February 2, 2023 ***Electronic Submittal***

Geotechnical
Environmental
Water Resources
Ecological

Ms. Taylor Monnin
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue – 3rd Floor
Buffalo, New York 14203

Subject: Site Management Periodic Review Report and IC/EC Certification Submittal – 2022, Revised PRR
Mineral Springs Road MGP Site (NYSDEC Site #V00195)

Dear Ms. Monnin:

On behalf of National Fuel Gas (NFG), GEI Consultants, Inc. P.C. (GEI) is submitting the attached revised Periodic Review Report (PRR) and IC/EC Certification Submittal for the subject site for the reporting period September 15, 2021 through November 15, 2022. The report was modified according to responses GEI submitted on February 2, 2023 after receiving Department comments on January 18, 2023. The IC/EC Certification pages remain unchanged as the responses did not warrant re-certification.

Please contact Mr. Brad Walker of NFG at 716-857-7247 if you have any questions.

Sincerely yours,
GEI CONSULTANTS, INC., P.C.

Richard H. Frappa, P.G.
Senior Consultant

Kelly R. McIntosh, Ph.D., P.E.
Senior Consultant

Enclosure
cc: A. Caprio – NYSDEC (1 electronic copy - email)
B. Walker – NFG (1 hardcopy - UPS,1 electronic copy - email)
T. Alexander - NFG (1 electronic copy – email)

GEI Consultants

Consulting
Engineers and
Scientists

Site Management Periodic Review Report and IC/EC Certification (2022)

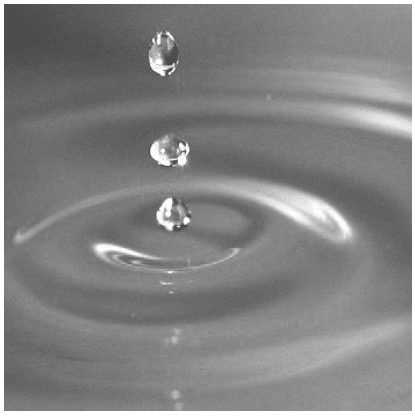
NFG - Mineral Springs MGP - Site No. V00195
West Seneca, New York

Submitted to:
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
Buffalo, New York

Submitted by:
GEI Consultants, Inc., P.C.
100 Sylvan Pkwy, Suite 400
Amherst, NY 14228

On behalf of:
National Fuel Gas Distribution Corporation
Williamsville, New York 14221

December 2022 (Revised February 2023)
Project 2001597



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1. Executive Summary

GEI Consultants, Inc., P.C. (GEI) was retained to conduct and prepare the 2022 Site Management Periodic Review Report (PRR) and IC/EC Certification submittal for the Mineral Springs Road Former Manufactured Gas Plant (MGP) Site located in West Seneca, New York. This PRR presents and evaluates the results of operation and maintenance (O&M) activities performed at the site over the past year and since completion of remedial actions. The O&M activities include visual inspections of remediated areas, semiannual groundwater and surface water quality monitoring, manual checks on DNAPL recovery from well RTW-1, and cap maintenance activities.

In conducting this periodic review, GEI reviewed the components of the O&M Plan established for the site in May 2002 (serves as the Site Management Plan or {SMP}) to determine proper implementation of the O&M Plan activities for the compliance period September 15, 2021 to November 15, 2022. In a letter from New York State Department of Environmental Conservation (NYSDEC) dated October 4, 2022, NYSDEC established this new compliance period which was previously September 16 to September 16, annually. This change was additionally confirmed in a letter from NYSDEC on November 9, 2022.

GEI has determined the following:

- ICs/ECs have been in place and effective.
- Inspections were performed as required.
- Groundwater and surface water monitoring (including mobile DNAPL recovery) was implemented as required.

Based upon the inspections and compliance with the O&M Plan, the site remedy continues to meet the remedial objectives for the site.

Recommendations for the 2023 monitoring period include:

- Continued assessment of total and free cyanide concentration trends at well MW-16 and MW-20 and surface water quality at downstream location SW-01.
- Continued cap maintenance and repair (as necessary).
- Repairs to the cable marking the edge of the Clay Cap between bollards east of Building 14. A new bollard will be installed outside the southwest corner of the Clay Cap near the southern perimeter fence to allow placement of a cable between the new bollard and the existing bollard in the northwest corner to restrict vehicle access along the west side of the cap. The cable will be

equipped with a lock to allow permitted access along the right of way. Signage indicating restrictions on digging and vehicle access should also be added around the perimeter of the Clay Cap.

- Repairs to the Clay Cap adjacent to Building 14, necessitated by damage caused by work at the base of the transmission tower by a National Grid service crew, was documented and repairs are scheduled for December 2022 (discussed in Section 3.1).

2. Site Overview

2.1 Site Description

The Site is currently an active National Fuel Gas (NFG or National Fuel) service center consisting of approximately 81 acres and includes seven active buildings, numerous parking areas, pipeline equipment and staging areas, and undeveloped areas. The Site location and Site layout are shown in Figures 1 and 2, respectively.

NFG completed remedial construction which included source removal and containment in 2001 under a Voluntary Cleanup Agreement (VCA) No. B9-0538-98-08 between NFG and the New York State Department of Environmental Conservation (NYSDEC). Remedial and engineering control features include perimeter fencing, six asphalt caps, a clay cap, an HDPE cap, and a capped drainage feature consisting of both clay and HDPE caps. National Fuel performs operations and maintenance activities for the remedy in accordance with the Final Engineering Report, Volume II – Operations and Maintenance Plan, dated May 2002 (O&M Plan).

2.2 Site Conditions and Investigation History

The Site is relatively flat-lying. An unnamed surface water drainage feature, designated as a Class D stream, is situated along the southern site boundary and flows in a westward direction. The stratigraphy of the site in order of occurrence is:

- soil fill (4 to 8 feet in thickness);
- approximately 10 feet of a laterally extensive clay (referred to as the upper confining clay layer {UCL});
- silt, sand, and gravel; and
- a lower confining clay layer (LCL), and bedrock.

Overburden groundwater is typically encountered 5 to 12 feet below ground surface and fluctuates approximately 2 feet seasonally. Overburden groundwater flow is generally to the north and northwest toward Mineral Springs Road, Calais Street, and the Buffalo River. Average overburden groundwater velocity across the site was estimated to be approximately 0.06 feet per day (22 feet per year). The direction of groundwater flow for the two semiannual monitoring events (April and August) is shown on Figure 3A and 3B, respectively.

In 1990 and 1995, investigations and soil remediation activities were performed near an oil-water separator pit in the central area of the site. In 1997 and 1998, a Preliminary Site Assessment (PSA) and a follow-up PSA Addendum were conducted. The assessments concluded that soil and groundwater at the site were impacted by MGP residues including dense non-aqueous phase liquids (DNAPL) and purifier waste materials containing cyanide.

2.3 Site Remedial Program Summary

An interim remedial measure (IRM) was conducted at the Site in December 1997 and 407 tons of purifier residuals were removed from the southwest corner of the Site. On August 4, 1998 NFG submitted a Voluntary Cleanup Agreement (VCA) program application (VCA number B9-0538-98-08) which was executed by NFG and NYSDEC (November 7, 1999). A Remedial Design Work Plan was subsequently prepared and implemented and the following remedial tasks were completed in 2002:

- Excavation and proper off-site disposal of 32,200 tons of contaminated soil, rubble, and purifier waste.
- Construction of engineering controls including 39,369 square feet of clay cap, 76,144 square feet of geomembrane and 130,890 square feet of asphalt cap over areas where purifier waste was located.
- Capping of hydrocarbon seeps within the Eastern Drainage Ditch (EDD), including construction of 640 linear feet of geosynthetic cap and 750 linear feet of clay cap.
- Installation of additional chain link security fence around the site perimeter.
- Implementation of site use and deed restrictions.
- Collection, treatment, and disposal of 207,000 gallons of contaminated groundwater.

Details of the remedial actions are presented in the Final Engineering Report (FER) prepared by The RETEC Group (May 2002).

Following remedial activities completed in 2002, blue-stained soils near Building 3 were identified and investigated in 2008 and a 24,000 square foot asphalt cap was installed immediately to the east of the existing building (Building 3 East Asphalt Cap {B3EAC}). Work to install the cap in the area occurred in June and July 2008. The new cap was designated as the Building 8 West Asphalt Cap (B8WAC). In July 2013, soil impacted with purifier wastes was observed in the southwestern corner of the site, outside of the perimeter fence on the western and southwestern site boundaries, near residential properties on Calais Street. NFG completed a series of Corrective Measure (CM) activities in the area where impacts were observed. CM activities to address purifier waste impacted soils in the southwest corner near the west property

line were implemented in November 2013. CM activities to remove fill materials that exceeded the NYSDEC Residential Soil Cleanup Objectives were implemented in October 2014. Remedial areas are shown on Figure 2.

2.4 O&M Plan

O&M requirements for the Site are documented in the NYSDEC-approved O&M Plan dated May 2002 which also serves as the SMP for the site. Components of the SMP for the Mineral Springs Road Site include:

Activity	Frequency	Description	Notes
Groundwater /Surface Water Monitoring	Semiannual	Groundwater and surface water quality monitoring (see Table 1).	Frequency reduced from 3Xs to 2Xs/year in 2005 with NYSDEC approval.
DNAPL Recovery Test Well	Semiannual	DNAPL recovery from well RTW-1.	Manual periodic removal since 2002 as de minimis volume is recovered.
Site Inspections	Annual	Maintenance and inspection of the following remedial components: • Clay, geomembrane, asphalt caps • Evidence of MGP residuals • Site perimeter fencing • Stream bordering south property line	
Reporting	Semiannual Annual	Groundwater and Surface Water Monitoring Report PRR (O&M)	Beginning in 2011, a PRR is submitted to meet NYSDEC DER-10 requirements.

These O&M requirements were conducted between the reporting period between September 15, 2021 and November 15, 2022.

3. Remedy Performance Evaluation

The objectives of the remedial actions completed at the Site include the following: 1. Prevent human contact with compounds of concern (COCs) in soil and sediment; 2. Prevent human contact or ingestion of COCs in groundwater; and 3. Prevent leaching of COCs from MGP residuals in soil to groundwater and surface water.

The remedial action objectives were achieved through implementation of engineering controls (ECs) through soil removal (excavation) and capping areas where MGP residuals remain in place. Additionally, implementation of institutional controls (ICs) effectively limit site use to minimize human exposure to COCs.

The remedial performance is evaluated based on implementation of activities described in Section 2.4 which consisted of the following activities taking place between September 15, 2021 and November 15, 2022:

- Annual inspection on April 19, 2022 documented in a technical memorandum provided to NFG dated June 21, 2022. The annual inspection is provided as Appendix A.
- Groundwater monitoring events on April 19 and 20, 2022 and August 17 and 19, 2022.
- Submittal of groundwater and surface water monitoring reports on August 8, 2022 and November 8, 2022. Electronic data submittals to NYENVDATA@dec.ny.gov were completed with notification to Region 9 NYSDEC.
- 2022 cap maintenance activities included routine mowing and asphalt sealing repairs discussed in Section 3.1 below.

3.1 Annual Site Inspection

The 2022 annual inspection of the Mineral Springs Former MGP was conducted by Kelly McIntosh, P.E. and Richard Frappa, P.G. of GEI on April 19, 2022 with Brad Walker (National Fuel Gas) in attendance. The NYSDEC was notified by NFG in advance of the inspection but did not participate in the walk-through. The area inspected is shown on Figure 2 and annual inspection findings with photographs are provided in the technical memorandum included in Appendix A.

The inspection summary with maintenance activities undertaken in 2022 are provided below for each of the caps.

Clay Caps

Clay Cap South of Building 14 (B14CC): No blue stained soil or erosion was observed. No animal burrows were observed. The vegetative cover was intact and free of trees and no hydrocarbon sheens were observed. The cable between bollards east of Building 14 was observed to be missing and National Fuel gas reported that the cable will be replaced in 2023 and include appropriate signage.

South of the capped area, the subsidence associated with the collapse of the storm sewer on adjacent property appears stable relative to prior years and has not encroached to the cutoff wall or outer edge of the clay cap (as determined by soil borings completed for the Corrective Measures Work Plan). The stone placed in the area remains intact and has not subsided or eroded.

