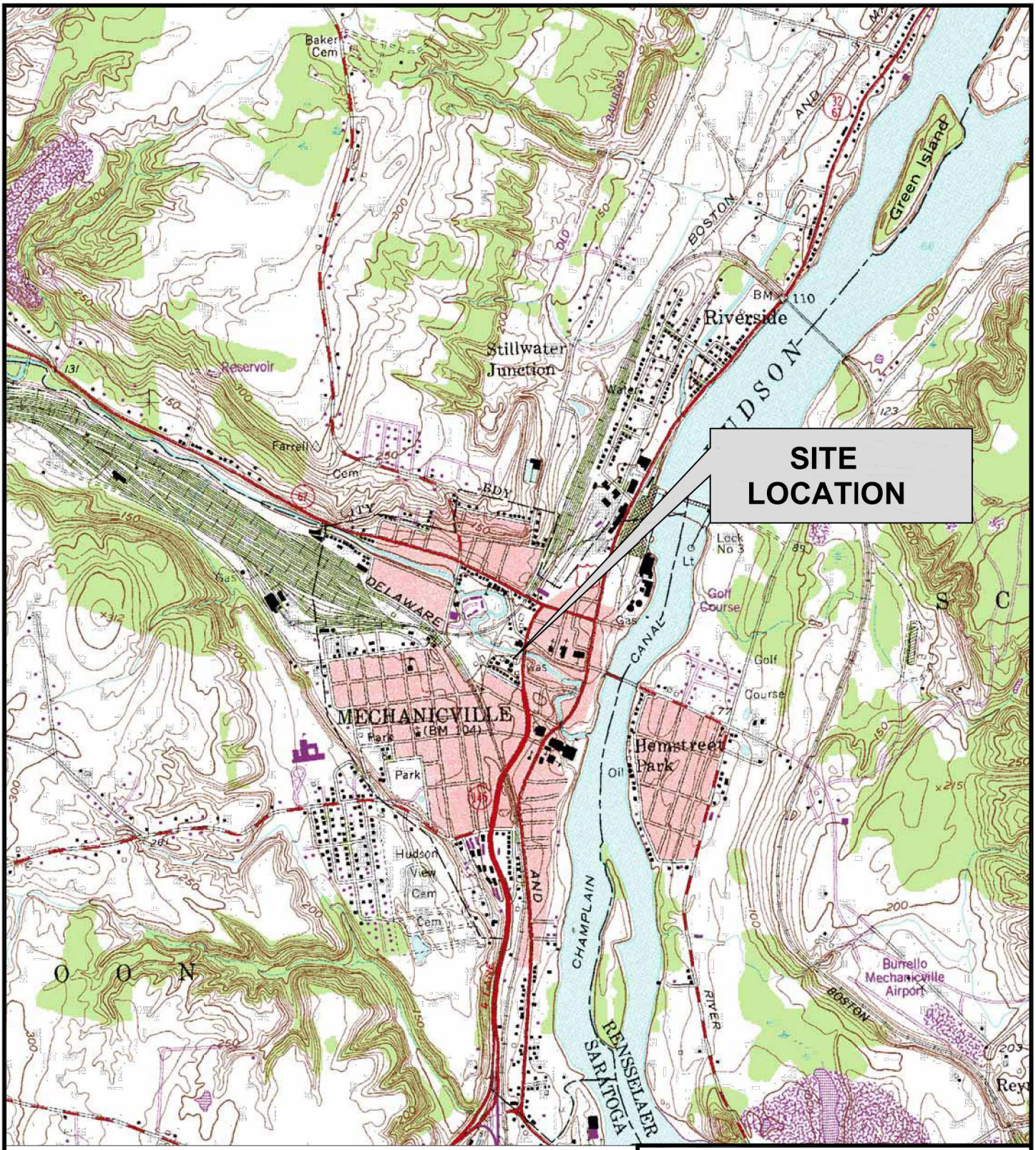
Cc:
Project File (60675881)

References

AECOM. 2011. *Site Management Plan, Mechanicville Central Avenue, Former MGP Site, Mechanicville, New York, NYSDEC Site #5-46-003*.

AECOM. 2021. *Periodic Review Report: March 2016 – March 2021, Mechanicville Central Avenue Former MGP Site, Mechanicville, New York, NYSDEC Site: 546003*.

Attachment A Figures



SOURCE: NYSDOT MECHANICVILLE 7.5' QUADRANGLE
SCALE: 1" = 2000 FT.

AECOM

SITE LOCATION MAP

NEW YORK STATE ELECTRIC AND GAS
MECHANICVILLE, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
	---	60675881	05/2023	1

Plotted By: meisterk
Layout-Sheet Name: FIG-1
Plot File Date Created: Dec/02/2010 11:12 AM

