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15 December 2025

Mr. Michael Belveg
Division of Environmental Remediation
New York State Department of Environmental Conservation
5786 Widewaters Parkway
Syracuse, New York 13214

RE: Pilot Study Percolation Test Results – REVISED FINAL
Contract/Work Assignment No: D009806-32
Zip Zip Mini Market, Syracuse, New York
Site No. B00075

Dear Mr. Belveg:

EA Engineering and Geology, P.C. (EA) was tasked by the New York State Department of Environmental Conservation (NYSDEC), under Work Assignment Number (No.) D009806-32 to conduct a pre-design investigation (PDI), pilot study, and remedial design at the Zip Zip Mini Market Site (No. B00075) (Site) in the City of Syracuse, Onondaga County, New York (Figure 1). EA completed the first two tasks of the pilot study outlined in the Pilot Study Work Plan.[1] Baseline groundwater sampling and a percolation test was completed between 29 July and 6 August 2025. The below sections describe field observations and results of the percolation test that affect the planned pilot study described in the Pilot Study Work Plan.[1]

Groundwater Sampling

EA collected pre-injection groundwater samples via low flow at the following monitoring wells to establish a baseline for volatile organic compound (VOC) concentrations as well as water quality parameters (i.e., oxidation-reduction potential, dissolved oxygen, etc.): MW-EA-1R, MW-EA-3R, MW-EA-4R, MW-EA-6, MW-EA-9. These five wells are in or around the historic source area as follows:

- MW-EA-3R: Upgradient end of source area and interim remedial measure excavation areas
- MW-EA-1R and MW-EA-4R: Downgradient
- MW-EA-6 and MW-EA-9: Side gradient

Monitoring wells were gauged, purged and sampled in accordance with the Pilot Study Work Plan[1] from 29 to 31 July 2025. Samples were analyzed via U.S. Environmental Protection Agency Method 8260 for VOCs by NYSDEC call-out laboratory, Pace Analytical Laboratories. Table 1 presents a summary of site contaminant of concern (COC) results across site monitoring wells

[1] EA Engineering and Geology, P.C. (EA). 2025. *Pilot Study Work Plan.* February.

from 2023 through 2025. COC concentrations continue to exceed NYSDEC Ambient Water Quality Standards (AWQS)[2] project cleanup objectives at the site (Figure 2).

- Concentrations of COCs from July 2025 were the highest in MW-EA-1R. Concentrations of 1,2,4-trimethylbenzene, benzene, and ethylbenzene have risen since 2023. Concentrations of other COCs have fluctuated or decreased since 2023.

- An order of magnitude decrease in COC concentrations was observed in MW-EA-6 between 2023 and 2024, with most COCs below AWQS in 2024. In 2025, concentrations have risen, primarily in 1,2,4-trimethylbenzene, benzene, and ethylbenzene.

- All analytes remain below AWQS in MW-EA-3R in MW-EA-9.

- Concentrations of methyl tertiary butyl ether (MTBE) have decreased overtime in MW-EA-4R.

Hydrogeologic Testing

Slug Test

As presented in the Pilot Study Work Plan,[1] EA completed soil borings, soil sampling, and groundwater monitoring well installation and sampling as part of the PDI activities. A falling head slug test was performed to determine the hydraulic conductivity of the subsurface. In MW-EA-1R, the slug displaced approximately 0.792 feet of water, which returned to close to the static water level after approximately 300 seconds for a rate of 0.0025 feet per second or approximately 1.5 gallons per hour. The average hydraulic conductivities calculated from the three wells (MW-EA-1R, MW-EA-4R, and MW-EA-8) using the Bouwer-Rice method ranged from 2.31×10^{-5} to 6.46×10^{-5} centimeters per second, which was consistent with the geologic material observed during drilling activities (silts and clays with some fine sands). Further details and field data from the slug tests are presented in the Pre-Design Investigation Results Summary Memorandum.[3]

Percolation Test #1

To further evaluate the falling head rate that could be achieved under a gravity fed injection, EA planned to conduct a percolation test in MW-EA-1R. The percolation test was performed by attaching 6-inch section of 2-inch diameter polyvinyl chloride (PVC) riser to the top of the well casing and then fitting a clear 4-inch diameter section of plastic piping graduated every 1 inch. The percolation test conducted on 31 July 2025 was performed by pouring successive 5-gallon buckets of potable water into the well to fill the entire well volume. EA then timed how quickly the water level fell in the 4-inch clear piping. Photographs of the equipment set up are provided in the daily field reports (Attachment 1).

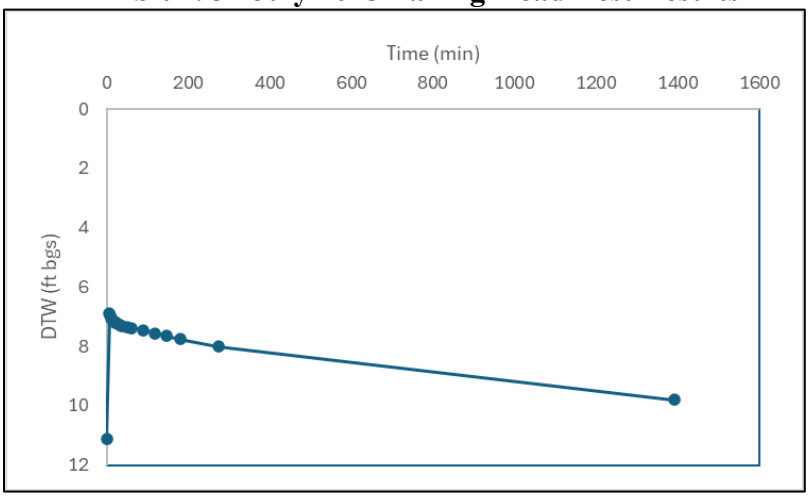
[2] NYSDEC. 1998. *Division of Water Technical and Operational Guidance Series (1.1.1)*. June.

[3] EA. 2024. *Pre-Design Investigation Results Summary.* February.

During the percolation test performed on 31 July 2025, EA added over 30 gallons of water to MW-EA-1R and observed that the water level in the plastic pipe fell approximately 6 inches per 1-2 seconds. This flow rate into the subsurface was much higher than expected based upon the PDI results, particularly the geologic material observed below the water table and the slug test results. EA's measurements collected on 31 July 2025 indicate that the subsurface accepts approximately 587 gallons of water per hour.

After adding 30 gallons of potable water to MW-EA-1R, EA measured depth to water until readings became near asymptotic. Once water level reached approximately 7 feet below ground surface (bgs), the infiltration rate slowed significantly. Exhibit 1 shows depth to water measured before water was added and as the well recovered. Field forms and a calculation sheet are presented in Attachment 1.

Exhibit 1. 31 July 2025 Falling Head Test Results



Notes:
DTW = depth to water
ft bgs = feet below ground surface
min = minutes

After the results of the Percolation Test #1, EA reviewed the boring log and monitoring well construction log from MW-EA-1R. A fine to medium gravel layer was observed from 5 to 7 feet bgs. Clays and silts are the predominant soil type from 7 feet bgs to refusal. MW-EA-1R was installed with well screen from 7 to 17 feet bgs and filter pack extending above the screen to 5 feet bgs, which allows the well to communicate with the more permeable gravel layer from 5 to 7 feet bgs observed in the soil boring.

EA contacted NYSDEC on 1 and 5 August 2025 to discuss results of Percolation Test #1 and proposed next steps. EA and NYSDEC agreed to perform a second percolation test with a higher volume of water.

Percolation Test #2

On 6 August 2025, EA conducted a second percolation test on MW-EA-1R. Using the same 2-inch PVC to graduated 4-inch plastic pipe set up from Percolation Test #1, EA added water to the subsurface using a hydrant connection at a rate of approximately 10 gallons per minute (gal/min). After around 40 seconds of constant 10 gal/min flow (approximately 7 gallons), water level in the well and 4-inch plastic pipe rose. Once water reached the top of the plastic pipe, EA shut off water and again timed the falling hydraulic head. Similar to Percolation Test #1, the falling head observed equated to about 6 inches per 2 seconds (approximately 587 gallons per hour).

EA further tested the percolation rate of subsurface by running 10 gal/min into MW-EA-1R for 1 hour and 40 minutes (1,000 gallons). Water level in the 4-inch plastic pipe stayed consistent, meaning the percolation rate is greater than or equal to 10 gal/min, or 600 gallons per hour.

Pilot Study Implications and Recommendations

In the pilot study, EA planned to test implementation and delivery of an in situ chemical oxidant (ISCO) solution of PersulfOx® in the vicinity of MW-EA-1R. However, the two percolation tests and falling head tests revealed that fluid short circuits through the 5-7 feet bgs gravel lens versus infiltrating in the contaminated silt/clays below 7 feet bgs. The rate of flow in the gravel lens far exceeds the expected 1.5 gallons per hour determined during the PDI slug test; the consequences of which indicate that fluid injected in the subsurface will likely take the path of least resistance and flow through the gravel lens. At this time, the monitoring network at the site is not sufficient to determine where injected fluid is traveling.