A National Grid subcontracted service crew was conducting O&M activity along the right of way on National Fuel property and caused localized damage to the Building 14 Clay Cap at the base of a National Grid electric transmission tower. On June 16, 2022, GEI inspected damage to the cap and observed hand excavations around the base of National Grid's electric transmission tower. Visual inspection of the area identified two of the four hand dug excavations at the base of each of the transmission tower steel supports (two northern most excavations) occurred within the Building 14 Clay Cap limits. Excavation depths around the transmission tower's northwestern and northeastern steel structure supports were approximately 2.0 feet and 1.0 feet, respectively and no purifier waste or MGP residuals were observed. GEI documented the damage to the clay cap in a memo to National Fuel Gas dated June 20, 2022. Recommendations for corrective action included the following:

- Containerize existing spoil piles in a 55-gallon DOT-approved drum for proper off-site disposal.
- Place geofabric on the excavation bottom to serve as a demarcation layer.
- Fill the excavation with low permeability clayey silt soil (maximum permeability of $1X10^{-6}$ cm/s) to a maximum height of 3-inches below the current grade. The clay-rich soil should be placed and compacted using hand tampers in two lifts to achieve a compacted thickness of 9-inches. A vibrating plate compactor should be used to compact the final surface of the clay.
- Topsoil should be placed to fill the remaining excavation, lightly compacted, and seeded with perennial grass.

Following discussions with National Grid and review and comment of their work plan for final repairs to the transmission tower, it was decided that repairs to the cap at base of the transmission tower will be completed in December 2022 and documented in the 2023 PRR.

Eastern Drainage Ditch Clay Caps (EDDCC): The clay caps situated north and south of the Eastern Drainage Ditch HDPE Cap (described below) were inspected. No blue stained soil or bank erosion was observed. No animal burrows were observed. The capped areas were free of trees and no hydrocarbon sheens were observed. The north and south culverts are open with no visible flow restrictions. Some litter accumulation was observed.

HDPE Caps

Eastern Drainage Ditch (EDDHC): No blue stained soil or bank erosion was observed. No animal burrows were observed. The HDPE area was free of trees and no hydrocarbon sheens were observed.

HDPE Cap in Eastern Swale (ESHC): No blue stained soil or edge erosion was observed. No animal burrows were observed. The vegetative cover was intact and free of trees. The capped areas were free of trees and no hydrocarbon sheens were observed. No visual integrity issues with the French Drain were observed. Maintenance recommended in the 2021 PRR to repair surficial tire tracks was observed to be completed as observed during the April 2022 inspection.

Asphalt Caps

Eastern Swale North Asphalt Cap (ESNAC): No blue stained soil or edge erosion was observed. Repaired surface cracks in the sealant were abundant. The sealant in some of the repaired cracks has weathered leaving small voids, but none appeared open through the asphalt wearing course layer. Minor sealing repairs would be appropriate. The area is currently used for pipe storage.

Eastern Swale South Asphalt Cap (ESSAC): No blue stained soil or edge erosion was observed. As noted above for the ESNAC, surface cracks in the sealant were observed, but none appeared open through the asphalt wearing course layer.

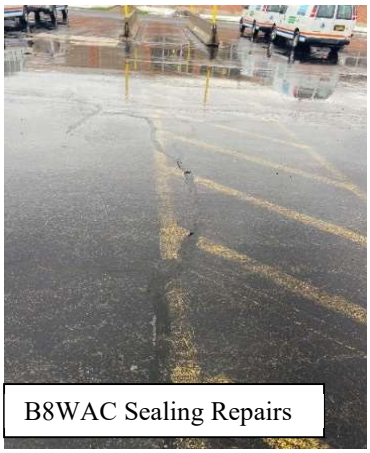
Building 10 Asphalt Cap (B10AC): This cap was repaired in 2018 and 2019 and appears to remain adequately sealed.

Building 3 South Asphalt Cap (B3SAC): This cap was repaved in 2021 (as recommended in the 2021 PRR) and remains free of cracking with no significant weathering observed. No edge erosion was observed.


B3EAC Sealing Repairs

Building 3 East Asphalt Cap (B3EAC): No blue stained soil or significant edge erosion was observed. Cap repairs including replacement of catch basin aprons were completed in 2019 and remain intact. Cap surface condition is generally good with some surficial cracking. Sealing repairs were completed the week of November 7, 2022 (see photo).

Former Building 8 West Asphalt Cap (B8WAC): No blue stained soil or edge erosion was observed. Cap repairs including replacement of catch basin aprons were completed in 2019 and remain intact. Cap surface condition is generally good with some surficial cracking. Sealing repairs were completed the week of November 7, 2022 (see photo).


B8WAC Sealing Repairs

Other Areas

Backfill in formerly excavated areas was intact. No ponding of surface water was observed during the inspection. No hydrocarbon sheens were observed in the Class D Stream.

Perimeter fencing was observed to be in good condition on the west side of the property. As noted during the April 2022 inspection, a fallen tree was observed to have fallen on the barbed wire top guard at the central section of the south perimeter fence. The tree compressed the barbed wire but no damage to the chain-link mesh or the top rail was noted. The tree will be removed in the Spring of 2023 when ground conditions (snow/ice) improve for safe access. Also, near this location, the fence post at the gate spanning the stream had come loose. Repairs to the gate were made in summer of 2022 as shown in the photograph provided.

The stone cover and fencing at the Corrective Measures Area (CM) at the southwest corner of the property was observed to be in good condition.

The DNAPL shed on the east side of the property was observed to have a deteriorated door frame. National Fuel Gas reported that repairs will be made in 2023.

The cable marking the edge of the Clay Cap between bollards east of Building 14 was observed to be missing and will be replaced. In addition, a new bollard should be installed outside the southwest corner of the Clay Cap near the southern perimeter fence to allow placement of a cable between the new bollard and the existing bollard in the northwest corner to restrict vehicle access along the west side of the cap. The cable will be equipped with a lock to allow permitted access along the right of way. Signage indicating restrictions on digging and vehicle access should also be added around the perimeter of the Clay Cap. National Fuel Gas reports that these items will be addressed during the 2023 PRR period.

In a letter dated November 9, 2022, National Fuel Gas provided notification to NYSDEC of planned excavation activities at the facility in support of gas pipeline repair and maintenance. The planned excavation occurs in non-historic MGP process areas and is scheduled to be completed during the 2023 PRR period. National Fuel Gas will implement community air monitoring during excavation, soil handling and backfilling activities in accordance with NYSDEC DER-10 guidelines Dept. of Health protocols. The work will be documented in the 2023 PRR report.

3.2 Groundwater and Surface Water Quality Monitoring

Groundwater and surface water quality monitoring results for the April and August 2022 semiannual monitoring events were documented in reports submitted to the NYSDEC on August 8, 2022 and November 8, 2022 respectively. GEI submitted an EQuIS format electronic data delivery (EDD) file for each sampling event to the NYSDEC.

Observations from groundwater and surface monitoring results follow:

Groundwater and Surface Water Flow – Heads across the Site fluctuate seasonally approximately one to two feet. The groundwater flow direction occurred predominantly in a north and west direction during both monitoring events in 2022 and were consistent with prior monitoring. The measured surface water elevations in the Class D stream were higher than nearby measured groundwater elevations indicating “losing stream conditions” in April and August 2022..

COCs in Groundwater and Surface Water – Appendix B summarizes time series plots of groundwater and surface water test results inclusive of the 2022 spring and summer monitoring events. Observations from 2022 groundwater and surface water monitoring are summarized below.

On-Site Wells In or Near Capped Areas *(Wells MW-07*, MW-10*, MW-11A*, MW-12, MW-16, MW-19*) - * indicates sample analysis includes BTEX and PAHs)*

- BTEX compounds detected in on-site wells near capped areas are at concentrations similar to those detected in recent years. A stable to declining BTEX concentration trend is observed from historic data in all wells analyzed for BTEX.
- Low concentrations of PAHs were detected above water quality comparison criteria in on-site wells near capped areas. The detected concentrations were consistent with historical analytical data and concentration trends are consistent with BTEX trends.
- Total cyanide concentrations in monitoring well MW-11A during 2022 were comparable to both 2020 and 2021 results and exhibit slight seasonality between the spring and summer sampling events. No increasing concentration trend is identified.
- Total cyanide concentrations in well MW-12 were overall slightly higher in 2022 compared to concentrations since 2017. The concentrations detected in 2022 remain below historic highs detected in 2005.
- Total cyanide concentrations at well MW-16 were elevated compared to the historic trend but are lower than the historic high concentration detected during the Spring 2021 sampling event. While elevated compared to historic results, the 2022 sampling results do not indicate a continuing increasing concentration trend. As summarized below, no apparent impact has been identified at surface water sample location SW-01 which is adjacent to the Clay Cap south of Building 14 and there are no receptors for the groundwater.
- Free cyanide concentrations at each location were within the range of historic concentrations.

Wells at Site Perimeter:
(Wells MW-13, MW-14, MW-17*, MW-20, MW-21, MW-22, MW-23*) - * indicates sample analyses include BTEX and PAHs)*

- BTEX compounds were not detected above groundwater quality comparison criteria in downgradient perimeter wells in 2022. Trace level concentrations of two PAH

compounds benzo-(b)fluoranthene (spring and summer 2022 events) and chrysene (Spring 2022 event) were detected above water quality comparison criteria in well MW-23.

- Consistent with prior years, total cyanide was detected at concentrations below the water quality comparison criteria (200 µg/L) in upgradient well MW-17. Its presence is considered representative of background conditions. Total cyanide was detected in downgradient wells MW-13, MW-14, MW-20, MW-21, MW-22, and MW-23 at concentrations above water quality comparison criteria in 2022. The highest concentrations were detected in wells MW-20 and MW-22 during the spring event and in wells MW-21 and MW-22 during the summer event. The total cyanide 5-year trend is stable or decreasing in upgradient and downgradient perimeter wells.
- Free cyanide was detected in the background well MW-17 during the summer 2022 monitoring event. Free cyanide was detected in downgradient monitoring wells during each 2022 sampling event except for MW-14 and MW-17 during the Spring 2022 monitoring event. Free cyanide concentrations do not exhibit an increasing concentration trend.

Surface Water:

- BTEX and PAH compounds were below NYSDEC comparison criteria for ambient surface water quality in surface water (both upstream and downstream) in 2022.
- Total and free cyanide concentrations were below NYSDEC comparison criteria for ambient surface water quality in surface water in 2022.
- Considering the total cyanide concentrations in groundwater at on-site well MW-16 located near surface water sampling location SW-01, Site groundwater has no measurable impact on downstream surface water quality.

3.3 DNAPL Recovery System

The DNAPL recovery system at RTW-1 was gauged using a threaded steel rod to assess DNAPL accumulation during the spring and summer 2022 monitoring events. No visual staining was observed on the rod bottom. Rigid tubing was lowered to the base of the well and pumped using peristaltic methods. Approximately two liters of water were evacuated. The water contained only trace DNAPL in the form of "blebs", visually estimated to be less than 1% of total volume. No discrete layer of DNAPL was observed to form in the evacuated water. Based on the testing performed, DNAPL accumulation was not identified in 2022.

3.4 Cap Maintenance

Cap inspection and maintenance activities during the reporting period were described in Section 3.1. Minor cap repairs in the area adjacent to Building 14 are scheduled for December 2022 as described in Section 3.1. Mowing was routinely performed. No further actions are required.

4. IC/EC Compliance

4.1 IC/EC Requirements

ICs include the following;

- Compliance with VCA No. B9-0538-98-08 between NFG and the New York State Department of Environmental Conservation (NYSDEC).
- Implementation of the Site O&M Plan (2002).
- Monitoring and inspection to assess the performance and effectiveness of the remedy.

The Site is a secure service center owned by NFG with restricted property access.

ECs include the following;

- Contaminated soil/MGP residual removal and in-place capping consisting of various clay, HDPE, and asphalt cover systems.
- Maintenance of the cover systems.
- Groundwater and surface water quality monitoring.
- Collection of mobile DNAPL at RTW-1.

4.2 IC/EC Compliance

The NYSDEC-approved O&M Plan is in place. All required inspections, monitoring, and maintenance activities were performed during this reporting period in accordance with the plan and subsequent NYSDEC-approved modifications.

4.3 IC/EC Certification

The IC/EC Certification is included in Appendix C.