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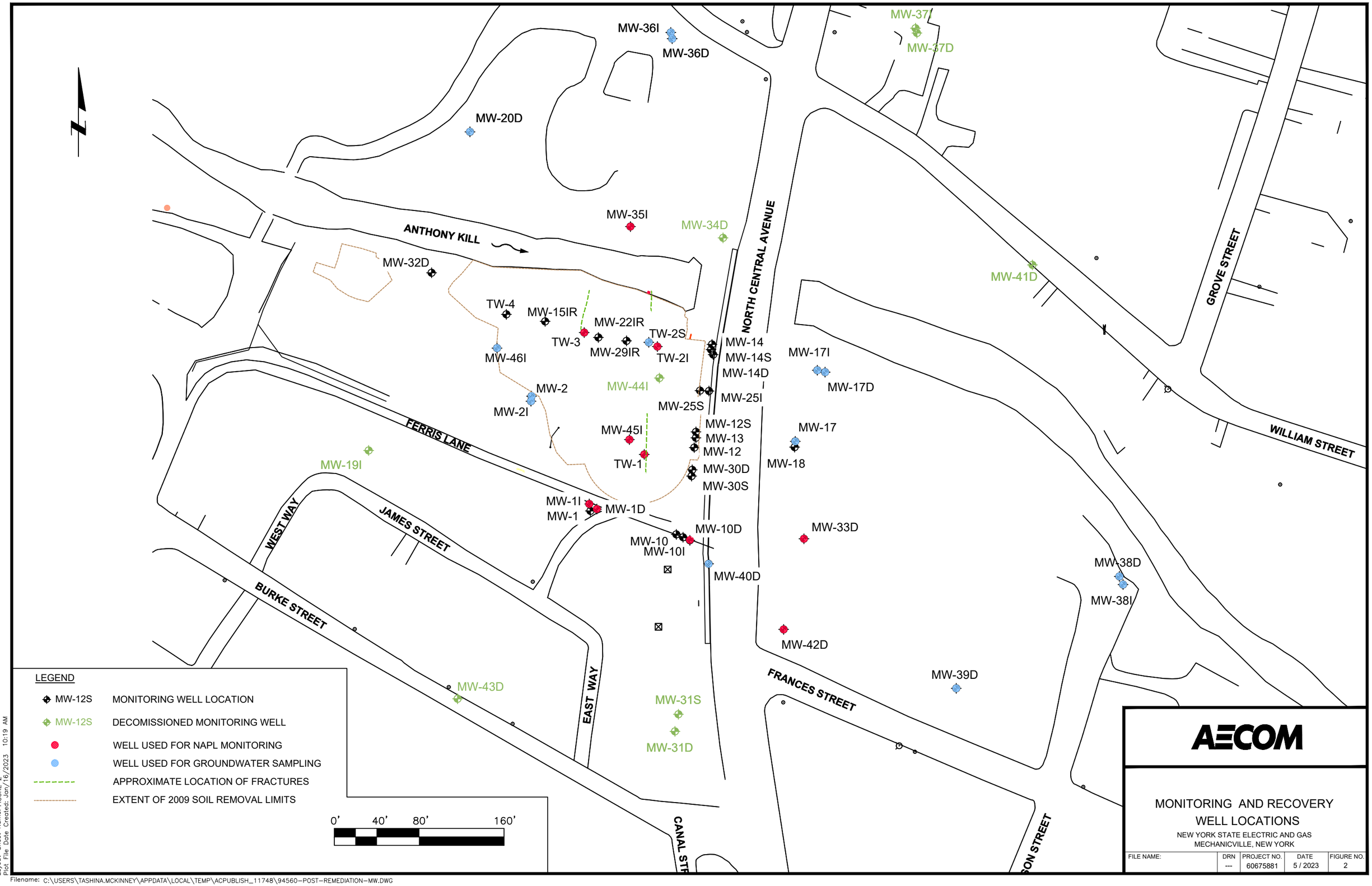


AECOM

MONITORING AND RECOVERY WELL LOCATIONS

NEW YORK STATE ELECTRIC AND GAS
MECHANICVILLE, NEW YORK

FILE NAME:	DRN	PROJECT NO.	DATE	FIGURE NO.
	---	60675881	5 / 2023	2

Plotted By: Tashina.McKinney
Layout: Sheet Name: FIGURE_2
Plot File Date Created: Jan/16/2023 10:19 AM

Filename: C:\USERS\TASHINA.MCKINNEY\APPDATA\LOCAL\TEMP\ACPUBLISH_11748\94560-POST-REMEDIATION-MW.DWG

Attachment B Groundwater Monitoring Well Network Review

Attachment B: Groundwater Monitoring Well Network Review
NYSEG Mechanicville Former MGP Site
Mechanicville, New York