EA is concerned with controlling the flow of the oxidizer through the gravel lens beyond the treatment zone in the Pilot Study Work Plan.[1] This means potential distribution outside intended treatment zones, including the utility corridors associated with Erie Boulevard. A conceptual model of the subsurface and utility locations is presented on Figures 3 and 4.

As ISCO products will oxidize metal pipe/conduit, note that EA confirmed the presence of an older cast iron water main with the right-of-way with the City of Syracuse. EA does not recommend proceeding with the ISCO pilot study as outlined in the Pilot Study Work Plan,[1] nor proceeding with ISCO groundwater treatment.

It is EA's suggestion that NYSDEC consider that work performed to date at the site meets the intent of the remedial action objectives (RAOs) presented in the Record of Decision (ROD)[4] and further remedial injection efforts are not practicable based on the low permeability of the targeted treatment zone. The status of the RAOs for groundwater as presented in the ROD are presented in Exhibit 2.

[4] NYSDEC. 2020. *Record of Decision; Zip Zip Mini Market Site, Environmental Restoration Project; Syracuse, Onondaga County.* March

Exhibit 2. RAO Status

RAO	Status	Comments
Prevent ingestion of groundwater with contaminated levels exceeding drinking water standards.	No exposure pathway.	Surrounding area is supplied with public water unaffected by site-related contamination.
Prevent contact with, or inhalation of volatiles, from contaminated groundwater.	The property is currently unoccupied with no structures present. There is no exposure to soil vapor via vapor intrusion in the property's current state unless the subsurface is disturbed.	A future Site Management Plan will include institutional controls and engineering controls to address inhalation of volatiles. Although property is currently unoccupied, change in property usage could trigger the need for engineering controls. Vapor intrusion sampling performed at the adjacent warehouse (west of the site) determined no further action was needed as related to human exposure to site-related VOCs.
Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.	It is not practicable to restore aquifer to pre-release conditions.	The percolation test and work performed to date demonstrates that the selected groundwater remedy (ISCO injections) is not practicable. Treatment with other mechanical remedial technologies such as air-sparge/soil vapor extraction or pump/treat are unlikely to succeed given low permeability of subsurface soils. A future Site Management Plan will address potential exposure related to intrusive work due to site development or public works projects. A Site Management Plan will include provisions for soil disturbance, including sampling/handling of generated waste, and protection of workers.
Remove the source of ground or surface water contamination	Completed during prior interim remedial measures.	The source of groundwater contamination was removed in the two interim remedial measures performed in 2005 and 2008. During these efforts, underground storage tanks, subsurface structures, piping, equipment, and contaminated soil were excavated to approximately 18 feet bgs. During the PDI, no staining or free product was observed during soil boring advancement and soil sampling.

EA recommends continuing with the other site remedies outlined in the ROD (cover system, institutional controls, and Site Management Plan) and transition to site management.

Please feel free to contact me if you have any questions or concerns at 315-565-6553.

Sincerely yours,
EA ENGINEERING AND GEOLOGY, P.C.

Emily Cummings

Emily Cummings
Project Manager

ec: J. Cook, NYSDEC
E. Rieseler, NYSDOH
O. Kerney, City of Syracuse
D. Conan, EA

Figures

1 Site Location

2 Groundwater Sample VOC Exceedances July 2025

3 Erie Canal Cross Section

4 Erie Canal Cross Section Transect

Tables

1 Groundwater Sampling Results Summary

Attachments

1 Field Forms and Calculation Sheet

Figures

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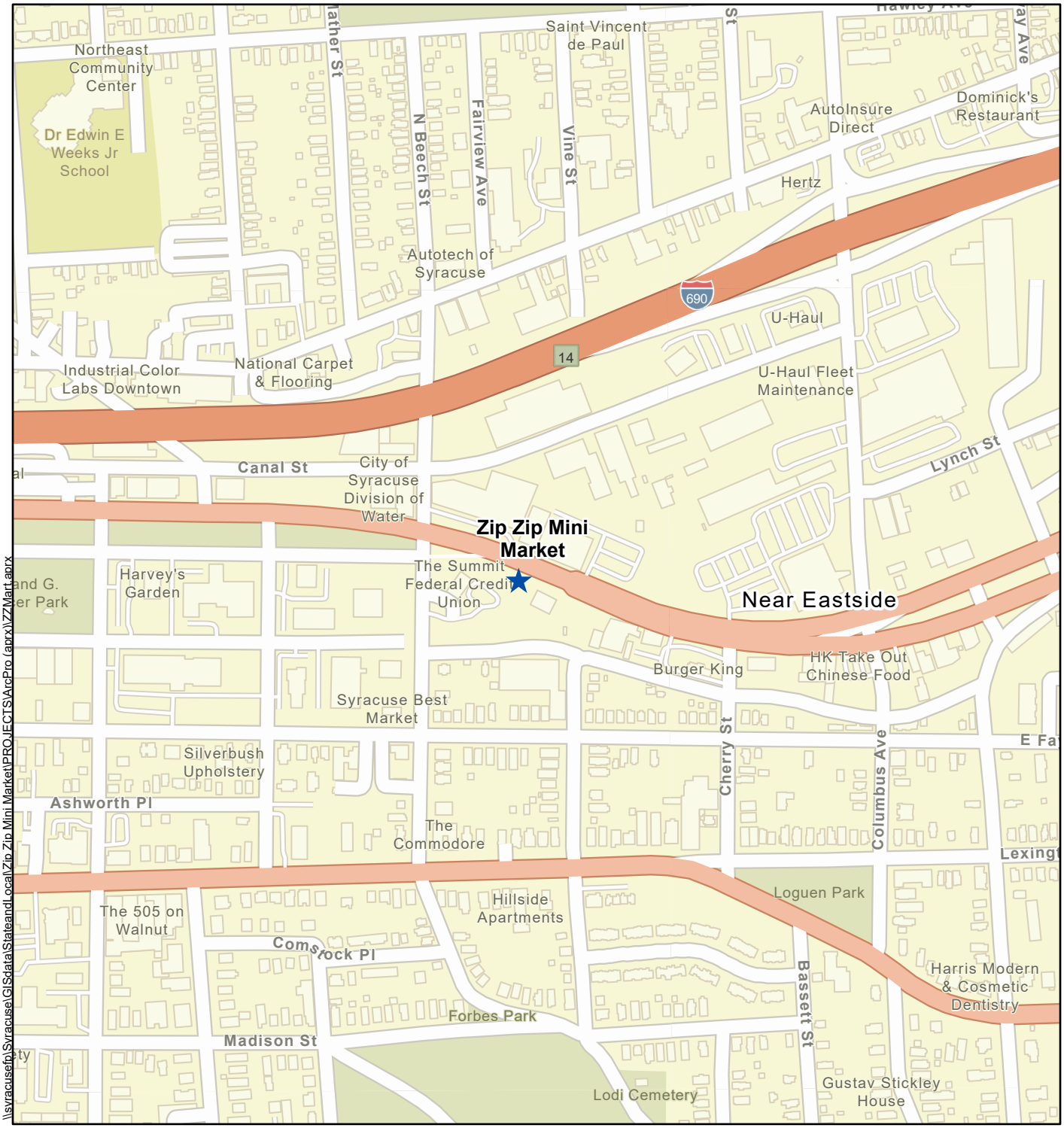

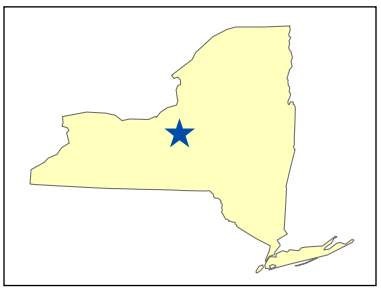

0 250 500
Feet

N

Legend

★ Site Location

Figure 1
Site Location
Zip Zip Mini Market
(NYSDEC Site No. B00075)
Syracuse, New York

Map Date: 2/7/2025
Projection: NAD 1983 State Plane New York Central FIPS
Source: ESRI, NYS