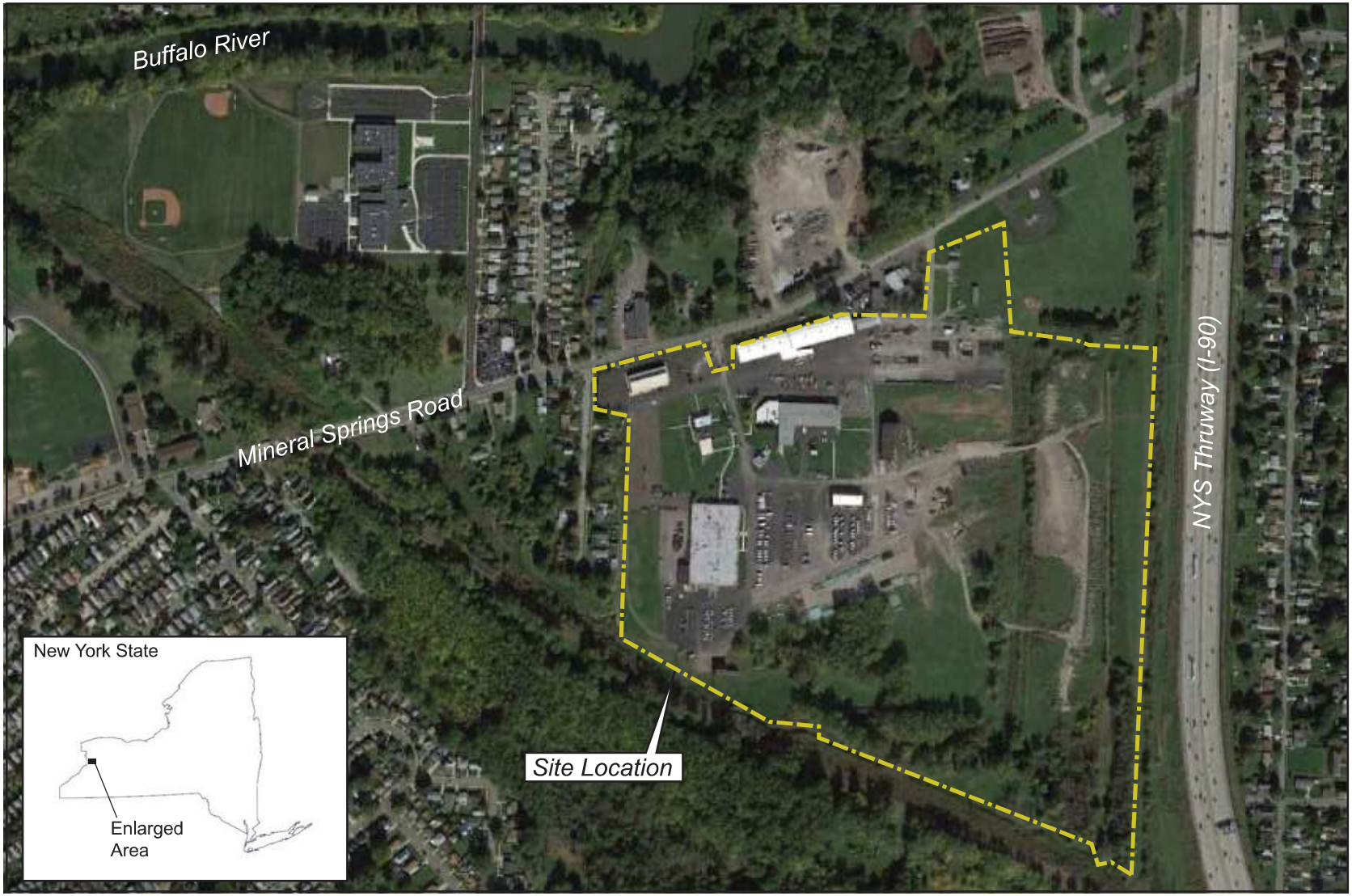
5. Conclusions and Recommendations

Each component of the O&M Plan dated May 2002 and amendments, collectively regarded as the SMP, were in compliance for the reporting period September 15, 2021 to November 15, 2022. The ICs/ECs have been in place and effective and inspections and monitoring, were performed as required. Minor outstanding maintenance/repair activities as outlined in Section 3.1 above will be documented during the 2023 PRR period.

Based upon the inspections and compliance with the SMP, the site remedy continues to meet the remedial objectives for the site.

GEI recommends continued monitoring of trends of total and free cyanide concentrations at well MW-16 and the surface water quality at SW-01, adjacent to MW-16, through continued sampling as required in the SMP.

Figures



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Notes:
Aerial Imagery Sourced from Google Maps (http://www.maps.google.com) dated 2016.

National Fuel Gas Corporation
Mineral Springs Facility

West Seneca, New York

GEI Consultants

Project 2001597

SITE LOCATION

February 2023

Figure 1

PROPERTY LINE
PERIMETER FENCE
MW-17
SW-05
SW-04
SOIL PLACEMENT AREA
MW-18
NORTH CULVERT
EDD
EDDHC
SW-03
SW-02
RTW1
ETBE
MW-12
MW-11A
SOUTH CULVERT
CLASS D STREAM
ESNAC
ESHC
FORMER BLDG 11
MW-19
SETLE
MW-22
FRENCH DRAIN
ESSAC
NTBE
CTBE
BLDG 10
B10AC
BLDG 9
SPE
WTBE
FORMER BLDG 8
PERIMETER FENCE
MW-13
BLDG 2
BLDG 1
B8WAC
MW-10
MW-7
B3EAC
APRE
CC
MW-16
SW-01
BLDG 14
MINERAL SPRINGS ROAD
DPE
BLDG 5
BLDG 3
B3SAC
COLLAPSED/SEPARATED STORM SEWER AREA
MW-23
OVERHEAD TRANSMISSION TOWER
BLDG 4
SWPRE
MW-15
BURIED ELECTRIC LINE
MW-14
CM
CALAIS STREET
MW-21
MW-20
PERIMETER FENCE

LEGEND

	EXISTING STRUCTURE
	REMEDIAL CONSTRUCTION
	FORMER STRUCTURE
	EXISTING EXCAVATION LIMITS
MW-7	MONITORING WELLS
SW-01 *	SURFACE WATER SAMPLE LOCATION (ASTERISK INDICATES HISTORIC SUPPLEMENTAL UPSTREAM SUFACE WATER SAMPLING LOCATION)
APRE	ADDITIONAL PURIFIER RESIDUALS EXCAVATION
B3EAC	BUILDING 3 EAST ASPHALT CAP
B3SAC	BUILDING 3 SOUTH ASPHALT CAP
B8WAC	BUILDING 8 WEST ASPHALT CAP
B10AC	BUILDING 10 ASPHALT CAP
CC	CLAY CAP
CM	CORRECTIVE MEASURE WEST PROPERTY LINE
CTBE	CENTRAL TAR BOILS EXCAVATION
DPE	DIESEL PAD EXCAVATION
EDD	EASTERN DRAINAGE DITCH
ESHC	EASTERN SWALE HDPE CAP
ESNAC	EASTERN SWALE NORTH ASPHALT CAP
ESSAC	EASTERN SWALE SOUTH ASPHALT CAP
ETBE	EASTERN TAR BOILS EXCAVATION
NTBE	NORTHERN TAR BOILS EXCAVATION
RTW1	RECOVERY TEST WELL AND DNAPL SHED
SETLE	SOUTHEASTERN TAR LENSES EXCAVATION
SPE	SEPARATOR PITS EXCAVATION
SWPRE	SOUTHWEST RESIDUALS EXCAVATION
WTBE	WESTERN TAR BOILS EXCAVATION
	CLAY CAP
	ASPHALT CAP
	HDPE CAP
	REMEDIAL EXCAVATION

PREVIOUSLY REMEDIATED AREAS ARE SHADED RED

150 0 300

GRAPHIC SCALE IN FEET

Figure modified from original presented by AECOM titled "Site Figure- Mineral Springs Road Facility, National Fuel Gas:" dated 6/23/15.

National Fuel Gas Corporation
Mineral Springs Facility

West Seneca, New York

GEI

SITE LAYOUT

Project 2001597 | February 2023 | Figure 2

PROPERTY LINE
PERIMETER FENCE
MW–17 (582.58)
SW–05
SW–04
SOIL PLACEMENT AREA
MW–18
NORTH CULVERT
EDD
EDDHC
582
583
584
SW–03
SW–02 (584.17)
(583.08) MW–11A
SOUTH CULVERT
CLASS D STREAM
RTW1
ETBE
MW–12 (581.65)
ESHC
ESNAC
FORMER BLDG 11
(582.07) MW–19
SETLE
MW–22 (581.45)
581
ESSAC
NTBE
CTBE
BLDG 10
B10AC
BLDG 9
SPE
WTBE
FORMER BLDG 8
PERIMETER FENCE
(579.83)
MW–13
580
BLDG 1
BLDG 2
B8WAC
MW–10 (581.76)
MW–7 (582.41)
B3EAC
AP E
CC
(582.58) MW–16
SW–01 (582.80)
BLDG 14
579
MINERAL SPRINGS ROAD
DPE
BLDG 5
BLDG 3
B3SAC
COLLAPSED/SEPARATED STORM SEWER AREA
(578.95) MW–23
582
OVERHEAD TRANSMISSION TOWER
578
BLDG 4
SWPRE
MW–15 (581.21)
BURIED ELECTRIC LINE
MW–14 (578.84)
581
CM
(577.95)
CALAIS STREET
(579.54)
580
MW–21
MW–20
579
578
PERIMETER FENCE

Figure modified from original presented by AECOM titled “Site Figure- Mineral Springs Road Facility, National Fuel Gas:” dated 6/23/15.

LEGEND

- EXISTING STRUCTURE
- REMEDIAL CONSTRUCTION
- FORMER STRUCTURE
- EXISTING EXCAVATION LIMITS
- MW–7 — MONITORING WELLS
- SW–01 — SURFACE WATER SAMPLE LOCATION
- (ASTERISK INDICATES HISTORIC SUPPLEMENTAL UPSTREAM SUFACE WATER SAMPLING LOCATION)
- (582.68) — GROUNDWATER ELEVATION (FASL, 4/19/2022)
- (NA) — MONITORING LOCATION WAS DRY
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- APRE — ADDITIONAL PURIFIER RESIDUALS EXCAVATION
- B3EAC — BUILDING 3 EAST ASPHALT CAP
- B3SAC — BUILDING 3 SOUTH ASPHALT CAP
- B8WAC — BUILDING 8 WEST ASPHALT CAP
- B10AC — BUILDING 10 ASPHALT CAP
- CC — CLAY CAP
- CM — CORRECTIVE MEASURE WEST PROPERTY LINE
- CTBE — CENTRAL TAR BOILS EXCAVATION
- DPE — DIESEL PAD EXCAVATION
- EDD — EASTERN DRAINAGE DITCH
- ESHC — EASTERN SWALE HDPE CAP
- ESNAC — EASTERN SWALE NORTH ASPHALT CAP
- ESSAC — EASTERN SWALE SOUTH ASPHALT CAP
- ETBE — EASTERN TAR BOILS EXCAVATION
- NTBE — NORTHERN TAR BOILS EXCAVATION
- RTW1 — RECOVERY TEST WELL AND DNAPL SHED
- SETLE — SOUTHEASTERN TAR LENSES EXCAVATION
- SPE — SEPARATOR PITS EXCAVATION
- SWPRE — SOUTHWEST RESIDUALS EXCAVATION
- WTBE — WESTERN TAR BOILS EXCAVATION
- CLAY CAP
- ASPHALT CAP
- HDPE (High Density Polyethylene) CAP
- REMEDIAL EXCAVATION

PREVIOUSLY REMEDIATED AREAS ARE SHADED RED

150 0 300

GRAPHIC SCALE IN FEET

National Fuel Gas Corporation
Mineral Springs Facility

West Seneca, New York

GEI Consultants

GROUNDWATER POTENTIOMETRIC SURFACE MAP-SPRING 2022

Project 2001597 | February 2023 | Figure 3A

PROPERTY LINE
PERIMETER FENCE
MW–17 (582.58)
SW–05
SW–04
SOIL PLACEMENT AREA
MW–18
NORTH CULVERT
EDD
581
582
580
EDDHC
SW–03
SW–02 (582.57)
(580.60)
MW–11A
RTW1
ETBE
SOUTH CULVERT
CLASS D STREAM
MW–12 (579.43)
ESHC
ESNAC
(579.67)
MW–19
SETLE
FORMER BLDG 11
MW–22 (579.26)
579
ESSAC
NTBE
CTBE
BLDG 10
B10AC
BLDG 9
SPE
WTBE
578
PERIMETER FENCE
(578.03)
MW–13
BLDG 1
FORMER BLDG 8
BLDG 2
B8WAC
MW–10
MW–7 (580.02)
(580.04)
B3EAC
AP E
CC
(580.39)
MW–16
SW–01 (NA)
BLDG 14
DPE
BLDG 5
BLDG 3
B3SAC
MINERAL SPRINGS ROAD
577
MW–23 (577.59)
BLDG 4
SWPRE
COLLAPSED/SEPARATED STORM SEWER AREA
OVERHEAD TRANSMISSION TOWER
MW–15 (579.10)
MW–14 (577.42)
BURIED ELECTRIC LINE
CM
CALAIS STREET
(576.64)
MW–21
MW–20 (576.79)
PERIMETER FENCE

Figure modified from original presented by AECOM titled “Site Figure- Mineral Springs Road Facility, National Fuel Gas:” dated 6/23/15.