	Monitoring Well ID	Date Gauged	Initial Well Installation Depth (ft bgs)	Total Depth (ft bTOC)	Screen Interval/Open Hole (ft bgs)	NAPL Observed (Y/N)[2]	NAPL Thickness (inches)[2]	NAPL Removed (Y/N)/Volume (Gals)[2]	Well Status	Recommendation
SMP Locations - NAPL Monitoring	**Retain Well - Little or No Rehabilitation Required**									
	TW-1	9/27/2022	75.00	73.80	24 - 75^	Y	15.6"	Y/10.3	Well in good condition. Requires minor curb box maintenance (bolts and J-plug).	Maintain well for SMP NAPL monitoring. Rehabilitate, as needed.
	TW-3	9/27/2022	75.00	--	15 - 75^	N	0"	N	Well in good condition. Requires minor curb box maintenance (bolts).	Maintain well for SMP NAPL monitoring. Rehabilitate, as needed.
	MW-1D	9/27/2022	155.20	158.74	121 - 155.2^	N	0"	N	Well in good condition. Requires minor curb box maintenance (bolts and J-plug).	Maintain well for SMP NAPL monitoring. Rehabilitate, as needed.
	MW-10D	9/27/2022	114.00	113.31	82 - 114^	Y	2"	N	Well in good condition. Requires minor curb box maintenance (bolts and J-plug).	Maintain well for SMP NAPL monitoring. Rehabilitate, as needed.
	MW-33D	9/27/2022	140.50	147.47	119.7 - 140.5^	N	0"	N	Well in good condition.	Maintain well for SMP NAPL monitoring.
	Retain Well - Moderate to Extensive Rehabilitation Required									
	TW-2I	9/27/2022	75.00	--	30 - 75^	--	--	N	Unable to locate well. Suspected to be buried under rip rap.	Mobilize mini-excavator and remove surficial rip-rap and attempt to locate well. If located, inspect and gauge the well for TD and NAPL. Use results to determine if well is to be retained or decommissioned.
	MW-35I	9/27/2022	38.00	34.04	12.5 - 38^	Y	0"	N	Well has ~4 ft. of sediment which should be removed to allow for representative NAPL gauging. Redevelopment to remove sediment will require an old boat to be moved.	Move boat if possible and redevelop well to remove sediment. Maintain well for SMP NAPL monitoring.
	MW-42D	6/27/2022	175.00	175.45	140 - 175^	N	0"	N	Curb box no longer present on well head.	Install new protective casing/road box and J-plug. Extend well casing to grade if needed. Maintain well for SMP NAPL monitoring.
	MW-45I	9/27/2022	75.00	73.50	23.5 - 75^	Y	39.6"	Y/18.4	Curb box is in poor condition and needs replacement.	Replace road box. Maintain well for SMP NAPL monitoring.
	Well Previously Decommissioned (Remove from SMP)									
	MW-34D	9/27/2022	120.5	--	100 - 120.5^	--	--	NA	Previously decommissioned.	Remove from SMP.
	MW-44I	9/27/2022	75.00	--	19 - 75^	--	--	NA	Previously decommissioned.	NYSDEC has approved removal from SMP

	Monitoring Well ID	Date Gauged	Initial Well Installation Depth (ft bgs)	Total Depth (ft bTOC)	Screen Interval/Open Hole (ft bgs)	NAPL Observed (Y/N)[2]	NAPL Thickness (inches)[2]	NAPL Removed (Y/N)/Volume (Gals)[2]	Well Status	Recommendation
SMP Locations - Groundwater Monitoring	**Retain Well - Little or No Rehabilitation Required**									
	MW-2	9/27/2022	14.35	13.75	11.2 - 14.35	N	0"	N	Requires minor curb box maintenance (J-plug).	Maintain well for SMP GW monitoring. Rehabilitiate, as needed.
	MW-2I	9/27/2022	32.2	33.03	11.25 - 32.2^	N	0"	N	Requires minor curb box maintenance (J-plug).	Maintain well for SMP GW monitoring. Rehabilitate, as needed.
	MW-17	9/27/2022	22.50	21.24	13 - 23	N	0"	N	Requires minor curb box maintenance (J-plug).	Maintain well for SMP GW monitoring. Rehabilitate, as needed.
	MW-20D	9/27/2022	110.10	111.89	90 - 110.1^	N	0"	N	Well is in good condition, but difficult to access in thick brushy off-Site area.	Clear brush from vicinity of well and maintain well for SMP GW monitoring. Clear vegetation at least annually during monitoring events. If continued maintenance of this off-site well is problematic, consider replacing with on-site upgradient well MW-32D (same approximate well depth interval); although consider that MW-32D may not provide as effective of a location as does MW-20D to monitor potential upgradient off-site contaminant sources.
	MW-36I	9/27/2022	45.00	44.71	20 - 45^	N	0"	N	Well in good condition.	Maintain well for SMP GW monitoring.
	MW-36D	9/27/2022	161.00	161.76	140 - 161^	N	0"	N	Well in good condition.	Maintain well for SMP GW monitoring.
	MW-38D	9/27/2022	170.10	169.85	150 - 170.1^	N	0"	N	Well in good condition.	Maintain well for SMP GW monitoring.
	MW-39D	9/27/2022	150.40	145.14	130.4 - 150.4^	N	0"	N	The total depth of this well was measured at 145.45' when it was sampled in 2003 (within a year of its installation), which is essentially the same as it was in 2022 (145.14'). Based on the well log (TD = 150.4 ft) and total depth measurements, the bottom 5' of the open hole well may be filled with sediment, however, there remains a 15 ft. long open hole interval to conduct representative groundwater sampling. The well is in otherwise in good condition with minor curb box maintenance (bolts) needed.	Continued use of this well to monitor downgradient groundwater quality with the current 15 ft. open hole interval expected to provide representative groundwater analytical data that will be adequate to evaluate trends with historical data. Removal of the sediment from the bottom of the well is not deemed to be necessary. The amount of sediment in the well should continue to be monitored annually and the need to redevelop the well can be re-evaluated if it increases.