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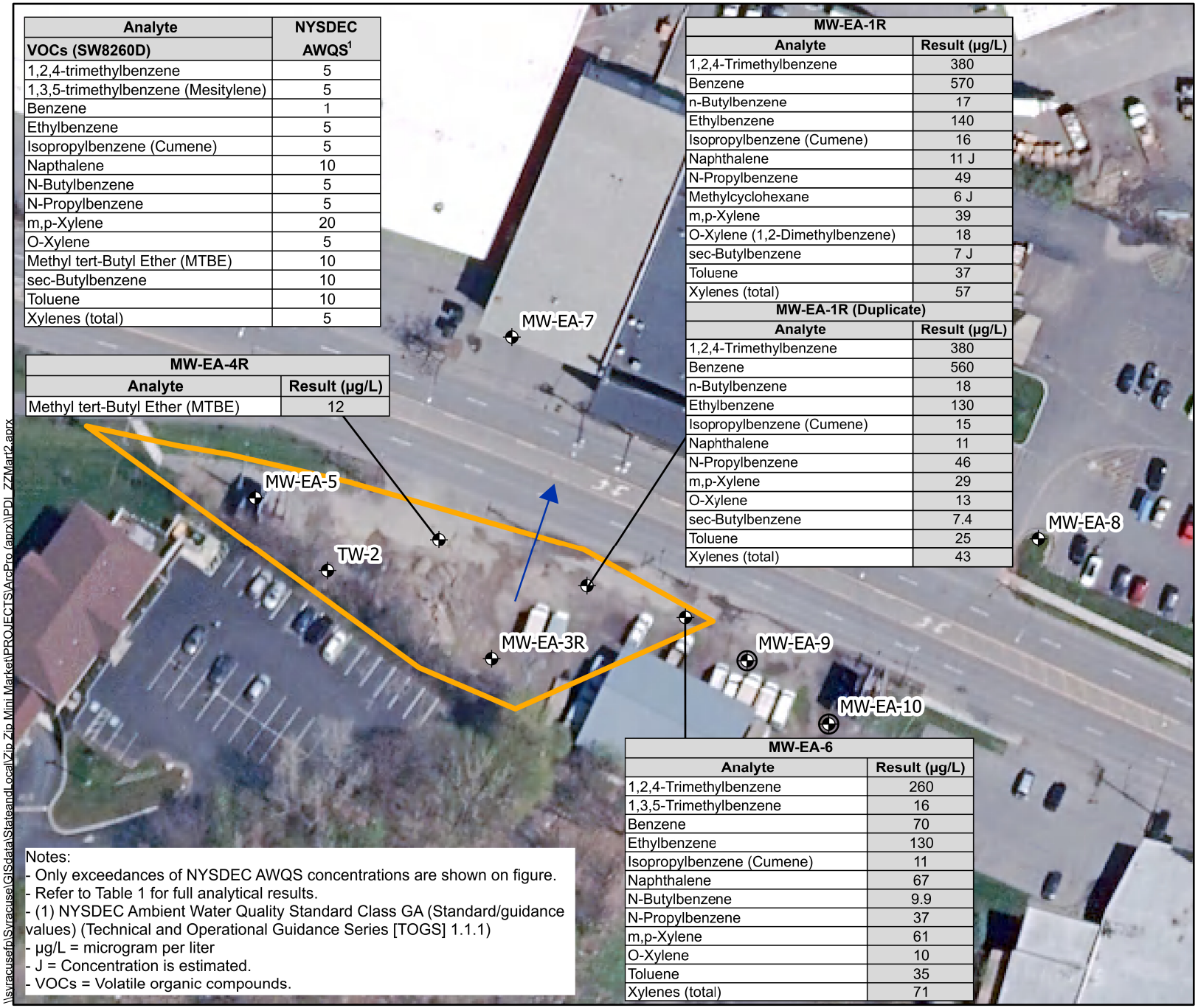

Analyte	NYSDEC AWQS[1]
VOCs (SW8260D)	
1,2,4-trimethylbenzene	5
1,3,5-trimethylbenzene (Mesitylene)	5
Benzene	1
Ethylbenzene	5
Isopropylbenzene (Cumene)	5
Napthalene	10
N-Butylbenzene	5
N-Propylbenzene	5
m,p-Xylene	20
O-Xylene	5
Methyl tert-Butyl Ether (MTBE)	10
sec-Butylbenzene	10
Toluene	10
Xylenes (total)	5

MW-EA-4R	
Analyte	Result (µg/L)
Methyl tert-Butyl Ether (MTBE)	12

MW-EA-1R	
Analyte	Result (µg/L)
1,2,4-Trimethylbenzene	380
Benzene	570
n-Butylbenzene	17
Ethylbenzene	140
Isopropylbenzene (Cumene)	16
Naphthalene	11 J
N-Propylbenzene	49
Methylcyclohexane	6 J
m,p-Xylene	39
O-Xylene (1,2-Dimethylbenzene)	18
sec-Butylbenzene	7 J
Toluene	37
Xylenes (total)	57

MW-EA-1R (Duplicate)	
Analyte	Result (µg/L)
1,2,4-Trimethylbenzene	380
Benzene	560
n-Butylbenzene	18
Ethylbenzene	130
Isopropylbenzene (Cumene)	15
Naphthalene	11
N-Propylbenzene	46
m,p-Xylene	29
O-Xylene	13
sec-Butylbenzene	7.4
Toluene	25
Xylenes (total)	43

MW-EA-6	
Analyte	Result (µg/L)
1,2,4-Trimethylbenzene	260
1,3,5-Trimethylbenzene	16
Benzene	70
Ethylbenzene	130
Isopropylbenzene (Cumene)	11
Naphthalene	67
N-Butylbenzene	9.9
N-Propylbenzene	37
m,p-Xylene	61
O-Xylene	10
Toluene	35
Xylenes (total)	71

Notes:
- Only exceedances of NYSDEC AWQS concentrations are shown on figure.
- Refer to Table 1 for full analytical results.
- (1) NYSDEC Ambient Water Quality Standard Class GA (Standard/guidance values) (Technical and Operational Guidance Series [TOGS] 1.1.1)
- µg/L = microgram per liter
- J = Concentration is estimated.
- VOCs = Volatile organic compounds.

VICINITY MAP

Legend

- Monitoring Well
- New Monitoring Well (Installed July 2024)
- Site Outline
- Approximate Groundwater Flow Direction

N

0 50 100

Feet

Map Date: 10/22/2025
Projection: NAD 1983 2011 StatePlane New York Central FIPS 3102 Ft US

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Figure 2

Groundwater Sample VOC Exceedances July 2025
Zip Zip Mini Mart
Supplemental Pre-Design Investigation Results Summary

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A
Southwest

A'
Northeast

Zip Zip Mini Market Site

Erie Boulevard

Building

MW-EA-3R (Projected)

MW-EA-4R (Projected)

MW-EA-1R (Projected)

MW-EA-7 (Projected)

2008 Slab Removal Area

~5 ft Fill Material Over Canal Wall

Erie Canal Lock 47 Central Island

Erie Canal Lock 47 South

Erie Canal Lock 47 North

2008 Excavation (10 ft Bottom)

2008 Excavation (12-14 ft Bottom)

2008 Excavation (16-18 ft Bottom)

Limestone Canal Lock Walls (assumed 15 ft vertical height)

Feet Above Mean Sea Level

440
430
420
410
400
390

0
50
100
150
200
250
300

Feet

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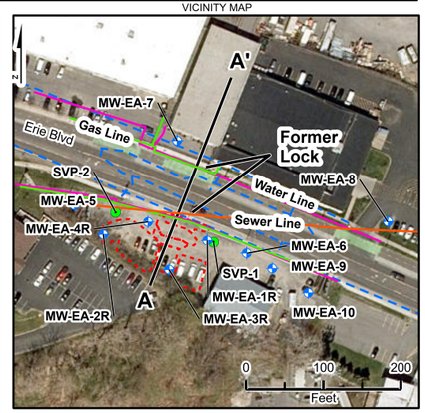
VICINITY MAP



Legend

- 2008 Excavation Area
- Monitoring Well Riser
- Monitoring Well Screened Interval
- Building
- 2008 Excavation Area
- Canal
- Fill
- Silt
- Clay
- Sewer Utility (Projected)
- Water Utility
- Gas Utility
- Approximate Water Table Interface October 2023 (dashed where inferred)
- Inferred Groundwater Flow Direction

Map Date: 10/22/2025
Projection: NAD83 State Plane New York Central

EA

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Figure 3
Erie Canal Cross Section
Zip Zip Mini Market
Syracuse, NY