LEGEND

- EXISTING STRUCTURE
- REMEDIAL CONSTRUCTION
- FORMER STRUCTURE
- EXISTING EXCAVATION LIMITS
- MW–7 — MONITORING WELLS
- SW–01 — SURFACE WATER SAMPLE LOCATION
- (ASTERISK INDICATES HISTORIC SUPPLEMENTAL UPSTREAM SUFACE WATER SAMPLING LOCATION)
- (582.68) — GROUNDWATER ELEVATION (FASL, 8/17/2022)
- (NA) — MONITORING LOCATION WAS DRY OR INACESSIBLE
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- APRE — ADDITIONAL PURIFIER RESIDUALS EXCAVATION
- B3EAC — BUILDING 3 EAST ASPHALT CAP
- B3SAC — BUILDING 3 SOUTH ASPHALT CAP
- B8WAC — BUILDING 8 WEST ASPHALT CAP
- B10AC — BUILDING 10 ASPHALT CAP
- CC — CLAY CAP
- CM — CORRECTIVE MEASURE WEST PROPERTY LINE
- CTBE — CENTRAL TAR BOILS EXCAVATION
- DPE — DIESEL PAD EXCAVATION
- EDD — EASTERN DRAINAGE DITCH
- ESHC — EASTERN SWALE HDPE CAP
- ESNAC — EASTERN SWALE NORTH ASPHALT CAP
- ESSAC — EASTERN SWALE SOUTH ASPHALT CAP
- ETBE — EASTERN TAR BOILS EXCAVATION
- NTBE — NORTHERN TAR BOILS EXCAVATION
- RTW1 — RECOVERY TEST WELL AND DNAPL SHED
- SETLE — SOUTHEASTERN TAR LENSES EXCAVATION
- SPE — SEPARATOR PITS EXCAVATION
- SWPRE — SOUTHWEST RESIDUALS EXCAVATION
- WTBE — WESTERN TAR BOILS EXCAVATION
- CLAY CAP
- ASPHALT CAP
- HDPE (High Density Polyethylene) CAP
- REMEDIAL EXCAVATION

PREVIOUSLY REMEDIATED AREAS ARE SHADED RED

150 0 300

GRAPHIC SCALE IN FEET

National Fuel Gas Corporation
Mineral Springs Facility

West Seneca, New York

GEI Consultants

GROUNDWATER POTENTIOMETRIC SURFACE MAP-SUMMER 2022

Project 2001597 | February 2023 | Figure 3B

Tables

Table 1. Groundwater and Surface Water Sampling Summary
Mineral Springs Road MGP Site
National Fuel Gas Distribution Corporation
West Seneca, New York

Location	Cyanide, Total USEPA SW846 9014	Cyanide, Free USEPA SW846 9016	BTEX USEPA SW846 8260C	PAHs USEPA SW846 8270D	TSS SM2540D	Specific Conductivity Field Measurement	Water Elevation	Benchmark Elevation (ft. MSL, top of PVC casing)
Upgradient Site Perimeter								
MW-17	x	x	x	x		x	x	587.28
Downgradient Site Perimeter								
MW-13	x	x	x	x		x	x	591.85
MW-14	x	x				x	x	589.53
MW-15							x	590.93
MW-20	x	x				x	x	587.06
MW-21	x	x				x	x	587.84
MW-22	x	x				x	x	592.50
MW-23	x	x	x	x		x	x	589.28
Onsite Purifier Residuals Impacted Areas								
MW-12	x	x				x	x	591.40
MW-16	x	x				x	x	588.99
Onsite Hydrocarbon Impacted Areas								
MW-07			x	x		x	x	587.01
MW-10			x	x		x	x	587.61
MW-11A	x	x	x	x	x	x	x	589.78
MW-19			x	x		x	x	589.83
Onsite Surface Water								
SW-01	x	x	x	x	x	x	x	top of headwall = 587.0
SW-02	x	x	x	x	x	x	x [2]	SG-2 "0" -581.67
SW-03 [2,3]	x [2]	x [2]			x [2]	x [2]		
SW-04 [2,3]	x [2]	x [2]			x [2]	x [2]		
SW-05 [2,3]	x [2]	x [2]			x [2]	x [2]		
QA/QC Samples (frequency)								
Trip Blank			x					(one per shipment)
Field Duplicate	x	x	x	x				(one per event)
Equipment Blank	x	x	x	x				(one per event)
DNAPL Recovery								
RTW-1	No Sample Collection							(purge well of accumulated DNAPL)
Total	17	17	12	11	12	18	16	
Container, Preservative	250 mL plastic, NaOH	250 mL plastic amber, NaOH	40 mL VOA vial, HCl (x3)	250 mL glass amber, NP (x2)	500 mL plastic, unpreserved			

Notes:
1. Elevations are from the 2007 survey, except for MW-20, which was resurveyed in August 2009 due to a repair.
2. Supplemental sampling at this location was conducted in August 2017, April 2018, August 2018, April 2019 and August 2019.
3. Supplemental sampling at this location discontinued in 2020 and thereafter.

Appendix A

GEI April 2022 Site Inspection Memorandum

Memo

To:	Brad Walker– National Fuel Gas
From:	Kelly McIntosh, P.E.
C:	File
Date:	6/21/2022
Re:	Field Memo – Mineral Springs Site – Annual Inspection April 19, 2022
	GEI Project No. 2001597

Kelly McIntosh. P.E. (GEI) conducted the annual inspection of caps and covers at the Mineral Springs Site on the afternoon of April 19, 2022. Brad Walker (National Fuel Gas) attended the site walk-through. The NYSDEC was notified by Brad Walker approximately one week prior to the inspection. Annual inspection findings are summarized briefly below and are recorded on the attached Annual Site Inspection Form. Photo documentation is attached with a map showing photo location orientation on Figure 1. A Periodic Review Report (PRR) will be prepared and submitted later this year.

SUMMARY OF 2022 INSPECTION FINDINGS

No blue stained soil was observed at any location on-site. Other relevant observations at each area are presented below.

Clay Caps

Clay Cap South of Building 14 (B14CC): No blue stained soil or erosion was observed. No animal burrows were observed. The vegetative cover was intact and free of trees and no hydrocarbon sheens were observed (Photos 5, 8). The cable between bollards east of Building 14 was observed to be missing and should be replaced (Photo 7).

South of the capped area, the subsidence associated with the collapse of the storm sewer on adjacent property appears stable relative to prior years and has not encroached to the cutoff wall or outer edge of the clay cap (as determined by soil borings completed for the Corrective Measures Work Plan). The stone placed in the area remains intact and has not subsided or eroded (Photo 6).

Eastern Drainage Ditch (EDDCC): No blue stained soil or bank erosion was observed. No animal burrows were observed. The capped areas were free of trees (Photos 13, 14, 20) and no hydrocarbon sheens were observed. The north and south culverts are open with no visible flow restrictions. Some litter accumulation was observed.

HDPE Caps

Eastern Drainage Ditch (EDDHC): No blue stained soil or bank erosion was observed. No animal burrows were observed. The HDPE area was free of trees and no hydrocarbon sheens were observed (Photo 14).

HDPE Cap in Eastern Swale (ESHC): No blue stained soil or edge erosion was observed. No animal burrows were observed. The vegetative cover was intact and free of trees. The capped areas were free of trees and no hydrocarbon sheens were observed. No visual integrity issues with French Drain were observed (Photos 18, 19). Maintenance recommended in the 2021 PRR to repair surficial tire tracks was observed to be completed.

Asphalt Caps

Eastern Swale North Asphalt Cap (ESNAC): No blue stained soil or edge erosion was observed. Repaired surface cracks in the sealant were abundant. The sealant in some of the repaired cracks has weathered leaving small voids, but none appeared open through the asphalt wearing course layer (Photo 21). Minor sealing repairs would be appropriate. The area is currently used for pipe storage.

Eastern Swale South Asphalt Cap (ESSAC): No blue stained soil or edge erosion was observed. As noted above for the ESNAC, surface cracks in the sealant were observed, but none appeared open through the asphalt wearing course layer (Photo 16, 17). Minor sealing repairs would be appropriate.

Building 10 Asphalt Cap (B10AC): This cap was repaired in 2018 and 2019 and appears to remain adequately sealed (Photos 22, 23).

Building 3 South Asphalt Cap (B3SAC): This cap was repaved in 2021 (as recommended in the 2021 PRR) and remains free of cracking with no significant weathering observed (Photos 1, 2). No edge erosion was observed.

Building 3 East Asphalt Cap (B3EAC): No blue stained soil or significant edge erosion was observed. Cap repairs including replacement of catch basin aprons were completed in 2019 and remain intact (Photo 20). Cap surface condition is generally good with some surficial cracking (Photos 26, 27). Minor sealing repairs would be appropriate.

Former Building 8 West Asphalt Cap (B8WAC): No blue stained soil or edge erosion was observed. Cap repairs including replacement of catch basin aprons were completed in 2019 and remain intact. Cap surface condition is generally good with some surficial cracking (Photos 24, 25). Minor sealing repairs would be appropriate.

Other Areas

Backfill in formerly excavated areas was intact. No ponding of surface water was observed during the inspection. No hydrocarbon sheens were observed in the Class D Stream (Photos 11, 12).

Perimeter fencing was observed to be in good condition on the west side of the property (Photo 4). A fallen tree was observed to have caused damage to the barbed wire top guard at the central section of the south perimeter fence (Photo 9). Also, near this location, the fence post at the gate spanning the stream has come loose and should be repaired and secured (Photo 10). The functionality of the gate section should be assessed and repaired/modified as appropriate.

The stone cover and fencing at the Corrective Measures Area (CM) at the southwest corner of the property was observed to be in good condition (Photo 3).

The DNAPL shed on the east side of the property was observed to have a deteriorated door frame and should be repaired (Photo 15).

RECOMMENDATIONS

Recommendations of the 2022 inspection are summarized as follows:

1. The fence post at the gate spanning the stream on the southwest side of the property should be repaired and secured. The top guard damaged by the tree fall should also be repaired.
2. The DNAPL shed door frame should be repaired.
3. Minor surficial cracks in the Building 3 East, Building 8 West, Eastern Swale North, and Eastern Swale South asphalt caps should be sealed.
4. The cable marking the edge of the Clay Cap between bollards east of Building 14 was observed to be missing and should be replaced. In addition, a new bollard should be installed outside the southwest corner of the Clay Cap near the southern perimeter fence to allow placement of a cable between the new bollard and the existing bollard in the northwest corner to restrict vehicle access along the west side of the cap. The cable should be equipped with a lock to allow permitted access along the right of way. Signage indicating restrictions on digging and vehicle access should also be added around the perimeter of the Clay Cap.