	Monitoring Well ID	Date Gauged	Initial Well Installation Depth (ft bgs)	Total Depth (ft bTOC)	Screen Interval/Open Hole (ft bgs)	NAPL Observed (Y/N)[2]	NAPL Thickness (inches)[2]	NAPL Removed (Y/N)/Volume (Gals)[2]	Well Status	Recommendation
SMP Locations - Groundwater Monitoring (cont'd)	**Attempt to Retain Well - Moderate to Extensive Rehabilitation Required**									
	TW-2S	9/27/2022	28.00	25.15	18 - 28^	N	0"	N	Total depth gauging in 2022 indicates there is 3 ft. of 'sediment' in the bottom of the well. The 6" steel surface casing is bent badly at the rim so a J-plug cannot be installed and the well is not properly sealed. The curb box is is in good condition except for requiring bolts.	This shallow well was installed to monitor/pump a pocket of NAPL penetrated near the top of bedrock. Crushed stone was placed in the wellbore when the surface casing was installed to provide a conduit for the NAPL pocket to enter the well. During subsequent NAPL pump testing of well TW-2I in the fall of 2009, TW-2S did not show or yield NAPL and subsequent gauging has not revealed any appreciable NAPL. Sediment in the well is presumably some of the crushed stone and/or rock fragments from the shallow weathered bedrock, neither of which could likely be removed without being drilled out. These materials should not preclude the well from yielding representative groundwater samples in the future, and their removal is not deemed necessary. To retain this well (due to the bent casing) it should be retrofitted with 2" PVC, installed with screen and sand pack spanning the open rock interval and grout seal to surface.
	MW-17I	9/27/2022	45.00	--	23 - 45^	--	--	NA	Well has been paved over.	Based on the location and depth of this downgradient well, attempts should be made to reclaim it and maintain it for SMP GW monitoring. Use a metal detector to locate the road box. Saw cut pavement if needed and dig up/expose road box. Install new road box flush with pavement. Redevelop well if necessary.
	MW-17D	9/27/2022	142.5	139.04	121 - 142.5^	N	0"	N	Curb box lid does not fit and curb box is flooded. Concrete collar is fractured. Interior 2" PVC casing is loose. This is presumed a retro-fitted PVC well with no sandpack or seals inside the open borehole, since it's not shown on the original well construction log. The 6" steel casing is 1' below the 2" PVC so can't be sealed leaving well open to surface impact.	Based on the location and depth of this downgradient well, attempts should be made to reclaim it and maintain it for SMP GW monitoring. Recommend removing the PVC well, redeveloping the entire open hole and re-installing a PVC well with sand pack and grout seal. Also replace road box and concrete collar.
	MW-38I	9/27/2022	120.00	100.39	90 - 120^	N	0"	N	Curb box is destroyed and J-plug missing. There is about 20 ft. of sediment in well.	Based on the location and depth of this downgradient well, attempts should be made to reclaim it and maintain it for SMP GW monitoring. Rehabilitate by attempting to drill/pump out sediment and installing a new curb box. An alternative is to decommission the well and install a replacement well.
	Attempt to Rehabiliate and Retain Well - Extensive Rehabilitation Required and Well Deemed Uneccessary									
	MW-46I	9/27/2022	75.00	--	16.5-75^	--	--	NA	This well is inside the fenced NYSEG yard. On 8/12/2021, a vertical 6" steel pipe (presumed top of MW-46I surface casing) was found buried in about 15 inches of sand and gravel fill, without a curb box, and was blocked (filled) at about 6 inches below the top; the entire well bore/casing has likely been filled in. AECOM covered the top of the pipe with a temporary NYSEG gas valve cover.	Attempt to retain well. Drill out sediment to original total depth (75' below top of casing) and redevelop. If attempts fail, properly decommission well and replace SMP monitoring location with TW-4 (located 32 ft. north and same open hole depth interval). TW-4 is in good condition (refer below).
	Decommission Well - Extensive Rehabilitation Required and Well Deemed Uneccessary									
	MW-40D	9/27/2022	170.00	169.59	140 - 170	N	0"	N	This well is located within a sidewalk section very near the curb edge. The curb box is in disrepair and needs to be replaced. Replacement of the curb box will require replacement of the entire sidewalk section.	Since downgradient well MW-42D (approx. same depth) has yielded NAPL in the past and is a SMP NAPL monitoring well, continued sampling of this well is not considered to be necessary. It is recommended that well MW-40D be decommissioned and removed as an SMP monitoring well.