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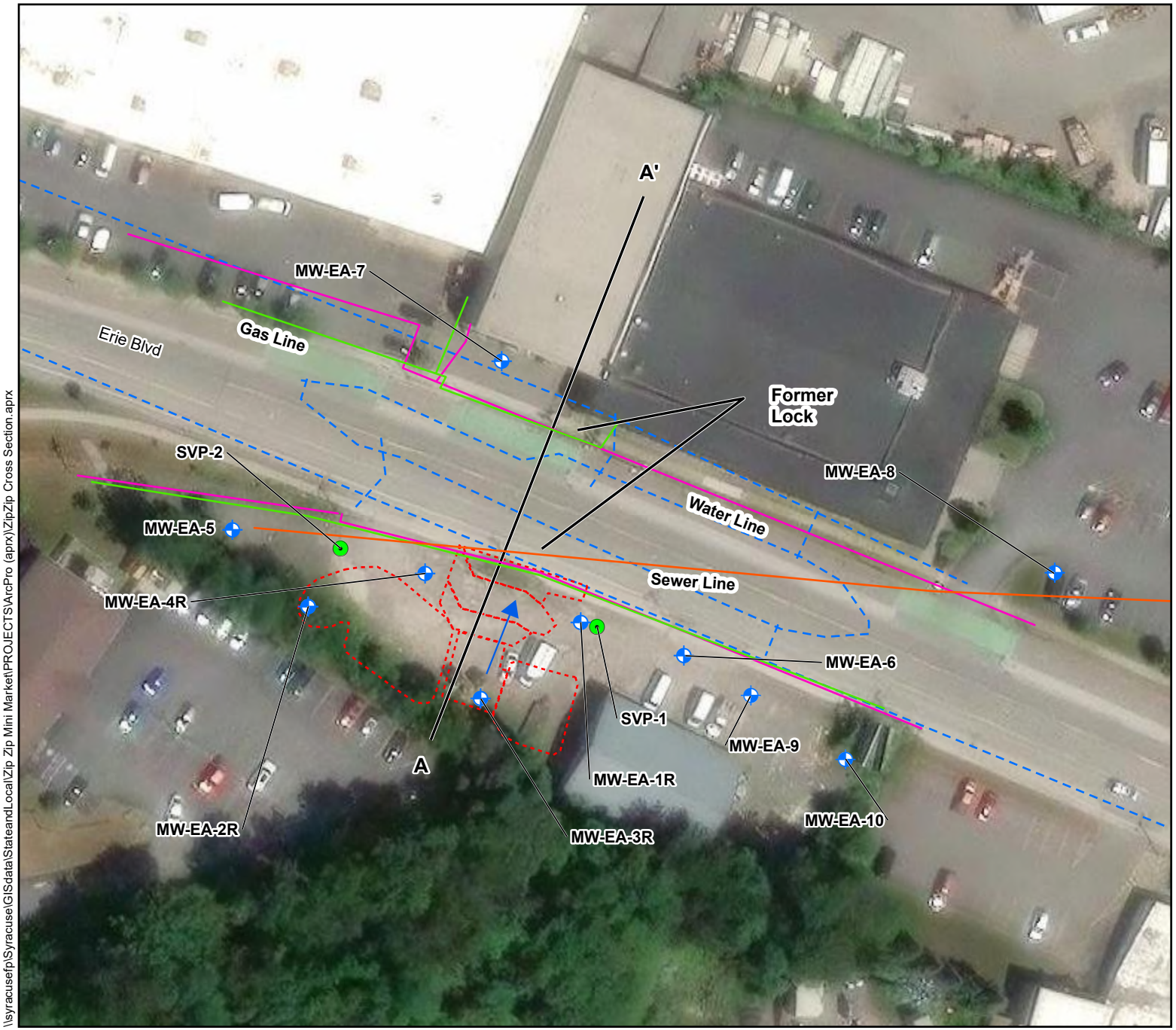

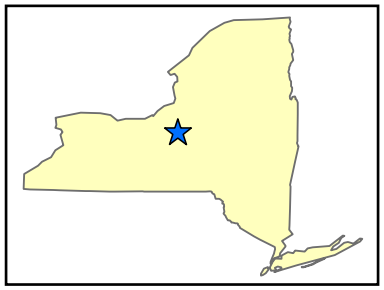

Legend

- Site Location
- Monitoring Well
- Soil Vapor Point
- IRM Excavation Areas
- Gas Line
- Sewer Line
- Water Line
- Approximate Groundwater Flow Direction
- Historic Erie Canal Path
- Transcect

N

0 50 100

US Feet

Map Date: 12/9/2025
Projection: NAD83 State Plane New York Central

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Figure 4
Erie Canal Cross Section Transect
Zip Zip Mini Mart
(NYSDEC Site No. B00075)
Syracuse, New York

\\syracusefp\Syracuse\GISdata\StateandLocal\Zip Zip Mini Market\PROJECTS\ArcPro (aprx)\ZipZip Cross Section.aprx

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Tables

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Table 1. Groundwater Sampling Results Summary

Analyte	NYSDEC AWQS[1]	Unit	Location ID: MW-EA-1R Sample Name: B00075-MW-EA-1R Parent Sample Name: Sample Date: 9/26/2023 Result	Location ID: MW-EA-1R Sample Name: B00075-FD-1 Parent Sample Name: B00075-MW-EA-1R_20230926 Sample Date: 9/26/2023 Result	Location ID: MW-EA-1R Sample Name: B00075-MW-EA-1R-082124 Parent Sample Name: Sample Date: 8/21/2024 Result	Location ID: MW-EA-1R Sample Name: B00075-MW-FD-01-082124 Parent Sample Name: B00075-MW-EA-1R-20240821 Sample Date: 8/21/2024 Result	Location ID: MW-EA-1R Sample Name: B00075-MW-EA-1R-07302025 Parent Sample Name: Sample Date: 7/30/2025 Result
1,2,4-Trimethylbenzene	5	µg/L	**42 J**	**23 J**	**160**	**200**	**380**
1,3,5-Trimethylbenzene (Mesitylene)	5	µg/L	**24 J**	**12 J**	**53**	**68**	3.4 J
2-Butanone (MEK)	50	µg/L	< 1.7 U	< 1.7 U	4.7 J	4.7 J	19 J
Benzene	1	µg/L	**190**	**180**	**50**	**54**	**570**
Cyclohexane	NSL	µg/L	NA	NA	6.2	8.3	23 J
Cymene	5	µg/L	0.34 J	0.99 J	2	2.7	NA
Ethylbenzene	5	µg/L	**40 J**	**16 J**	**41 J**	**57 J**	**140**
Isopropyl Ether	NSL	µg/L	0.5	0.41 J	NA	NA	NA
Isopropylbenzene (Cumene)	5	µg/L	2.8	1.6	**6.5**	**8.8**	**16**
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NSL	µg/L	1.7 J	< 1.3 U	< 10 U	< 10 U	< 12 U
Methylcyclohexane	NSL	µg/L	3.5	3.9	7.6	9.7	6.0 J
M-P-Xylene	5	µg/L	**180 J**	**69 J**	**100 J**	**140 J**	**39**
Naphthalene	10	µg/L	4.1	2.1	**12**	**16**	**11 J**
N-Butylbenzene	5	µg/L	1.7	1.1	4.2	**5.6**	**17**
N-Propylbenzene	5	µg/L	4.7	3	**18**	**24**	**49**
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	**140 J**	**49 J**	**7.4**	**9**	**18**
Sec-Butylbenzene	5	µg/L	0.37 J	0.33 J	2.2	2.8	**7.0 J**
Tert-Butyl Methyl Ether (MTBE)	10	µg/L	**20**	**20**	0.29 J	0.31 J	< 1.1 U
Toluene	5	µg/L	**110 J**	**33 J**	2.7	< 1 U	**37**
Xylenes (total)	5	µg/L	NA	NA	**110 J**	**150 J**	**57**

Notes:

1. NYSDEC Ambient Water Quality Standard Class GA (Standard/guidance values) (Technical and Operational Guidance Series [TOGS] 1.1.1) - Exceedances are in bold.

AWQS = Ambient Water Quality Standard

ID = Identification

J = Concentration is estimated

µg/L = Microgram(s) per liter

NA = Not analyzed

NSL = No screening level available

NYSDEC = New York State Department of Environmental Conservation

U = Analyte not detected

Table 1. Groundwater Sampling Results Summary

			Location ID	MW-EA-1R	MW-EA-3R	MW-EA-3R	MW-EA-4R	MW-EA-4R
			Sample Name	B00075-FD-01-07302025	B00075-MW-EA-3R	B00075-MW-EA-3R-07302025	B00075-MW-EA-4R	B00075-MW-EA-4R-082124
			Parent Sample Name	B00075-MW-EA-1R-07302025				
			Sample Date	7/30/2025	9/26/2023	7/30/2025	9/26/2023	8/21/2024
Analyte	**NYSDEC AWQS[1]**	**Unit**		**Result**	**Result**	**Result**	**Result**	**Result**
1,2,4-Trimethylbenzene	5	µg/L		**380**	< 0.2 U	< 0.15 U	< 0.2 U	< 1 U
1,3,5-Trimethylbenzene (Mesitylene)	5	µg/L		2.7 J	< 0.15 U	< 0.16 U	< 0.15 U	< 1 U
2-Butanone (MEK)	50	µg/L		20 J	< 1.7 U	< 1.5 U	< 1.7 U	<1.4 U
Benzene	1	µg/L		**560**	< 0.18 U	< 0.19 U	< 0.18 U	**1.6**
Cyclohexane	NSL	µg/L		16 J	NA	< 1.3 U	NA	< 5 U
Cymene	5	µg/L		NA	< 0.13 U	NA	< 0.13 U	< 1 U
Ethylbenzene	5	µg/L		**130**	< 0.22 U	< 0.11 U	< 0.22 U	< 1 U
Isopropyl Ether	NSL	µg/L		NA	< 0.2 U	NA	< 0.2 U	NA
Isopropylbenzene (Cumene)	5	µg/L		**15**	< 0.15 U	< 0.16 U	< 0.15 U	< 1 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NSL	µg/L		< 6.1 U	< 1.3 U	< 1.2 U	< 1.3 U	< 10 U
Methylcyclohexane	NSL	µg/L		5.6	< 0.16 U	< 0.17 U	< 0.16 U	< 1 U
M-P-Xylene	5	µg/L		**29**	< 0.49 U	< 0.30 U	< 0.49 U	< 2 U
Naphthalene	10	µg/L		**11**	< 0.38 U	< 0.21 U	< 0.38 U	< 2 U
N-Butylbenzene	5	µg/L		**18**	< 0.15 U	< 0.14 U	< 0.15 U	< 1 U
N-Propylbenzene	5	µg/L		**46**	< 0.12 U	< 0.11 U	< 0.12 U	< 1 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L		**13**	< 0.24 U	< 0.16 U	< 0.24 U	< 1 U
Sec-Butylbenzene	5	µg/L		**7.4**	< 0.13 U	< 0.14 U	< 0.13 U	< 1 U
Tert-Butyl Methyl Ether (MTBE)	10	µg/L		2.6 J	0.78 J	3.3	**30**	**18**
Toluene	5	µg/L		**25**	< 0.22 U	< 0.11 U	< 0.22 U	< 1 U
Xylenes (total)	5	µg/L		**43**	NA	< 1.0 U	NA	< 1 U