Attachments: Figure 1 – Site Layout and Inspection Photo Locations
Photo documentation Log

LEGEND:

- Photo Direction
- Photo Locations

Spatial Reference
NAD 1983 2011 StatePlane New York West FIPS 3103 Ft US

0 100 200 400 Feet

1 inch = 200 feet

Annual Site Inspection 2022
Mineral Springs Facility
National Fuel Gas Distribution Corporation

Buffalo, New York

GEI Consultants

ANNUAL SITE INSPECTION
PHOTOGRAPH LOCATIONS

Project 2001597 | June 2022 | Fig. 1

Path: C:\Users\jhansen\OneDrive - GEI Consultants, Inc\Documents\GIS_Work\MISCELLANEOUS\National Fuel Sites\2001597 - NFG_Mineral Springs Facility\2001597 - NFG_Mineral Springs Facility.aprx

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 1	DATE: April 19, 2022	LATITUDE: 42.8583758054367	LONGITUDE: -78.7991554003199
DIRECTION: North	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Asphalt Cap South of Building 3 (Repaved 2021), Looking North			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 2	DATE: April 19, 2022	LATITUDE: 42.8584596402691	LONGITUDE: -78.799083628196
DIRECTION: East	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Asphalt Cap South of Building 3 (Repaved 2021), Looking East			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 3	DATE: April 19, 2022	LATITUDE: 42.8586870257381	LONGITUDE: -78.7995839770449
DIRECTION: South	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Corrective Measures Area: Stone Cover and Fencing in Good Condition (Looking South)			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 4	DATE: April 19, 2022	LATITUDE: 42.8594710330311	LONGITUDE: -78.8000650964245
DIRECTION: South	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: West Fence (Looking South)			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 5	DATE: April 19, 2022	LATITUDE: 42.8596248149725	LONGITUDE: -78.8000682002797
DIRECTION: East	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Clay Cap South of Building 14 Looking East			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 6	DATE: April 19, 2022	LATITUDE: 42.8581801234158	LONGITUDE: -78.7986070113478
DIRECTION: South	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Storm Sewer Settlement Area on Adjacent Property South of Building 14 Clay Cap			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 7	DATE: April 19, 2022	LATITUDE: 42.8580213475384	LONGITUDE: -78.79852322886
DIRECTION: West	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Missing Bollard Cable East of Building 14			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 8	DATE: April 19, 2022	LATITUDE: 42.8580083418864	LONGITUDE: -78.7979897851736
DIRECTION: Northeast	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Clay Cap South of Building 14 Looking Northeast			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 9	DATE: April 19, 2022	LATITUDE: 42.8575399438037	LONGITUDE: -78.7960439795171
DIRECTION: Southeast	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Barbed Wire Top Guard Damage: Center Area of South Perimeter Fence			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 10	DATE: April 19, 2022	LATITUDE: 42.8575246342408	LONGITUDE: -78.7960422973404
DIRECTION: South	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Damaged Gate at Stream: Center Area of South Perimeter Fence			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 11	DATE: April 19, 2022	LATITUDE: 42.8574934322786	LONGITUDE: -78.7959252857406
DIRECTION: East	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Unnamed Stream on property			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 12	DATE: April 19, 2022	LATITUDE: 42.8576153814153	LONGITUDE: -78.7948651038764
DIRECTION: Southeast	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Swale and stream junction			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 13	DATE: April 19, 2022	LATITUDE: 42.857928214599	LONGITUDE: -78.7947878531357
DIRECTION: North	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Eastern Drainage Ditch (Looking North)			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 14	DATE: April 19, 2022	LATITUDE: 42.8579318689309	LONGITUDE: -78.7948998148545
DIRECTION: North	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: HDPE Cap in Eastern Drainage Ditch (Looking North)			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 15	DATE: April 19, 2022	LATITUDE: 42.8588760316026	LONGITUDE: -78.7946733046444
DIRECTION: South	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: DNAPL Shed Door and Frame in Need of Repair			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 16	DATE: April 19, 2022	LATITUDE: 42.8594107338415	LONGITUDE: -78.7951129046073
DIRECTION: North	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Eastern Swale South Asphalt Cap			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 17	DATE: April 19, 2022	LATITUDE: 42.8605616273499	LONGITUDE: -78.7952287679867
DIRECTION: East	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Eastern Swale South Asphalt Cap			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 18	DATE: April 19, 2022	LATITUDE: 42.8606575611957	LONGITUDE: -78.7954984580022
DIRECTION: Northeast	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Eastern Swale HDPE Cap (Looking Northeast)			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 19	DATE: April 19, 2022	LATITUDE: 42.8609693472175	LONGITUDE: -78.7947173117384
DIRECTION: West	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Eastern Swale HDPE Cap Drain (Looking West)			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 20	DATE: April 19, 2022	LATITUDE: 42.8611428571119	LONGITUDE: -78.7947010523105
DIRECTION: Northeast	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Eastern Drainage Ditch Clay Cap (Looking Northeast)			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 21	DATE: April 19, 2022	LATITUDE: 42.8614277451553	LONGITUDE: -78.7946780540909
DIRECTION: South	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Eastern Swale North Asphalt Cap			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 22	DATE: April 19, 2022	LATITUDE: 42.8614655595414	LONGITUDE: -78.7949968038332
DIRECTION: East	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Building 10 Asphalt Cap			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 23	DATE: April 19, 2022	LATITUDE: 42.8609058222395	LONGITUDE: -78.7963628258867
DIRECTION: West	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Building 10 Asphalt Cap			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 24	DATE: April 19, 2022	LATITUDE: 42.8608932509389	LONGITUDE: -78.7963829979178
DIRECTION: South	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Building 8 Asphalt Cap			
PHOTO BY: RICK FRAPPA, P.G.			

Photographic Log

Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

PHOTOGRAPH NO: 25	DATE: April 19, 2022	LATITUDE: 42.8598760525752	LONGITUDE: -78.7977030024558
DIRECTION: North	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Building 8 Asphalt Cap			
PHOTO BY: RICK FRAPPA, P.G.			

PHOTOGRAPH NO: 26	DATE: April 19, 2022	LATITUDE: 42.8595893101335	LONGITUDE: -78.7977136782997
DIRECTION: North	SITE LOCATION: MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Building 3 East Asphalt Cap			
PHOTO BY: RICK FRAPPA, P.G.			

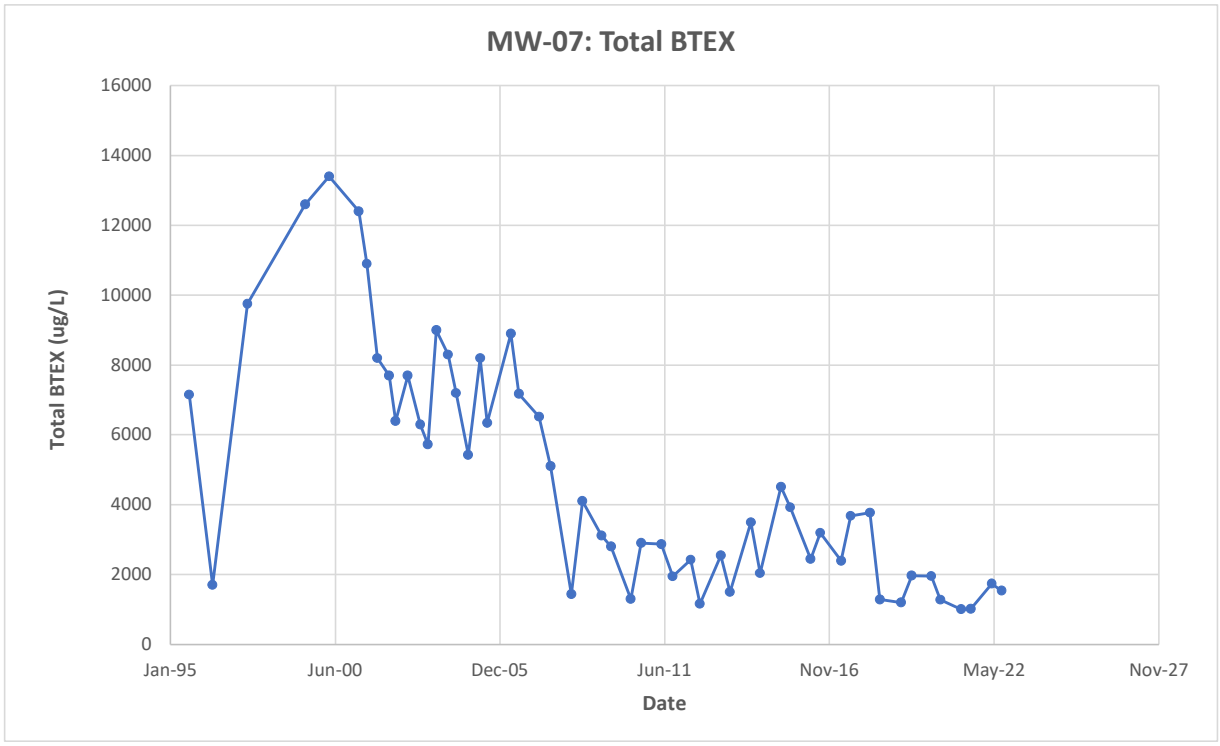
Photographic Log

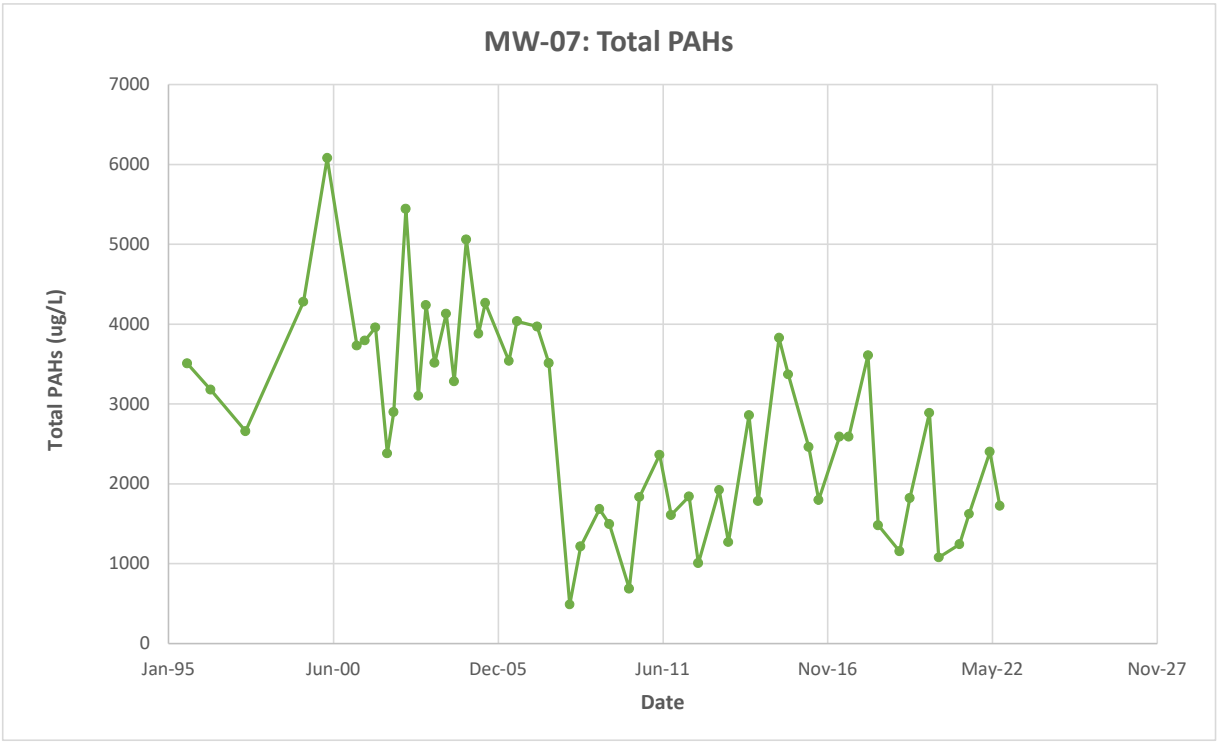
Project: Annual Site Inspection 2022
Client: National Fuel Gas Corporation **GEI Proj. No.:** 2001597

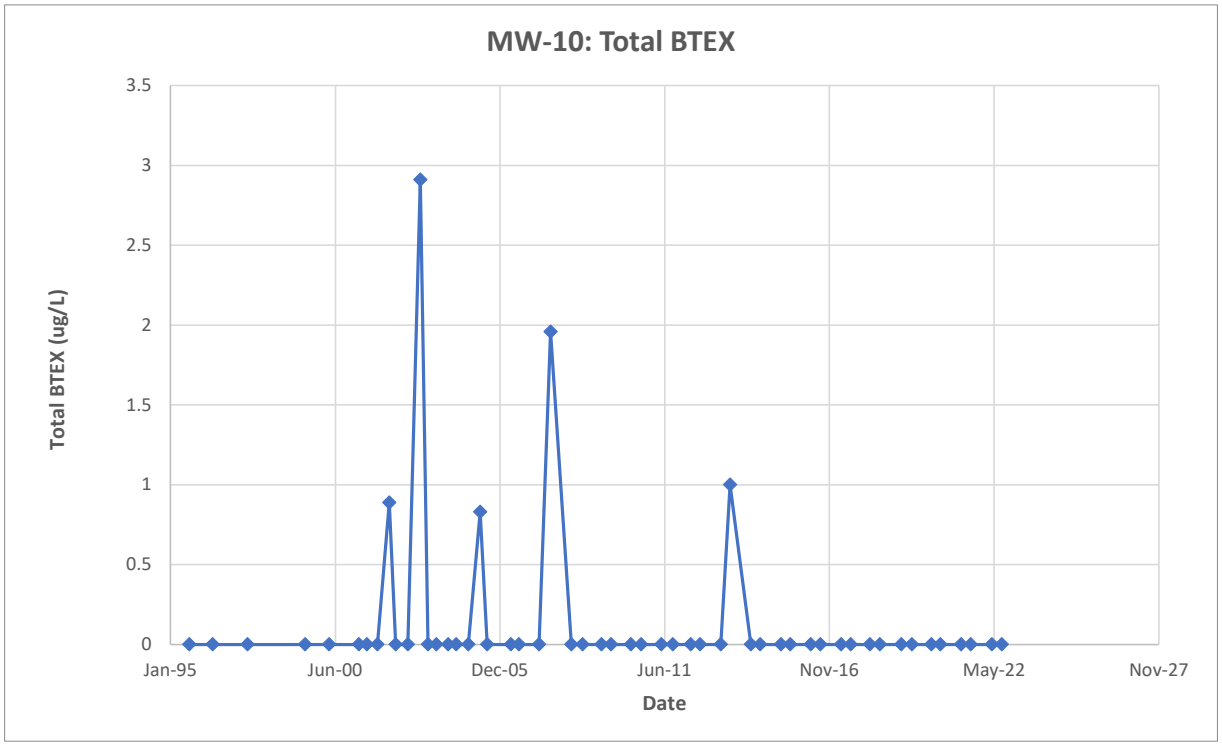
PHOTOGRAPH NO: 27	**DATE:** April 19, 2022	**LATITUDE:** 42.8594746706396	**LONGITUDE:** -78.7980096902243
DIRECTION: South	**SITE LOCATION:** MINERAL SPRINGS FACILITY - BUFFALO, NEW YORK		
DESCRIPTION: Building 3 East Asphalt Cap			
PHOTO BY: **RICK FRAPPA, P.G.**			