	Monitoring Well ID	Date Gauged	Initial Well Installation Depth (ft bgs)	Total Depth (ft bTOC)	Screen Interval/Open Hole (ft bgs)	NAPL Observed (Y/N)[2]	NAPL Thickness (inches)[2]	NAPL Removed (Y/N)/Volume (Gals)[2]	Well Status	Recommendation
Not Specified in SMP	**Retain and Add to SMP as NAPL Monitoring Well - Little or No Rehabilitation Required**									
	MW-1I	9/27/2022	75.00	72.90	45 - 75^	Y	102"	Y/35.8	Well is in good condition. There was 8.5 ft. of NAPL in the well and 35.8 gals of NAPL were pumped from the well in October 2022.	This well should be maintained and added to SMP as NAPL monitoring well. Consideration should be given to conducting quarterly or semi-annual NAPL recovery tests in this well.
	Retain Well for Water Level Monitoring or Potential Future Use as Replacement Well- Little or No Rehabilitation Required									
	TW-4	9/27/2022	75.00	76.18	15 - 75^	N	0"	N	Well in good condition.	Maintain for water level monitoring and as a potential replacement for MW-46I.
	MW-10I	9/27/2022	43.00	43.20	22 - 43^	N	0"	N	Well in good condition.	Rock well in good condition, retain and maintain for water level and periodic NAPL gauging.
	MW-15IR	9/27/2022	75.00	78.52	16 - 75^	N	0"	N	Well in good condition.	Rock well in good condition, retain and maintain for water level and periodic NAPL gauging.
	MW-22IR	9/27/2022	75.00	77.87	16 - 75^	N	0"	N	Well in good condition.	Rock well in good condition, retain and maintain for water level and periodic NAPL gauging.
	MW-29IR	9/27/2022	75.00	79.30	17.1 - 75^	N	0"	N	Well in good condition.	Rock well in good condition, retain and maintain for water level and periodic NAPL gauging.
	MW-30D	9/27/2022	101.10	120.1	90 - 121^	N	0"	N	Well in good condition.	Rock well in good condition, retain and maintain for water level and periodic NAPL gauging.
	MW-30S	9/27/2022	27.00	29.31	10 - 25	--	--	NA	Well in good condition.	Retain if needed for future GW gauging or monitoring.
	MW-32D	9/27/2022	111.50	112.76	91 - 111.5^	N	0"	N	Well in good condition.	Retain and maintain as a deep rock well in good condition. Potential upgradient well to replace MW-20D if needed (see MW-20D recommendations).
	Retain Well for Water Level Monitoring or Potential Future Use as Replacement Well- Moderate Rehabilitation Required									
	MW-25I	9/27/2022	47.00	31.46	27 - 47^	N	0"	N	Total depth gauging (with casing stick up) indicated 20'+ of sediment in well. Well has a slightly bent stick up casing.	Attempt to remove sediment and retain for water level and periodic NAPL gauging.
	MW-1	9/27/2022	18.90	14.78	11.6 - 16.85	N	0"	N	Overburden well with 4' of sediment accumulation.	Attempt to remove sediment and retain if needed for future GW gauging or monitoring.
	MW-10	9/27/2022	19.70	--	8.7 - 19.5	--	--	NA	Obstruction at approximately 6.5 ft bgs. No J-Plug.	Attempt to remove blockage/sediment and retain if needed for future GW gauging or monitoring.
	MW-13	9/27/2022	55.50	47.85	44.7 - 55.5	N	0"	N	Total depth gauging (with casing stick up) indicated 10' of sediment in well.	Attempt to remove sediment and retain for water level and periodic NAPL gauging.
	Decommission Well - Well No Longer Needed or Used									
	MW-12	9/27/2022	25.50	26.20	14.5 - 25.5	N	0"	N	Well in good condition.	Unused shallow well. Decommission well.
	MW-12S	9/27/2022	28.00	28.80	11 - 26	N	0"	N	Well in good condition.	Unused shallow well. Decommission well.
	MW-18	9/27/2022	38.00	35.10	28 - 38	N	0"	N	Only accessible by removing whole casing cover. Curb box repair or replacement needed.	Unused well in need of repair. Decommission well.
	MW-25S	9/27/2022	28.00	24.41	11 - 26	N	0"	N	6'+ of sediment in well.	Unused shallow well with sediment. Decommission well.
	Well Previously Decommissioned									
	MW-14	--	41.00	--	30 - 41	--	--	--	Previously decommissioned.	--
	MW-14D	--	121.70	--	91 - 121.7^	--	--	--	Previously decommissioned.	--
	MW-14S	--	25.00	--	10 - 25	--	--	--	Previously decommissioned.	--

Notes:

1. ^ Denotes open hole
2. Observations from September 2022 Annual Monitoring.

Denotes well requires little to no rehabilitation.
Denotes well requires moderate to extensive rehabilitation.
Denotes well was previously decommissioned.
Denotes well where an attempt to rehabilitate will be made.

SMP - Site Management Plan
NAPL - non-aqueous phase liquid.
ft bTOC - feet below top of casing
ft bgs - feet below ground surface.
GW - groundwater

Attachment C 2021 and 2022 Photologs

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
1	07/26/21

Direction Photo Taken:

West

Description:

View of TW-2S.

Photo No.	Date:
2	07/26/21

Direction Photo Taken:

South

Description:

View of TW-3.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
3	07/26/21

Direction Photo Taken:

West

Description:

View of TW-4.

Photo No.	Date:
4	07/26/21

Direction Photo Taken:

Southwest

Description:

View of MW-1D.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
5	07/26/21

Direction Photo Taken:

West

Description:

View of MW-2.

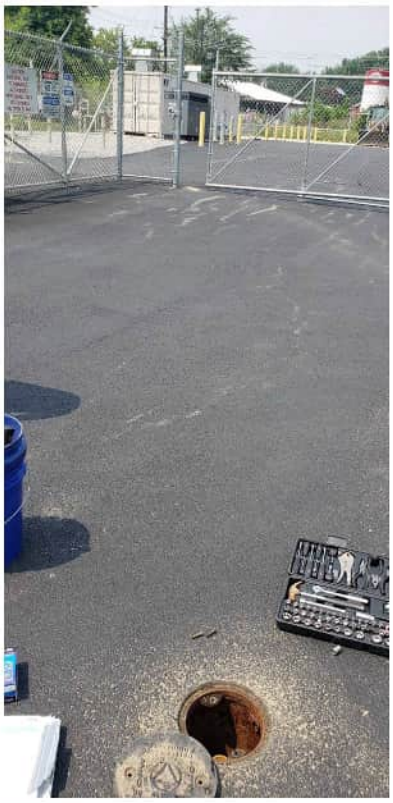


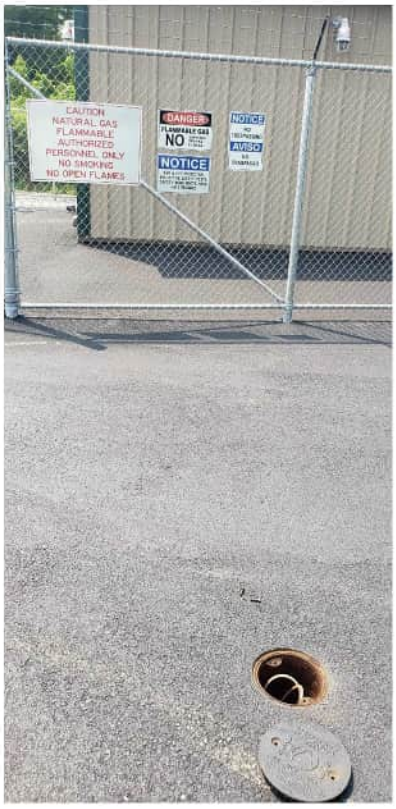
Photo No.	Date:
6	07/26/21

Direction Photo Taken:

South

Description:

View of MW-2I.



AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
7	07/26/21

Direction Photo Taken:

Downward

Description:

View of MW-10.

Photo No.	Date:
8	07/26/21

Direction Photo Taken:

East

Description:

View of MW-10D.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
9	07/26/21

Direction Photo Taken:

East

Description:

View of MW-10, MW-10I and MW-10D.

Photo No.	Date:
10	07/26/21

Direction Photo Taken:

South

Description:

View of MW-12 in foreground.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
11	07/26/21

Direction Photo Taken:

South

Description:

View of MW-12S in foreground.

Photo No.	Date:
12	07/26/21

Direction Photo Taken:

South

Description:

View of MW-13 in foreground.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
13	07/26/21

Direction Photo Taken:

South

Description:

View of area of MW-14, MW-14S and MW14D, previously decommissioned.

Photo No.	Date:
14	07/26/21

Direction Photo Taken:

South

Description:

View of MW-15IR.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
15	07/26/21

Direction Photo Taken:

South

Description:

View of MW-17 and MW-18 (background).

Photo No.	Date:
16	07/26/21

Direction Photo Taken:

Downward

Description:

View of MW-17I.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
17	07/26/21

Direction Photo Taken:

Downward

Description:

View of MW-17D.

Photo No.	Date:
18	07/26/21

Direction Photo Taken:

Downward

Description:

View of MW-18.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
19	07/26/21

Direction Photo Taken:

Downward

Description:

View of MW-20D.

Photo No.	Date:
20	07/26/21

Direction Photo Taken:

Southeast

Description:

View of MW-20D.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
21	07/26/21

Direction Photo Taken:

North

Description:

Entrance to area containing MW-20D.

Photo No.	Date:
22	07/26/21

Direction Photo Taken:

Northwest

Description:

Entrance to area containing MW-20D.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
23	07/26/21

Direction Photo Taken:

South

Description:

View of MW-22IR.

Photo No.	Date:
24	07/26/21

Direction Photo Taken:

South

Description:

View of MW-25D.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
25	07/26/21

Direction Photo Taken:

West

Description:

View of MW-25I.

Photo No.	Date:
26	07/26/21

Direction Photo Taken:

South

Description:

View of MW-29IR.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
27	07/26/21

Direction Photo Taken:

Downward

Description:

View of MW-30D.

Photo No.	Date:
28	07/26/21

Direction Photo Taken:

South

Description:

View of MW-30D (foreground) and MW-30S (background).

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
29	07/26/21

Direction Photo Taken:

West

Description:

View of MW-32D.

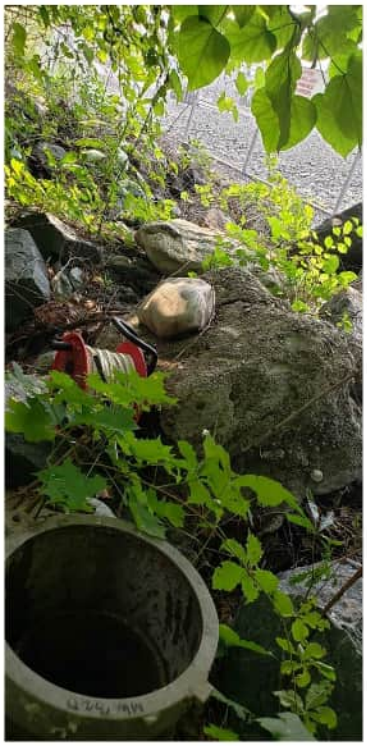


Photo No.	Date:
30	07/26/21

Direction Photo Taken:

East

Description:

View of MW-33D.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
31	07/26/21

Direction Photo Taken:

Southeast

Description:

View of MW-35I.

Photo No.	Date:
32	07/26/21

Direction Photo Taken:

North

Description:

View of MW-36D (right) and MW-36I (left).

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
33	07/26/21

Direction Photo Taken:

Downward

Description:

View of MW-36I.

Photo No.	Date:
34	07/26/21

Direction Photo Taken:

Northwest

Description:

View of MW-38D (background) and MW-38I (foreground).

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
35	07/26/21

Direction Photo Taken:

Northwest

Description:

View of MW-38D.

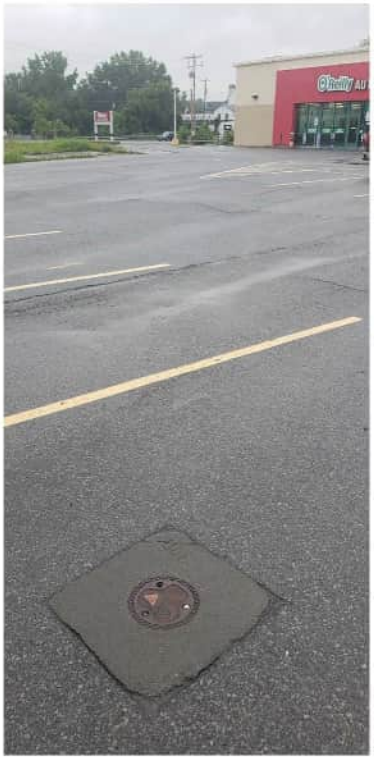
Photo No.	Date:
36	07/26/21

Direction Photo Taken:

Northwest

Description:

View of MW-39D and general conditions.



AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
37	07/26/21

Direction Photo Taken:

North

Description:

View of MW-40D and N Central Avenue.

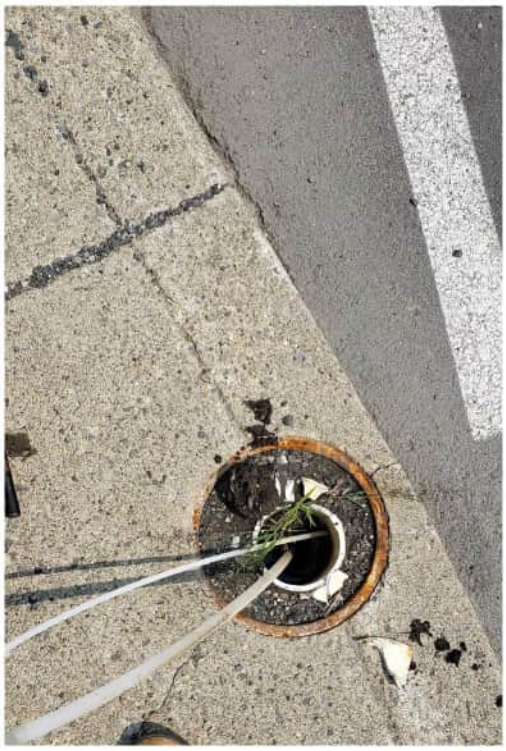


Photo No.	Date:
38	07/26/21

Direction Photo Taken:

Southwest

Description:

View of MW-42D.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
39	07/26/21

Direction Photo Taken:

Downward

Description:

View of MW-45I.

Photo No.	Date:
40	07/26/21

Direction Photo Taken:

Southeast

Description:

View of MW-45I and TW-1.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
41	07/26/21

Direction Photo Taken:

Northwest

Description:

View of area where TW-2S and TW-2I are installed.

Photo No.	Date:
42	07/26/21

Direction Photo Taken:

North

Description:

View of area where TW-2S and TW-2I are installed.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
43	07/26/21

Direction Photo Taken:

Northeast

Description:

View of area where TW-2S and TW-2I are installed.

Photo No.	Date:
44	07/26/21

Direction Photo Taken:

Northeast

Description:

View of area where TW-2S and TW-2I are installed.

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
45	07/26/21

Direction Photo Taken:

Southwest

Description:

View of Anthony Kill and general conditions.

Photo No.	Date:
46	07/26/21

Direction Photo Taken:

West

Description:

View of Anthony Kill and general conditions

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
NYSEG Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photo No.	Date:
47	08/13/21

Direction Photo Taken:

West

Description:

View of area where TW-2S and TW-2I are installed.

Photo No.	Date:
48	08/13/21

Direction Photo Taken:

Downward

-

Description:

View of steel 6" steel casing in appx. location of MW-46I. Steel casing ~15" below grade.

AECOM

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 1 Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-1	

Photograph No. 2 Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-1D	

AECOM

Photographic Log

Facility Name: Mechanicville Former MGP Site	**Site Location:** Mechanicville, New York	**Project No.** 60675881

Photograph No. 3 Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-2	

Photograph No. 4 Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-2I	

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 5 Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-10D	

Photograph No. 6 Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-17	

AECOM

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 7

Date: 09/28/2022

Direction Photo Taken:

Downward

Description:

View of MW-17D

Photograph No. 8

Date: 09/28/2022

Direction Photo Taken:
North

Description:

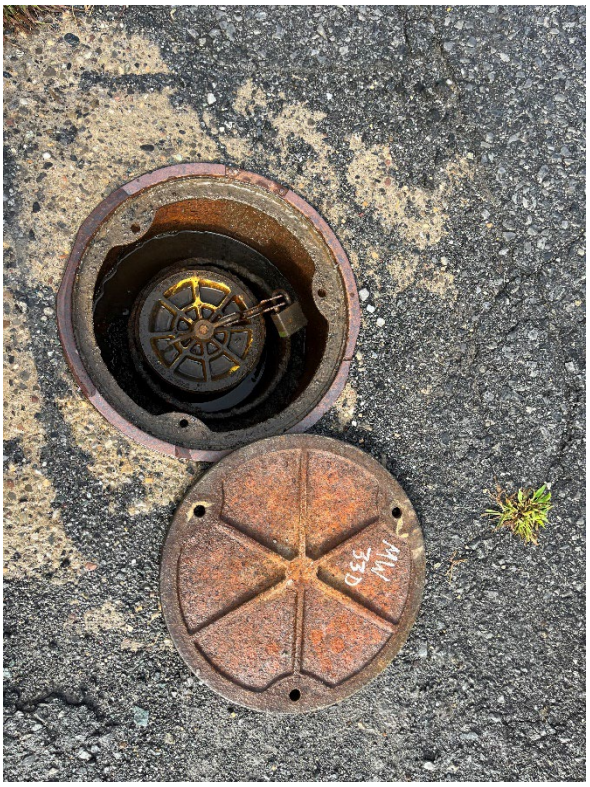
View of MW-17D. The small dark depression in the asphalt to left is MW-17I (paved over).