Notes:

1. NYSDEC Ambient Water Quality Standard Class GA (Standard/guidance values) (Technical and Operational Guidance Series [TOGS] 1.1.1) - Exceedances are in bold.

AWQS = Ambient Water Quality Standard

ID = Identification

J = Concentration is estimated

µg/L = Microgram(s) per liter

NA = Not analyzed

NSL = No screening level available

NYSDEC = New York State Department of Environmental Conservation

U = Analyte not detected

Table 1. Groundwater Sampling Results Summary

			Location ID	MW-EA-4R	MW-EA-5	MW-EA-6	MW-EA-6	MW-EA-6
			Sample Name	B00075-MW-EA-4R-07302025	B00075-MW-EA-5	B00075-MW-EA-6	B00075-MW-EA-6-082224	B00075-MW-EA-6-07312025
			Parent Sample Name					
			Sample Date	7/30/2025	9/27/2023	9/26/2023	8/22/2024	7/31/2025
Analyte	NYSDEC AWQS[1]	Unit		Result	Result	Result	Result	Result
1,2,4-Trimethylbenzene	5	µg/L		< 0.15 U	< 0.2 U	**2400**	**5.3**	**260**
1,3,5-Trimethylbenzene (Mesitylene)	5	µg/L		< 0.16 U	< 0.15 U	**810**	3.8	**16**
2-Butanone (MEK)	50	µg/L		< 1.5 U	< 1.7 U	< 67 U	< 1.4 U	22 J
Benzene	1	µg/L		< 0.19 U	< 0.18 U	**640**	0.25 J	**70**
Cyclohexane	NSL	µg/L		2.3 J	NA	NA	< 5 U	26
Cymene	5	µg/L		NA	< 0.13 U	15 J	0.17 J	NA
Ethylbenzene	5	µg/L		< 0.11 U	< 0.22 U	**1400**	1.2	**130**
Isopropyl Ether	NSL	µg/L		NA	< 0.2 U	< 8.1 U	NA	NA
Isopropylbenzene (Cumene)	5	µg/L		0.37 J	< 0.15 U	**95**	0.27 J	**11**
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NSL	µg/L		< 1.2 U	< 1.3 U	< 53 U	2.3 J	<6.1 J
Methylcyclohexane	NSL	µg/L		0.79 J	< 0.16 U	110	1.6	20
M-P-Xylene	5	µg/L		< 0.30 U	< 0.49 U	**4300**	3.9	**60**
Naphthalene	10	µg/L		< 0.21 U	< 0.38 U	**750**	1.0 J	**67**
N-Butylbenzene	5	µg/L		< 0.14 U	< 0.15 U	**110**	0.39 J	**9.9**
N-Propylbenzene	5	µg/L		< 0.11 U	< 0.12 U	**320**	0.57 J	**37**
O-Xylene (1,2-Dimethylbenzene)	5	µg/L		< 0.16 U	< 0.24 U	**2900**	1.5	**10**
Sec-Butylbenzene	5	µg/L		0.24 J	< 0.13 U	**25 J**	< 1 U	3.5 J
Tert-Butyl Methyl Ether (MTBE)	10	µg/L		**12**	1.2	< 6.8 U	< 1 U	< 0.56 U
Toluene	5	µg/L		< 0.11 U	< 0.22 U	**4500**	< 1 U	**35**
Xylenes (total)	5	µg/L		< 1 U	NA	NA	**5.4**	**71**

Notes:

1. NYSDEC Ambient Water Quality Standard Class GA (Standard/guidance values) (Technical and Operational Guidance Series [TOGS] 1.1.1) - Exceedances are in bold.

AWQS = Ambient Water Quality Standard

ID = Identification

J = Concentration is estimated

µg/L = Microgram(s) per liter

NA = Not analyzed

NSL = No screening level available

NYSDEC = New York State Department of Environmental Conservation

U = Analyte not detected

Table 1. Groundwater Sampling Results Summary

			Location ID	MW-EA-7	MW-EA-8	MW-EA-9	MW-EA-9
			Sample Name	B00075-MW-EA-7	B00075-MW-EA-8	B00075-MW-EA-9-082124	B00075-MW-EA-9-07292025
			Parent Sample Name				
			Sample Date	10/31/2023	9/27/2023	8/21/2024	7/29/2025
Analyte	NYSDEC AWQS[1]	Unit		Result	Result	Result	Result
1,2,4-Trimethylbenzene	5	µg/L		< 0.2 U	< 0.2 U	< 1 U	< 0.15 U
1,3,5-Trimethylbenzene (Mesitylene)	5	µg/L		< 0.15 U	< 0.15 U	< 1 U	< 0.13 U
2-Butanone (MEK)	50	µg/L		< 1.7 U	< 1.7 U	< 1.4 U	< 1.5 U
Benzene	1	µg/L		< 0.18 U	< 0.18 U	< 1 U	< 0.19 U
Cyclohexane	NSL	µg/L		NA	NA	< 5 U	< 1.3 U
Cymene	5	µg/L		< 0.13 U	< 0.13 U	< 1 U	NA
Ethylbenzene	5	µg/L		< 0.22 U	< 0.22 U	< 1 U	< 0.11 U
Isopropyl Ether	NSL	µg/L		< 0.2 U	< 0.2 U	NA	NA
Isopropylbenzene (Cumene)	5	µg/L		< 0.15 U	< 0.15 U	< 1 U	< 0.16 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NSL	µg/L		< 1.3 U	< 1.3 U	< 10 U	< 1.2 U
Methylcyclohexane	NSL	µg/L		< 0.16 U	< 0.16 U	< 1 U	< 0.17 U
M-P-Xylene	5	µg/L		< 0.49 U	< 0.49 U	< 2 U	< 0.30 U
Naphthalene	10	µg/L		< 0.38 U	< 0.38 U	< 2 U	< 0.21 U
N-Butylbenzene	5	µg/L		< 0.15 U	< 0.15 U	< 1 U	< 0.14 U
N-Propylbenzene	5	µg/L		< 0.12 U	< 0.12 U	< 1 U	< 0.11 U
O-Xylene (1,2-Dimethylbenzene)	5	µg/L		< 0.24 U	< 0.24 U	< 1 U	< 0.16 U
Sec-Butylbenzene	5	µg/L		< 0.13 U	< 0.13 U	< 1 U	< 0.14 U
Tert-Butyl Methyl Ether (MTBE)	10	µg/L		< 0.17 U	< 0.17 U	0.52 J	< 0.11 U
Toluene	5	µg/L		< 0.22 U	< 0.22 U	< 1 U	0.18 J
Xylenes (total)	5	µg/L		NA	NA	< 1 U	< 1 U

Notes:

1. NYSDEC Ambient Water Quality Standard Class GA (Standard/guidance values) (Technical and Operational Guidance Series [TOGS] 1.1.1) - Exceedances are in bold.