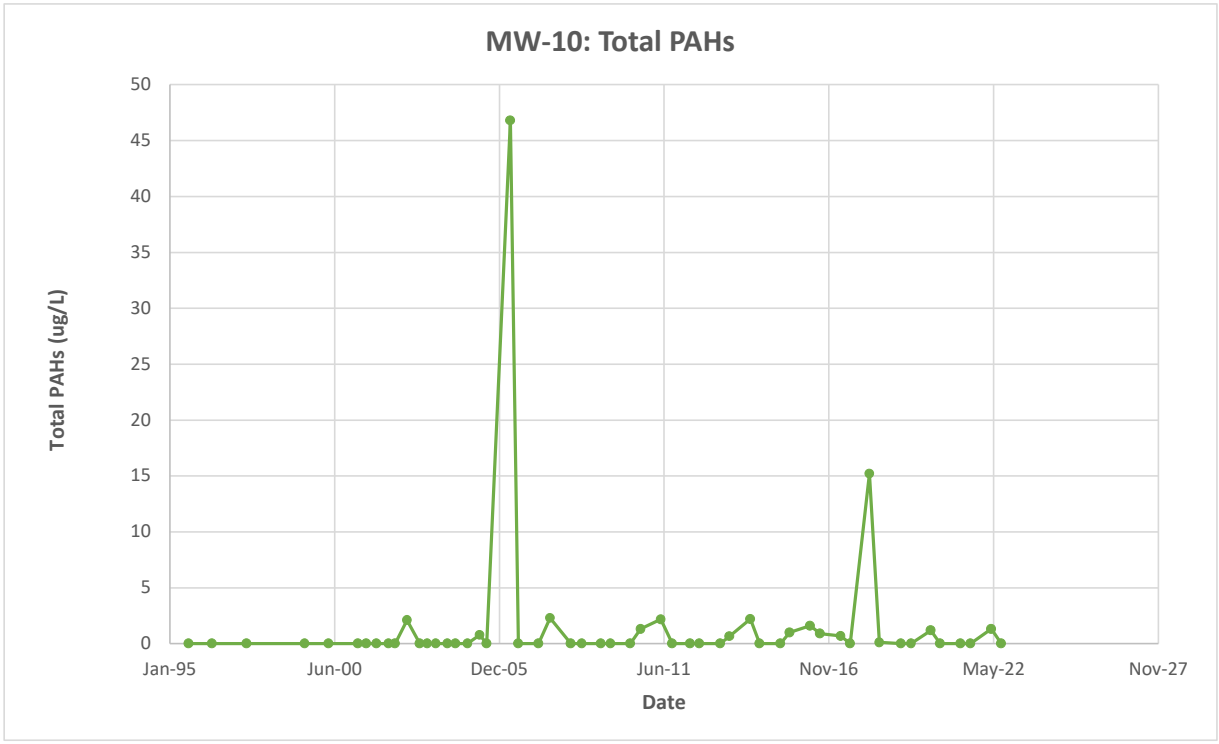
Appendix B

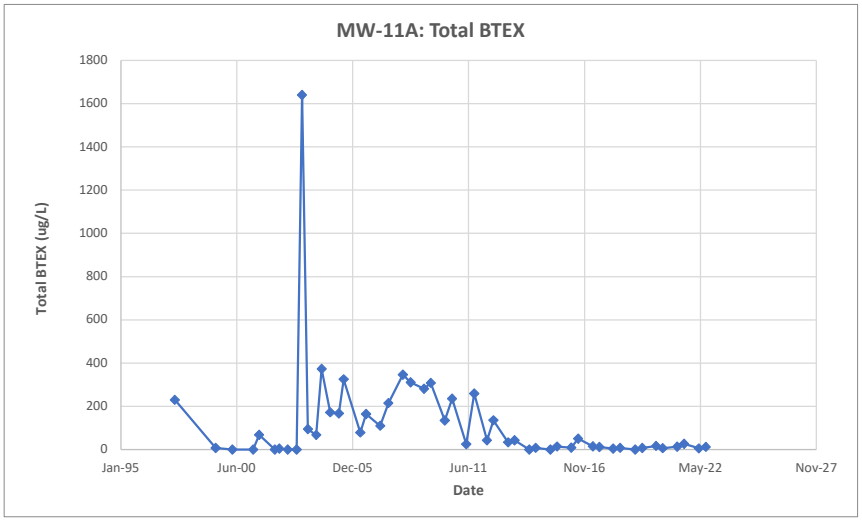
Graphical Summary of Historical Groundwater/Surface Water Analytical Results

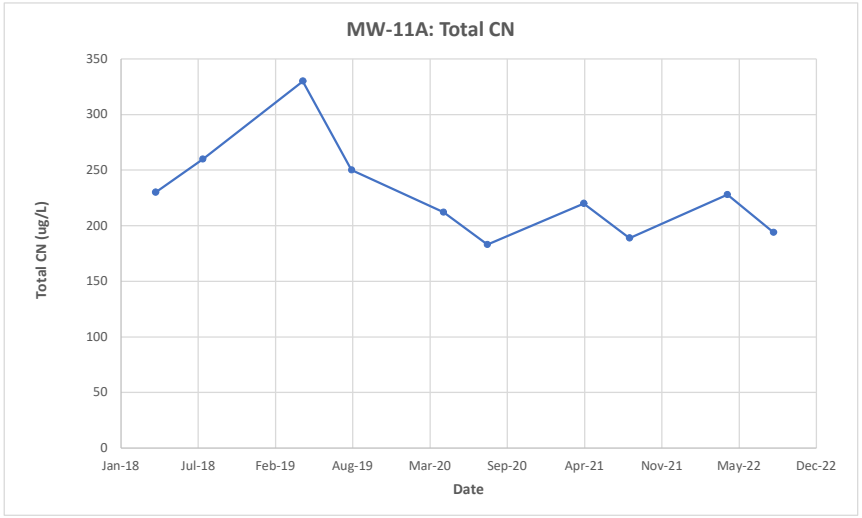

MW-07: Total BTEX
Total BTEX (ug/L)
16000
14000
12000
10000
8000
6000
4000
2000
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

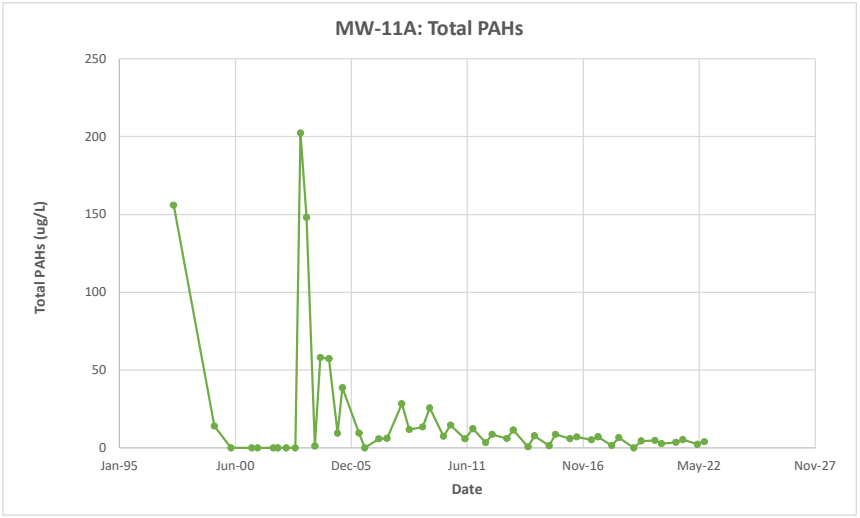

MW-07: Total PAHs
Total PAHs (ug/L)
7000
6000
5000
4000
3000
2000
1000
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

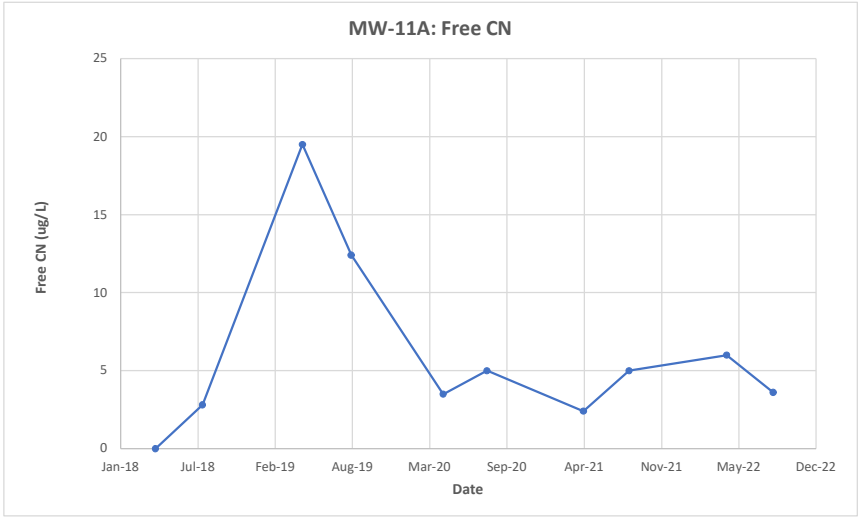

MW-10: Total BTEX
Total BTEX (ug/L)
3.5
3
2.5
2
1.5
1
0.5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

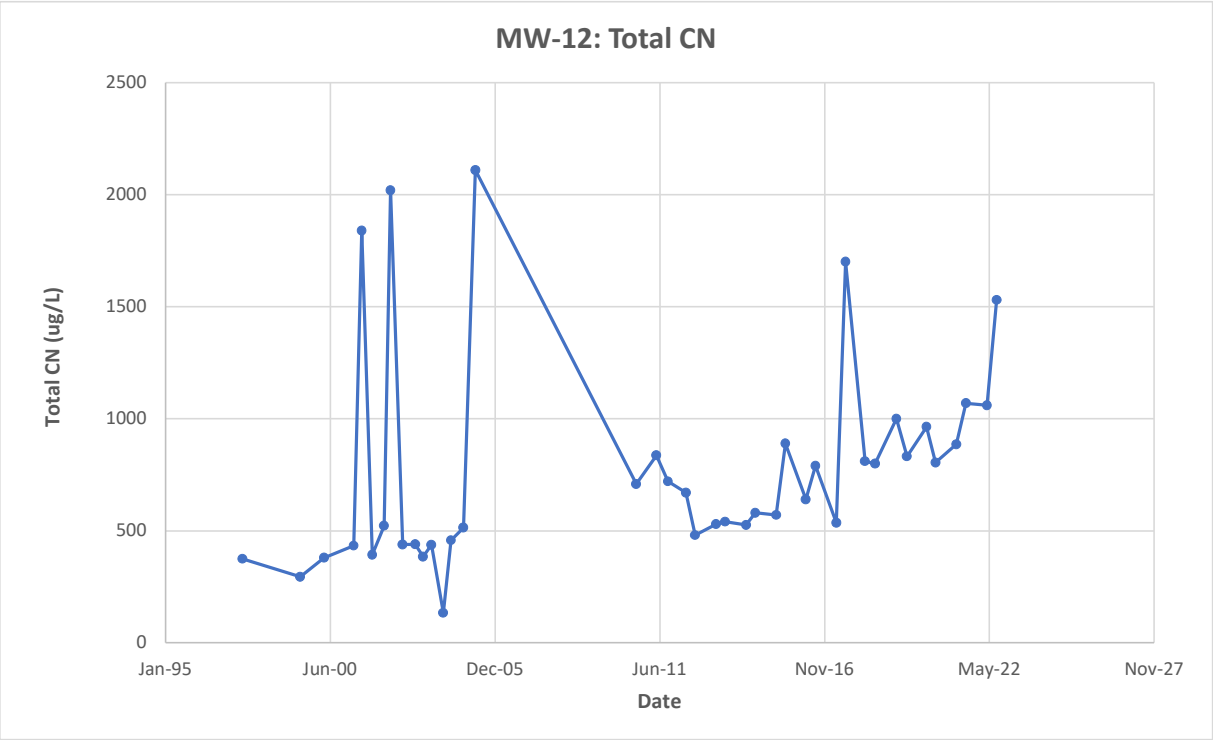

MW-10: Total PAHs
Total PAHs (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