AECOM

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 9	
Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-20D	

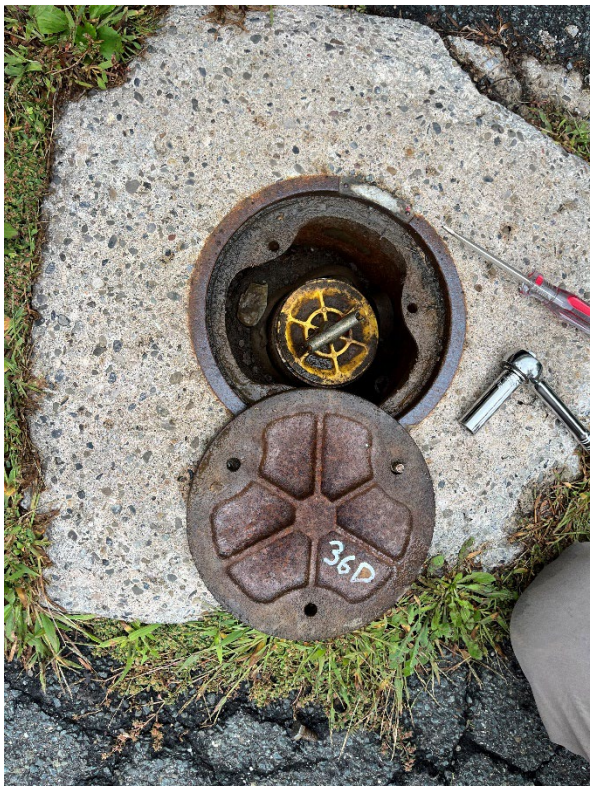
Photograph No. 10	
Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-33D	

AECOM

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 11	
Date: 09/28/2022 **Direction Photo Taken:** Downward	
Description: View of MW-35I	

Photograph No. 12	
Date: 09/28/2022 **Direction Photo Taken:** Downward	
Description: View of MW-36D	

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 13	
Date: 09/28/2022 **Direction Photo Taken:** Downward	
Description: View of MW-36I	

Photograph No. 14	
Date: 09/28/2022 **Direction Photo Taken:** Downward	
Description: View of MW-38D (L) and MW-38I (R)	

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 15	
Date: 09/28/2022 **Direction Photo Taken:** Downward	
Description: View of MW-39D	

Photograph No. 16	
Date: 09/28/2022 **Direction Photo Taken:** Downward	
Description: View of MW-40D	

Photographic Log

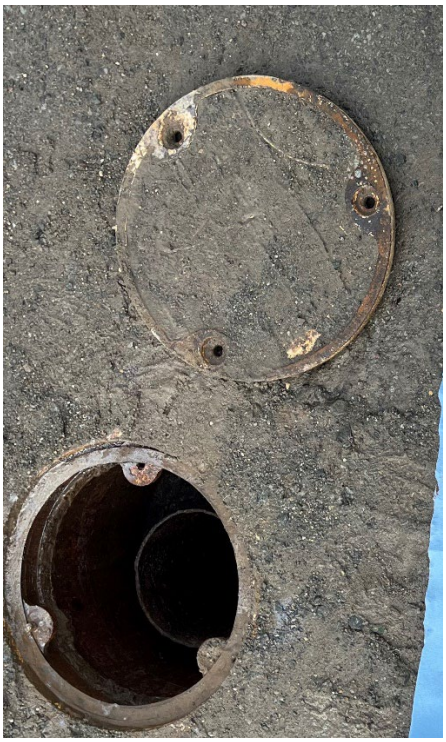
Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

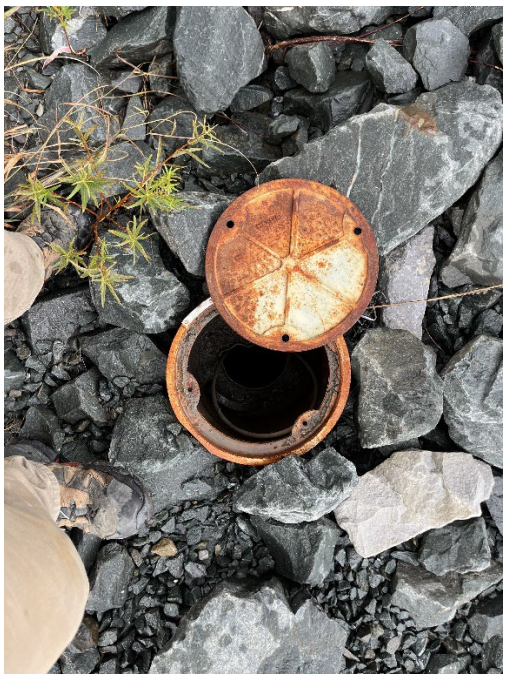
Photograph No. 17 Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-42D	

Photograph No. 18 Date: 09/28/2022 **Direction Photo Taken:** Downward **Description:** View of MW-45I	

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 19	
Date: 09/28/2022 **Direction Photo Taken:** East	
Description: View of TW-1	

Photograph No. 20	
Date: 09/28/2022 **Direction Photo Taken:** North	
Description: View of TW-2S	

AECOM

Photographic Log

Facility Name:	Site Location:	Project No.
Mechanicville Former MGP Site	Mechanicville, New York	60675881

Photograph No. 21

Date: 09/28/2022

Direction Photo Taken:
North

Description:

View of TW-3