AWQS = Ambient Water Quality Standard

ID = Identification

J = Concentration is estimated

µg/L = Microgram(s) per liter

NA = Not analyzed

NSL = No screening level available

NYSDEC = New York State Department of Environmental Conservation

U = Analyte not detected

Attachment 1
Field Forms and Calculation Sheet

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Zip Zip (B00075) 7-29-25

Objective: Bisanne GW Sample
Weather: AM 80°F mostly clouds PM. 89°F partly cloudy
personnel: T. Robinson, M. Moores

0835 EA onsite
0845 wasp spray applied to rest
0850 Discover MW-EA-3R is now buried/covered
0857 PID calibrated
0904 Gauging start

TR Time	well	PID →	DTW	DTB
0905	MW-EA-4R	0.0	6.21	13.28
0911	MW-EA-1R	7.3	10.02	16.73
0916	MW-EA-5	0.0	9.74	11.80
0923	MW-EA-6	44.2	2.21	10.57
0930	MW-EA-9	0.0	8.19	17.95
0940	MW-EA-10	0.0	21.66	21.70
0958	MW-EA-8	0.2	4.35	18.85
1009	MW-EA-7	0.0	8.13	13.86

1015 Calibrate Horiba
1040 Purge start @ MW-EA-9
1135 Sample collected for VOCs split w/ MS/MSD
B00075-MW-EA-9-07292025
1230 EA offsite for team pickup
1345 EA onsite
1400 Purge start @ MW-EA-4R
1501 MW-EA-4R purged DRY
1533 EA offsite

[signature] 7-29-25

ZH ZH 7-30-25

Objective: Baseline GW sampling

weather: Am 74°F clear. Pm 89°F clear

personnel: T. Robinson, M. Mooney

0815 EA onsite PID: 0.1 DTW: 7.05

0825 MW-EA-3R located DTB: 13.25

0830 PID 3 Hour calibrated

0900 MW-EA-4R gauged PID: 0.6 DTW: 8.96

Sample collected for VOCs DTB: 13.24

BOOO75-MW-EA-4R-07302025

0925 Purge start @ MW-EA-1R

0950 Samples collected for VOCs

BOOO75-MW-EA-1R-07302025

BOOO75-FD-01-07302025

1015 Purge start @ MW-EA-6

1032 MW-EA-6 went DRY. Stop purge and allowed to recharge.

1050 Purge start @ MW-EA-3R

1110 Samples collected for VOCs

BOOO75-MW-EA-3R-07302025

1122 EA offsite for Drum pickup

1320 EA onsite to drop off drums

1330 EA offsite

7-30-25

ZH ZH 7-31-25

Objective: Baseline GW Sampling

weather: AM: 69°F Rain

personnel: T. Robinson, M. Mooney

0819 EA Onsite

0821 PID 3 Hour Calibrated

0831 E. Cummings onsite

0844 MW-EA-6 gauged 3 Sample w/ Bailer

0848 Sample collected for VOCs

BOOO75-MW-EA-6-07312025

0856 E. Ashton onsite

0911 Recirculation test @ MW-EA-1R to begin.

0935 30 gal of water introduced. Begin monitoring static water level

1036 E. Cummings & E. Ashton offsite

1227 Call w/ E. Cummings on rate of return to static water level, call off pre test monitoring

1232 EA offsite

1301 Trip blank collected for VOCs

BOOO75-TB-01-07312025

1400 EA onsite for water levels MW-EA-1R

1406 EA offsite

7-31-25

FIELD CALIBRATION FORM
Horiba U-52
pH, CONDUCTIVITY, AND TURBIDITY

CALIBRATION
DATE: 07-29-2025
TIME: 10:~~22~~ 15
METER ID: 215823

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	6.25	3.96

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	5.83	4.49

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	11.63	0.0

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM
Horiba U-52
pH, CONDUCTIVITY, AND TURBIDITY

CALIBRATION
DATE: 07-30-2025
TIME: 0830
METER ID: 215823

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	6.7	3.99

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	2.47	4.38

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	1.9	0.00

COMMENTS

SIGNATURE

FIELD CALIBRATION FORM
Horiba U-52
pH, CONDUCTIVITY, AND TURBIDITY

CALIBRATION	
DATE:	7-31-25
TIME:	0821
METER ID:	215823

pH CALIBRATION

pH STANDARD	INITIAL READING	FINAL READING
4.0	6.53	3.97

CONDUCTIVITY CALIBARATION

CONDUCTIVITY STANDARD	STANDARD READING	FINAL READING
4.49	6.03	4.45

TURBIDITY CALIBRATION

STANDARD	INITIAL READING	FINAL READING
0 NTU	40.9	0.0

COMMENTS

SIGNATURE

CLIENT: New York State Department of Environmental Conservation
PROJECT: Zip Zip Mini Market
NUMBER: 1602532

Prepared By: EGC **Date:** 08/06/25
Reviewed By: **Date:**

Purpose: Calculate rate of flow in subsurface from falling head test conducted on monitoring well.

Methodology: Convert rate of falling head test from inches per second to gallons per hour

Solution:

1. Volume of water (in gallons) per 0.5 ft of 4-in diameter pipe

D	4.00	inches	Diameter of clear PVC pipe
H	0.50	ft	Height of water falling
t	2.00	sec	Time H of water fell
k	0.65	gal/ft	Gallons liquid per foot of 4" diam. pipe
V		gal	Gallons of water

V = k * H gal Gallons of water

V = 0.327 gal

2. Determine rate (gal / hour) of flow

V	0.33	gal	Gallons of water
t	2.00	sec	Time H of water fell
	0.0333	min	
	0.0006	hr	

Q = *V / t* gal/hour

Q = 587.7 gal/hour

FIELD CALIBRATION FORM

Site Name: Z:1 Z:8

INSTRUMENT: MiniRae PID	INSTRUMENT ID No: 801093
OPERATOR: T. Robinson	WEATHER: 80°F Cloudy
SPAN GAS TYPE: Isobutylene	DATE: 7-29-25
CALIBRATION NOTES:	
Zero = 0 ppm	
Span = 100.3 ppm	
COMMENTS:	
SIGNATURE:	DATE: 7-29-25

FIELD CALIBRATION FORM

Site Name: ZIP Zip

INSTRUMENT: Mini Rae PID	INSTRUMENT ID No: 801093
OPERATOR: T. Robinson	WEATHER: 75°F, Clear
SPAN GAS TYPE: Isobutylene	DATE: 7-30-25
CALIBRATION NOTES:	
Zero = 0.0 ppm	
Span = 100.1 ppm	
COMMENTS:	
SIGNATURE: [signature]	DATE: 7-30-25

FIELD CALIBRATION FORM

Site Name: Z.P Z.P

INSTRUMENT: Mini Rae PID	INSTRUMENT ID No: 801093
OPERATOR: T. Robinson	WEATHER: 69°F Rain
SPAN GAS TYPE: Isobut	DATE: 7-31-25
CALIBRATION NOTES:	
Zero = 0.0 ppm	
Span = 100.1 ppm	
COMMENTS:	
SIGNATURE:	DATE: 7-31-25

DAILY FIELD REPORT **Day: Wednesday Date: 6 August 2025**

Project Name: Zip Zip Mini Market

Wind Direction: AM: 5 mph E

PM: 3 mph NE

NYSDEC Site # B00075

Weather: AM: 67; Mostly Cloudy

PM: 81F; Mostly Cloudy

Contract # D009806-32 **Arrive at site:** 0831 (am)

Location: Syracuse, New York **Leave site:** 1120 (pm)

HEALTH & SAFETY:

Are there any changes to the Health & Safety Plan? Yes ( ) No (x)
(If yes, list the deviation under items for concern)

Are monitoring results at acceptable levels?	Soil	Yes ( )	n/a (x)	* No ( )
	Waters	Yes ( )	n/a (x)	* No ( )
	Air	Yes (x)	n/a ( )	* No ( )

- *If No, provide comments*

OTHER ITEMS:

Site Sketch Attached: Yes ( ) No (x)
Photos Taken: Yes (x) No ( )

DESCRIPTION OF DAILY WORK PERFORMED:

(0830) D. Conan, E. Cummings and T. Robinson onsite to conduct the second percolation test. Gauge MW-EA-1R (10.99 ft bTOC) and set up hose and hydrant.
(0858) Gauge MW-EA-3R (7.58 ft bTOC)
(0902) Start percolation test at MW-EA-1R with hose flowing at rate of 10 GPM. Approximately 7 gallons of water were introduced and water began backing up in 4-inch pipe. EA measured falling head in pipe as 6-inches every 2 seconds.
(0912) EA gauged MW-EA-4R (6.47 ft bTOC) and MW-EA-6 (7.64 b TOC) and started constant flow of water into MW-EA-1R at 10 GPM at about 09:07 AM
(1007) D. Conan offsite. After about 1 hour of constant flow, water began backing up ~ 6 inch in 4-inch riser. Level stayed pretty consistent thereafter. Ground accepting >= 10 GPM.
(1049) Stopped pumping into MW-EA-1R after about 1000 gallons. Started falling head test at MW-EA-1R

Time Elapsed (min)	Depth to Water (ft BTOC)	Time Elapsed (min)	Depth to Water (ft BTOC)
0:00	5.02	7:00	6.98
0:30	5.60	7:30	6.98
1:00	5.91	8:00	6.99
1:30	6.21	8:30	7.00
2:00	6.40	9:00	7.01
2:30	6.55	9:30	7.01
3:00	6.65	10:00	7.03
3:30	6.75	10:30	7.05
4:00	6.79	11:00	7.06
4:30	6.85	11:30	7.06
5:00	6.90	12:00	7.07
5:30	6.90	17:00	7.15
6:00	6.92	25:00	7.20

(1109) Gauged other onsite wells:
MW-EA-6 = 7.61 ft bTOC
MW-EA-3R = 7.57 ft bTOC
MW-EA-4R = 6.36 ft bTOC
(1120) EA offsite.