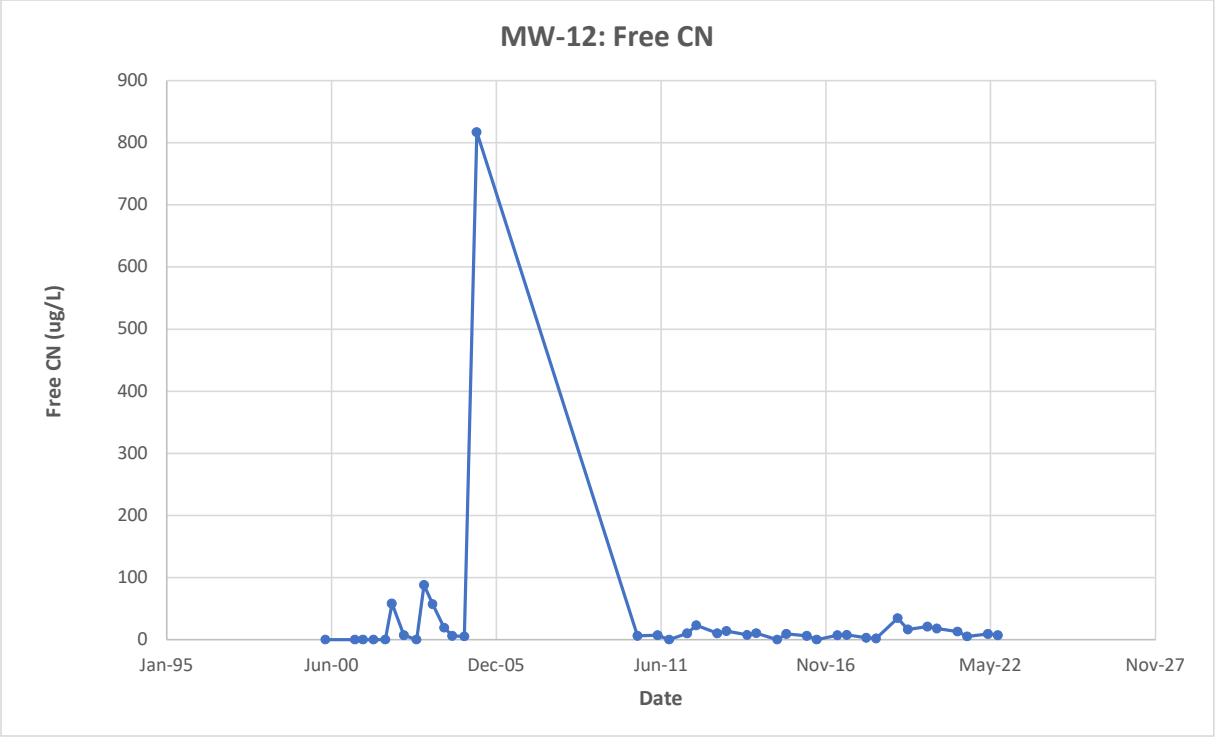

MW-11A: Total BTEX
Total BTEX (ug/L)
1800
1600
1400
1200
1000
800
600
400
200
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

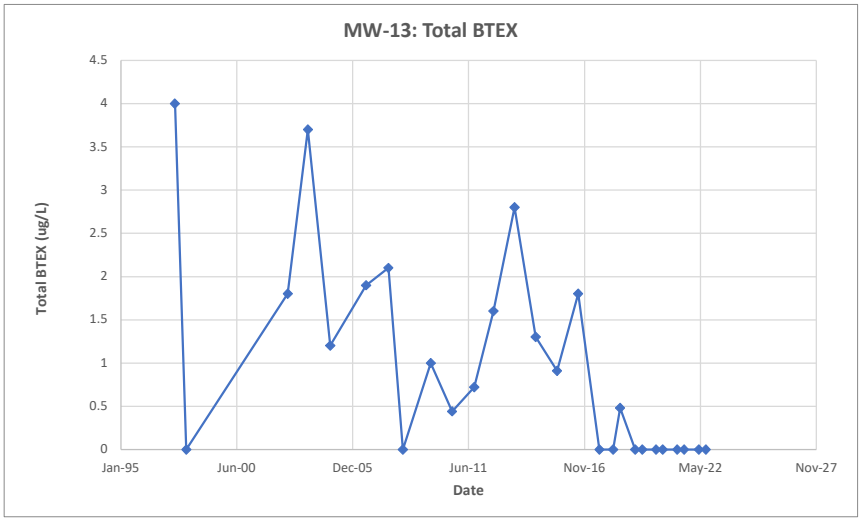

MW-11A: Total CN
Total CN (ug/L)
350
300
250
200
150
100
50
0
Jan-18
Jul-18
Feb-19
Aug-19
Mar-20
Sep-20
Apr-21
Nov-21
May-22
Dec-22
Date

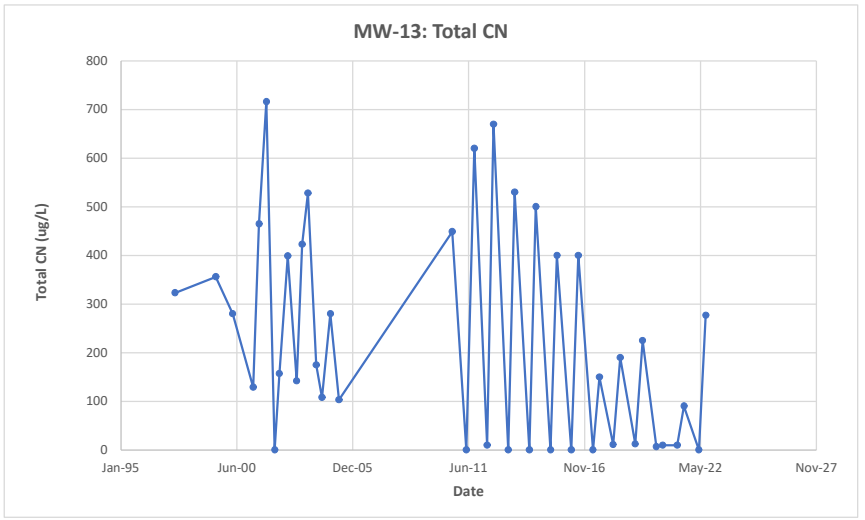

MW-11A: Total PAHs
Total PAHs (ug/L)
250
200
150
100
50
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

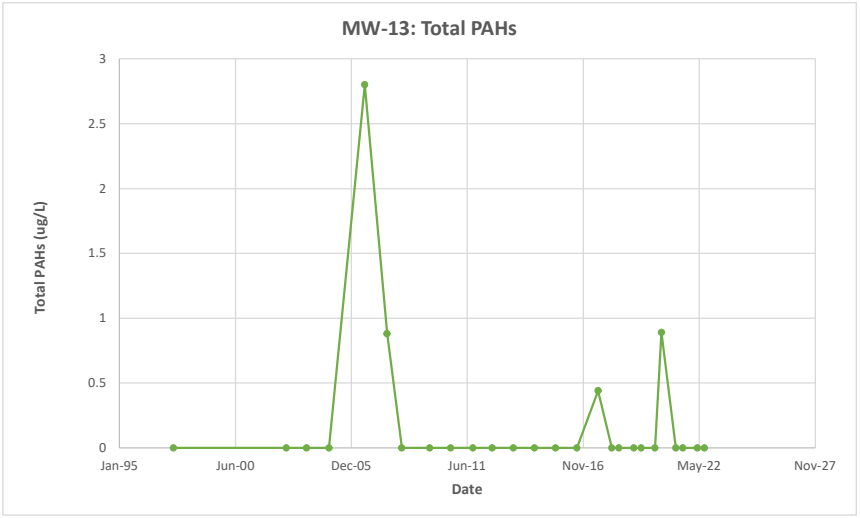

MW-11A: Free CN
Free CN (ug/L)
25
20
15
10
5
0
Jan-18
Jul-18
Feb-19
Aug-19
Mar-20
Sep-20
Apr-21
Nov-21
May-22
Dec-22
Date

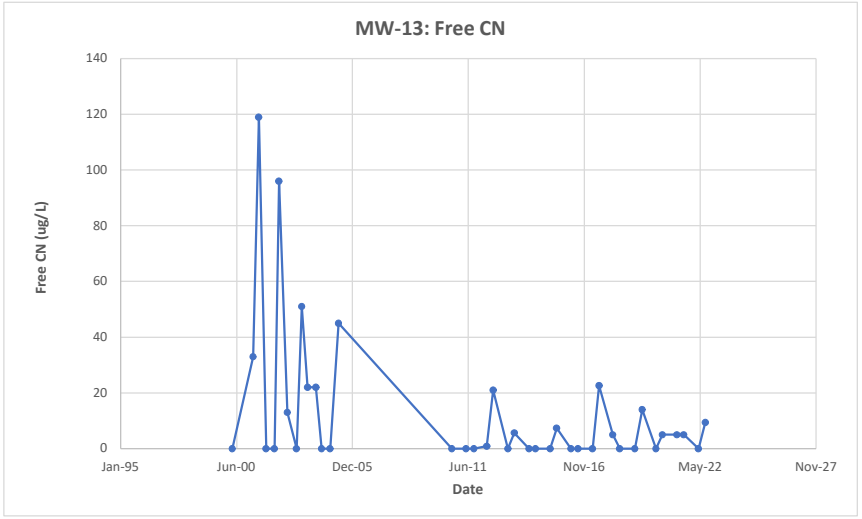

MW-12: Total CN
Total CN (ug/L)
2500
2000
1500
1000
500
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

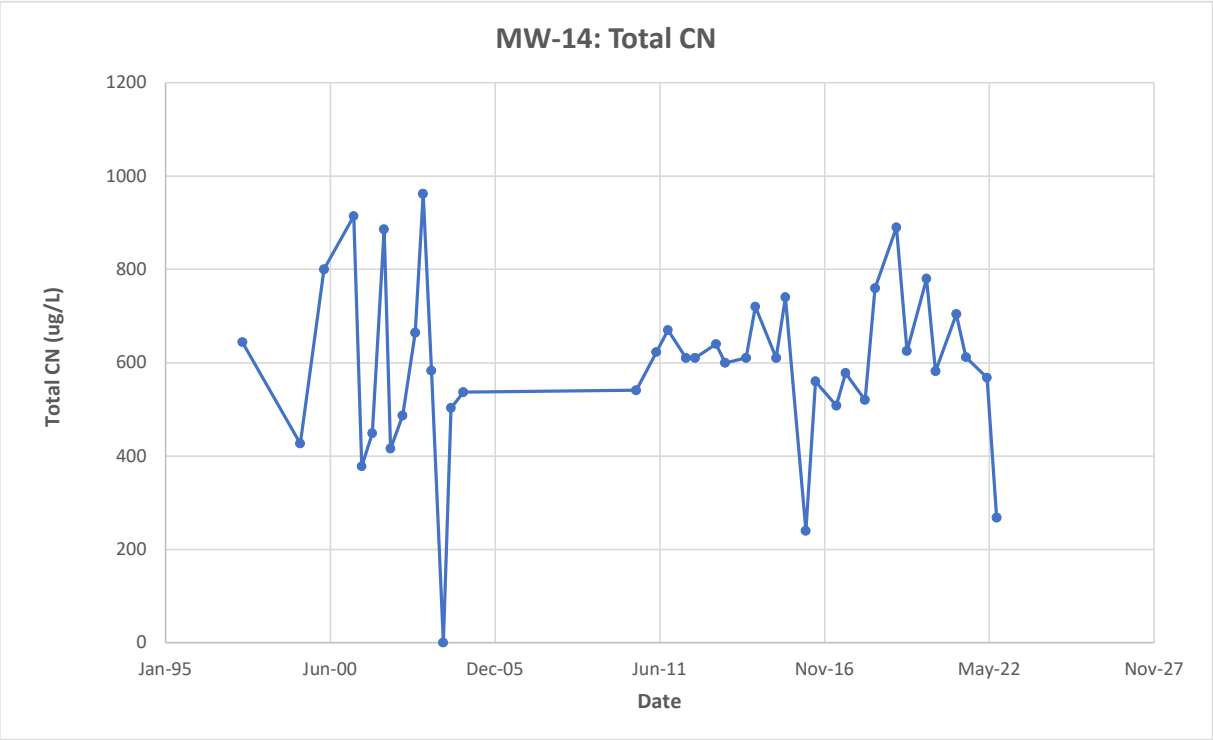

MW-12: Free CN
Free CN (ug/L)
900
800
700
600
500
400
300
200
100
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