CONTRACTOR/SUBCONTRACTOR EQUIPMENT AND PERSONNEL ON SITE:

EA personnel: T. Robinson, E. Cummings, D. Conan

Subcontractor personnel: N/A

NYSDEC personnel: None

EA equipment: Water Level Meter, tools.

Subcontractor Equipment:

VISITORS TO SITE:

PROJECT SCHEDULE ISSUES:

None

PROJECT BUDGET ISSUES:

ITEMS OF CONCERN:

COMMENTS:

ATTACHMENT(S) TO THIS REPORT:

SITE REPRESENTATIVE:

Name: Emily Cummings

cc: Michael Belveg, NYSDEC

Site Photographs (Descriptions Below)	
	Percolation test apparatus
	Percolation test with constant 10 GPM flow
Site Inspector(s): Emily Cummings	**Date: 8/06/2025**

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Zip Zip mini mart	Project No: B00075	Page 1 of 1
Well ID	MW-EA-1R	Date 7-30-25	Time 0924
Well Site Description	western corner of DBR warehouse		
Weather/Temp	80°F clear		
Field Technician	T. Robinson		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	~~TR 16.73~~ 425.39	Screened Interval (ft bgs)	7-17
Well Diameter (in.)	2	Nominal Borehole Diameter (in.)	6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	16.73	Gallons per foot of depth	0.163
Depth to product (ft)	N/A	Static water level (ft)	10.05
Product column height (ft)	N/A	Water column height (ft)	6.68
Product volume (Gallons)	N/A	Water volume (Gallons)	1.09

PURGE INFORMATION

Pump Type / ID	Peristaltic / 20857	Water Quality Meter Type / ID	Horiba / 215823
Pump Intake Depth (ft)	11.73	Flow-Thru Cell Volume (L)	1
Purge Start Time	~~0930~~ TR 0925	Appearance/Odor (Start)	Clear, odorless, colorless
Purge End Time	0950	Appearance/Odor (End)	Clear, odorless, colorless
Average Purge Rate (mL/min)	250	Total Drawdown (ft)	2.15
Well Went Dry (Y/N)	N	Stop Time NA	Volume removed (L) NA
Recovery Time	N/A	Recovery Rate (mL/min) NA	Restart Purge Time NA
Total Volume Removed (L)	6.25	Total Pump Time (min)	25

Date	Time	Purge Rate (mL/min)	Volume Removed (LPM)	pH (+/-0.1)	Cond. (µS/cm) (+- 3%)	Temp. (°C) (+- 3%)	ORP (mV) (+/- 10)	Turbidity (NTU) +/-10% or <5 NTU	DO (mg/L) +/-10% or <0.5 mg/L	Depth to Water (ft below TOC)
7-30-25	0925	250	0	7.16	2.55	20.63	-125	11.9	0.25	10.28
	0930		1.25	6.94	2.58	20.06	-115	9.1	0.01	10.50
	0935		2.5	6.91	2.64	18.50	-113	5.7	0.00	10.85
	0940		3.75	6.92	2.65	18.47	-111	1.0	0.00	11.35
	0945		5.0	6.96	2.61	18.42	-125	0.0	0.00	11.70
	0950		6.25	6.99	2.61	18.44	-117	0.0	0.00	12.20

COMMENTS _____

SAMPLE COLLECTION

Sample Date	7-30-2025	Sample Time	0950
Sample ID	B00075-MW-EA-1R-07302025		
QA/QC Collected / ID	FD	Sample Appearance/Odor	Clear, colorless, odorless
Analyses	VOCs		
Sampler	TR, MM	Signature	

WELL PURGING AND SAMPLING RECORD

Site Name/Location 258 259 Mini mart	Project No: B00075	Page 1 of 1
Well ID MW-EA-3R	Date 7-30-25	Time 1048
Well Site Description Near trees but on property		
Weather/Temp 89°F Clear		
Field Technician T. Robinson		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	425.43	Screened Interval (ft bgs)	5-15
Well Diameter (in.)	2	Nominal Borehole Diameter (in.)	6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	13.95	Gallons per foot of depth	0.163
Depth to product (ft)		Static water level (ft)	7.20
Product column height (ft)	NA	Water column height (ft)	6.75
Product volume (Gallons)		Water volume (Gallons)	1.10

PURGE INFORMATION

Pump Type / ID	Peristaltic / 20857	Water Quality Meter Type / ID	Horiba / 215823
Pump Intake Depth (ft)	8.95	Flow-Thru Cell Volume (L)	1
Purge Start Time	1050	Appearance/Odor (Start)	Clear, colorless, odorless
Purge End Time	1110	Appearance/Odor (End)	Clear, colorless, odorless
Average Purge Rate (mL/min)	250	Total Drawdown (ft)	1.35
Well Went Dry (Y/N)	N	Stop Time NA	Volume removed (L) NA
Recovery Time NA	Recovery Rate (mL/min) NA	Restart Purge Time	NA
Total Volume Removed (L)	5.00	Total Pump Time (min)	20

Date	Time	Purge Rate (mL/min)	Volume Removed (LPM)	pH (+/-0.1)	Cond. (µS/cm) (+- 3%)	Temp. (°C) (+- 3%)	ORP (mV) (+/- 10)	Turbidity (NTU) +/-10% or <5 NTU	DO (mg/L) +/-10% or <0.5 mg/L	Depth to Water (ft below TOC)
7-30-25	1050	250	0	7.97	1.96	23.45	2	5.3	0.5	7.32
"	1055	"	1.25	7.18	2.07	19.96	7	0.7	0.22	7.50
"	1100	"	2.50	7.00	2.10	18.83	11	1.1	0.10	7.85
"	1105	"	3.75	6.97	2.10	18.81	13	0.0	0.00	8.20
"	1110	"	5.00	6.94	2.11	18.82	16	0.0	0.00	8.55

COMMENTS _____

SAMPLE COLLECTION

Sample Date	7-30-2025	Sample Time	1110
Sample ID	B00075-MW-EA-3R-07302025		
QA/QC Collected / ID	N/A	Sample Appearance/Odor	Clear, colorless, odorless
Analyses	VOCs		
Sampler	TR, MM	Signature	

WELL PURGING AND SAMPLING RECORD

Site Name/Location	ZIP Zip mini Mart	Project No: B00075	Page 1 of 2
Well ID	MW-EA-4R	Date 7-29-2025	Time 1358
Well Site Description	western edge of lot		
Weather/Temp	89°F partly Cloudy		
Field Technician	T. Robinson		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	425.52	Screened Interval (ft bgs)	5-15
Well Diameter (in.)	2"	Nominal Borehole Diameter (in.)	6"

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	13.28	Gallons per foot of depth	0.163
Depth to product (ft)	N/A	Static water level (ft)	6.29
Product column height (ft)		Water column height (ft)	6.99
Product volume (Gallons)		Water volume (Gallons)	1.14

PURGE INFORMATION

Pump Type / ID	Peristaltic / 20857	Water Quality Meter Type / ID	Horiba / 215823
Pump Intake Depth (ft)	8.28	Flow-Thru Cell Volume (L)	1
Purge Start Time	1400	Appearance/Odor (Start)	Colorless, odorless, clear
Purge End Time	1501	Appearance/Odor (End)	Colorless, odorless, cloudy
Average Purge Rate (mL/min)	250	Total Drawdown (ft)	5.11
Well Went Dry (Y/N)	Y	Stop Time 1501	Volume removed (L) 15
Recovery Time 17.98 hrs		Recovery Rate (mL/min) 1.3	Restart Purge Time Barker
Total Volume Removed (L)	15	Total Pump Time (min)	61

1079mm

Date	Time	Purge Rate (mL/min)	Volume Removed (LPM)	pH (+/-0.1)	Cond. (µS/cm) (+- 3%)	Temp. (°C) (+- 3%)	ORP (mV) (+/- 10)	Turbidity (NTU) +/-10% or <5 NTU	DO (mg/L) +/-10% or <0.5 mg/L	Depth to Water (ft below TOC)
07-29-25	1400	250	0	7.46	3.08	23.93	-72	76.7	0.48	6.65
	1405		1.25	7.27	2.87	23.45	-65	72.3	0.25	6.96
	1410		2.50	7.25	2.83	22.32	-79	79.2	0.10	7.42
	1415		3.75	7.26	2.94	23.06	-93	83.1	0.04	7.80
	1420		5.00	7.23	3.10	22.85	-96	81.7	0.00	8.20
	1425		6.25	7.29	3.19	22.75	-89	72.3	0.00	8.60
	1430		7.50	7.29	3.24	22.50	-77	63.1	0.00	8.94
	1435		8.75	7.29	3.27	22.28	-74	55.7	0.00	9.35
	1440		10.00	7.28	3.25	22.00	-76	54.5	0.00	9.70
	1445		11.25	7.28	3.21	21.44	-79	49.3	0.00	10.10
	1450		12.50	7.28	3.17	21.32	-84	47.0	0.00	10.45

COMMENTS _____

SAMPLE COLLECTION

Sample Date	7-30-25	Sample Time	0900
Sample ID	B00075-MW-EA-4R-07302025		
QA/QC Collected / ID	NA	Sample Appearance/Odor	Colorless, odorless, cloudy
Analyses	VOCs		
Sampler	T. Robinson	Signature	

6.1 PID
8.96 reduce

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Project No:	Page 2 of 2
Well ID MW-EA-4R	Date	Time
Well Site Description		
Weather/Temp	See Pg. 1	
Field Technician		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	Screened Interval (ft bgs)
Well Diameter (in.)	Nominal Borehole Diameter (in.)

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	Gallons per foot of depth
Depth to product (ft)	Static water level (ft)
Product column height (ft)	Water column height (ft)
Product volume (Gallons)	Water volume (Gallons)

See Pg. 1

PURGE INFORMATION

Pump Type / ID		Water Quality Meter Type / ID
Pump Intake Depth (ft)	See Pg. 1	Flow-Thru Cell Volume (L)
Purge Start Time		Appearance/Odor (Start)
Purge End Time		Appearance/Odor (End)
Average Purge Rate (mL/min)		Total Drawdown (ft)
Well Went Dry (Y/N) Y	Stop Time 1501	Volume removed (L)
Recovery Time	Recovery Rate (mL/min)	Restart Purge Time
Total Volume Removed (L)		Total Pump Time (min)

Date	Time	Purge Rate (mL/min)	Volume Removed (LPM)	pH (+/-0.1)	Cond. (µS/cm) (+- 3%)	Temp. (°C) (+- 3%)	ORP (mV) (+/- 10)	Turbidity (NTU) +/-10% or <5 NTU	DO (mg/L) +/-10% or <0.5 mg/L	Depth to Water (ft below TOC)
	1455		13.25	7.26	3.19	19.64	-98	38.3	0.00	11.10
	1500		15.00	7.24	3.19	20.35	-92	20.3	0.88	11.40
				well went dry						
	0900	Bailer		6.95	3.33	21.85	39	9.1	1.6	8.96

COMMENTS _____

SAMPLE COLLECTION

Sample Date 7-30-25	Sample Time 0900
Sample ID BOU075-MW-EA-4R-07302025	
QA/QC Collected / ID NA	Sample Appearance/Odor Cloudy, Colorless, Odorless
Analyses VOCs	
Sampler TRobson	Signature

WELL PURGING AND SAMPLING RECORD

Site Name/Location	Zip Zip Mini Mart	Project No: B00075	Page 1 of 1
Well ID	MW-EA-6	Date 7-30-25	Time 1010
Well Site Description	In front of DBR warehouse		
Weather/Temp	85°F Clear		
Field Technician	T. Robinson		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	425.93	Screened Interval (ft bgs)	5-12
Well Diameter (in.)	2	Nominal Borehole Diameter (in.)	6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	10.57	Gallons per foot of depth	0.163
Depth to product (ft)		Static water level (ft)	7.21
Product column height (ft)	NA	Water column height (ft)	3.36
Product volume (Gallons)		Water volume (Gallons)	0.55

PURGE INFORMATION

Pump Type / ID	Peristaltic / 20857	Water Quality Meter Type / ID	Horiba / 215823
Pump Intake Depth (ft)	5.57 → dropped to 8.57	Flow-Thru Cell Volume (L)	1
Purge Start Time	1015	Appearance/Odor (Start)	Cloudy, colorless, odorless
Purge End Time	1032	Appearance/Odor (End)	Cloudy, colorless, odorless
Average Purge Rate (mL/min)	250	Total Drawdown (ft)	1.79
Well Went Dry (Y/N)	Y	Stop Time 1032	Volume removed (L) 4.25
Recovery Time	1338 min	Recovery Rate (mL/min) 0.73	Restart Purge Time Bailer
Total Volume Removed (L)	4.25	Total Pump Time (min)	17

Date	Time	Purge Rate (mL/min)	Volume Removed (LPM)	pH (+/-0.1)	Cond. (µS/cm) (+- 3%)	Temp. (°C) (+- 3%)	ORP (mV) (+/- 10)	Turbidity (NTU) +/-10% or <5 NTU	DO (mg/L) +/-10% or <0.5 mg/L	Depth to Water (ft below TOC)
7-30-25	1015	250	0	7.41	9.61	22.88	-133	53.9	0.0	7.60
	1020		1.25	7.52	9.71	22.28	-155	27.8	0.0	7.90
	1025		2.50	7.52	9.76	21.88	-161	27.0	0.0	8.20
	1030		3.75	7.54	9.55	21.02	-168	30.6	6.0	9.00
	~~1030~~ 1032				DRY					
Bailer										
7-31-25	0850	—	—	6.49	9.52	19.35	46	39.8	7.02	~~RH~~ TR 7.33

COMMENTS _____

SAMPLE COLLECTION

Sample Date	7-31-25	Sample Time	0848
Sample ID	B00075-MW-EA-6-07312025		
QA/QC Collected / ID	NA	Sample Appearance/Odor	Cloudy, good, odorless
Analyses	VOCs		
Sampler	T. Robinson	Signature	

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WELL PURGING AND SAMPLING RECORD

Site Name/Location	7.9 2.1	Project No: B00075	Page 1 of 1
Well ID	MW-EA-9	Date 7-29-25	Time 1038
Well Site Description	In front of DBR		
Weather/Temp	86°F slightly cloudy		
Field Technician	T. Robinson, M. Moore		

WELL CONSTRUCTION DATA

TOC Elevation (ft amsl)	426.08	Screened Interval (ft bgs)	8-18
Well Diameter (in.)	2	Nominal Borehole Diameter (in.)	6

FIELD MEASUREMENTS

Well Depth (gauge after sampling) (ft)	17.95	Gallons per foot of depth	0.163
Depth to product (ft)	NA	Static water level (ft)	8.20
Product column height (ft)	NA	Water column height (ft)	9.75
Product volume (Gallons)	NA	Water volume (Gallons)	1.59

PURGE INFORMATION

Pump Type / ID	Proactive / 20857	Water Quality Meter Type / ID	Horiba / 215823
Pump Intake Depth (ft)	12.95	Flow-Thru Cell Volume (L)	1
Purge Start Time	1040	Appearance/Odor (Start)	Cloudy, Grey, Odorless
Purge End Time	1135	Appearance/Odor (End)	Clear, Odorless, Colorless
Average Purge Rate (mL/min)	250	Total Drawdown (ft)	3.75
Well Went Dry (Y/N)	N	Stop Time NA	Volume removed (L) NA
Recovery Time	NA	Recovery Rate (mL/min) NA	Restart Purge Time NA
Total Volume Removed (L)	13.75	Total Pump Time (min)	55

Date	Time	Purge Rate (mL/min)	Volume Removed (LPM)	pH (+/-0.1)	Cond. (µS/cm) (+- 3%)	Temp. (°C) (+- 3%)	ORP (mV) (+/- 10)	Turbidity (NTU) +/-10% or <5 NTU	DO (mg/L) +/-10% or <0.5 mg/L	Depth to Water (ft below TOC)
7-29-25	1040	~~0.250~~	0	7.05	3.57	20.10	-57	568	3.62	8.82
	1045		1.25 ~~0.25~~	7.21	3.44	19.70	-94	475	3.26	9.00
	1050		2.50 ~~0.5~~	7.30	3.39	19.83	-91	410	3.32	9.02
	1055		3.75 ~~0.75~~	7.31	3.32	19.81	-86	446	3.53	9.3
	1100		5.00	7.30	3.29	19.87	-79	436	3.62	9.6
	1105		6.25	7.15	2.87	19.73	-88	19.7	0.3	10.1
	1110		7.50	7.17	2.99	19.97	-100	8.3	0.08	10.36
	1115		8.75	7.21	3.11	20.19	-110	5.3	0.03	10.60
	1120		10.00	7.29	3.21	19.87	-118	5.1	0.00	10.95
	1125		11.25	7.27	3.32	19.78	-125	4.9	0.00	11.28
	1130		12.50	7.28	3.35	19.81	-127	4.7	0.00	11.55
	1135		13.75	7.29	3.39	19.79	-130	4.8	0.00	11.95

COMMENTS

SAMPLE COLLECTION

Sample Date	7-29-2025	Sample Time	1135
Sample ID	B00075-MW-EA-9-07292025		
QA/QC Collected / ID	MS/MSD	Sample Appearance/Odor	Clear, Odorless, Colorless
Analyses	VOCs		
Sampler	TR, MM	Signature	