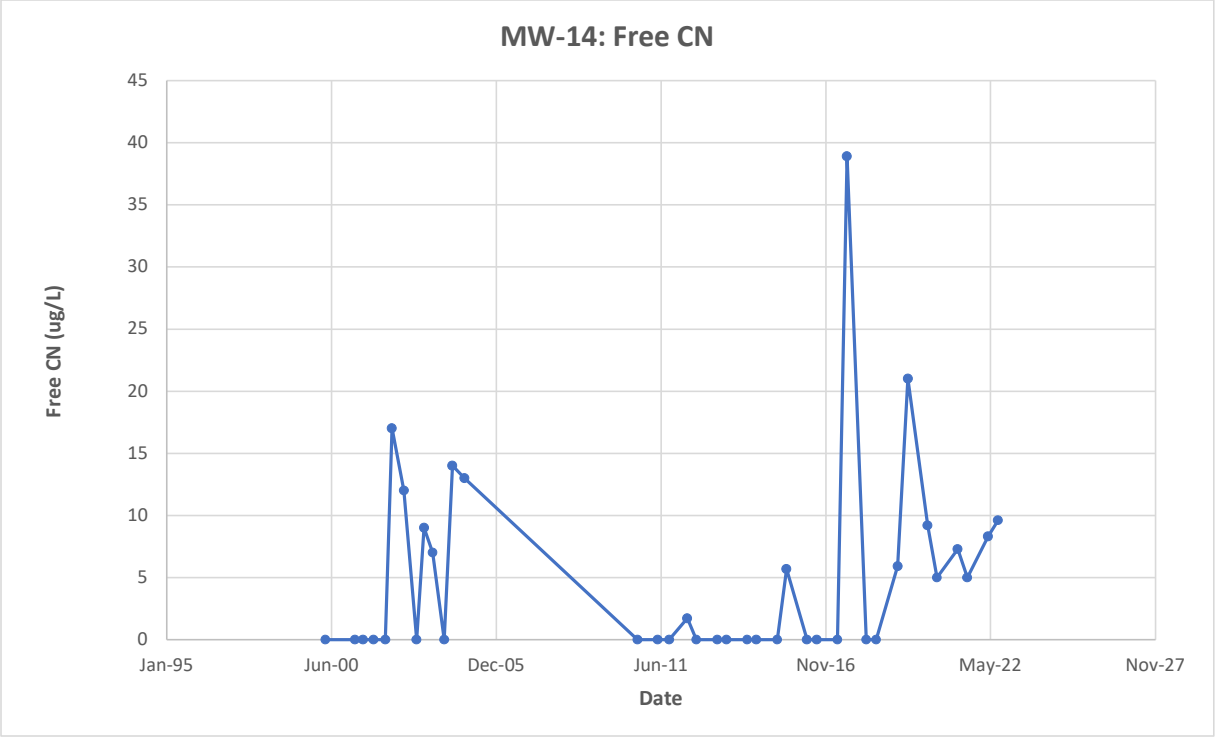

MW-13: Total BTEX
Total BTEX (ug/L)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

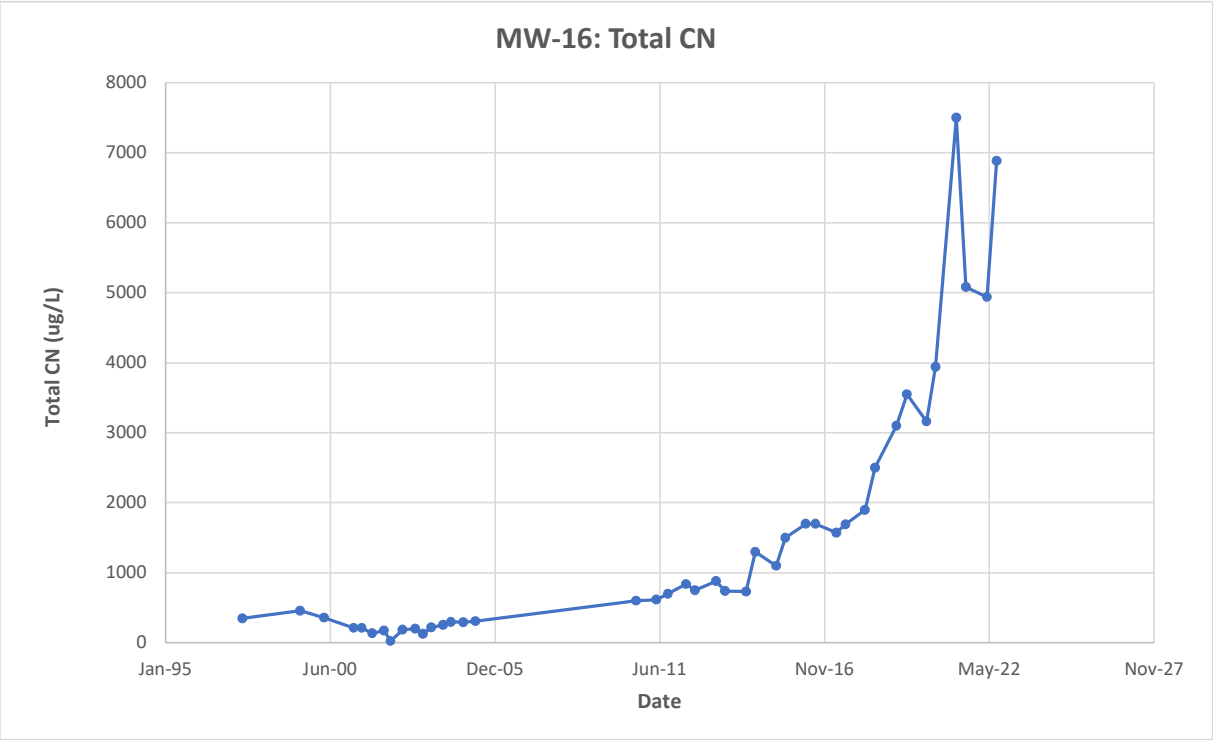

MW-13: Total CN
Total CN (ug/L)
800
700
600
500
400
300
200
100
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

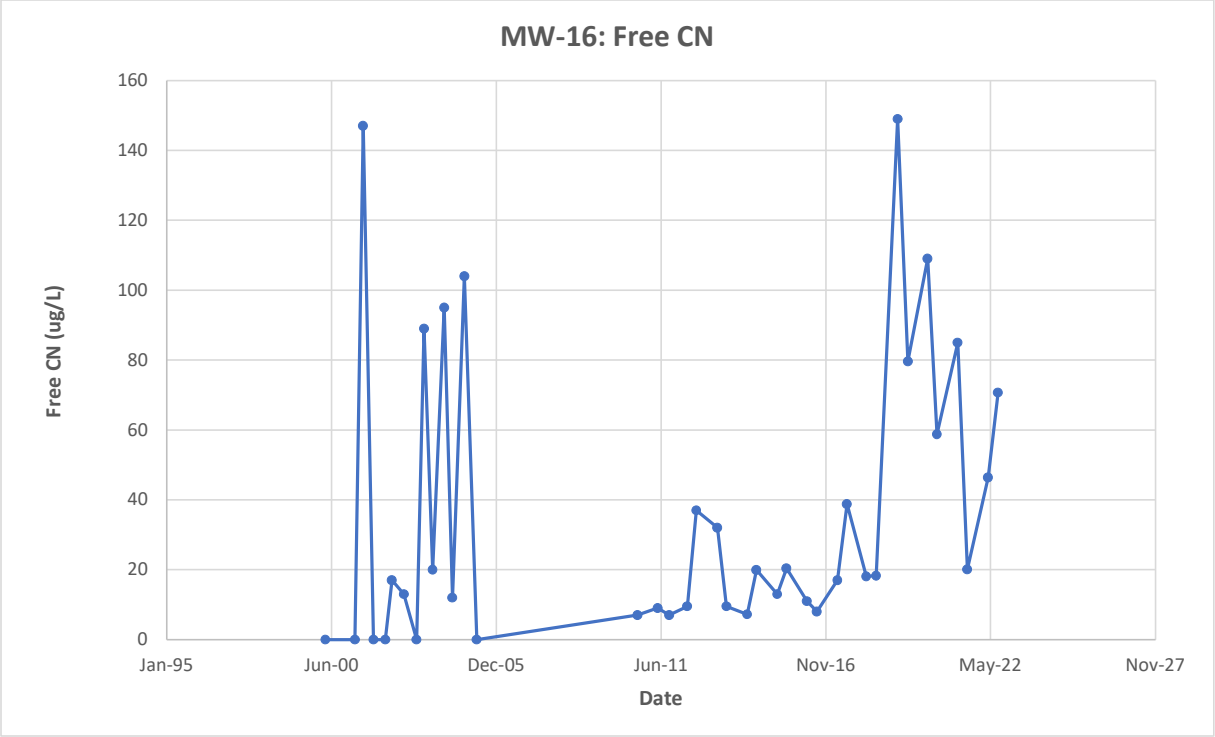

MW-13: Total PAHs
Total PAHs (ug/L)
3
2.5
2
1.5
1
0.5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

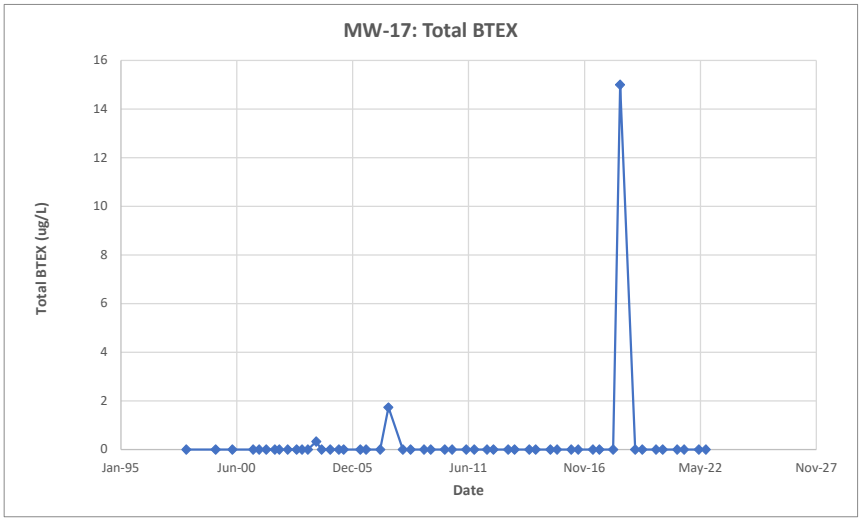

MW-13: Free CN
Free CN (ug/L)
140
120
100
80
60
40
20
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

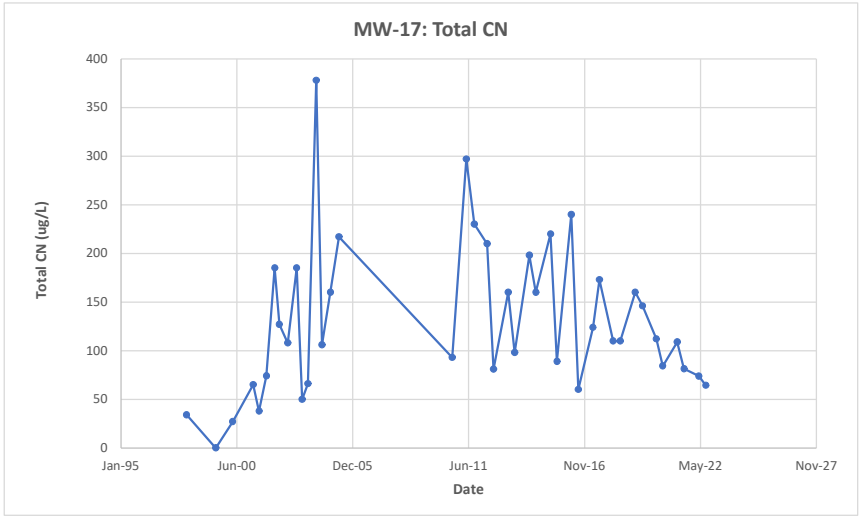

MW-14: Total CN
Total CN (ug/L)
1200
1000
800
600
400
200
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

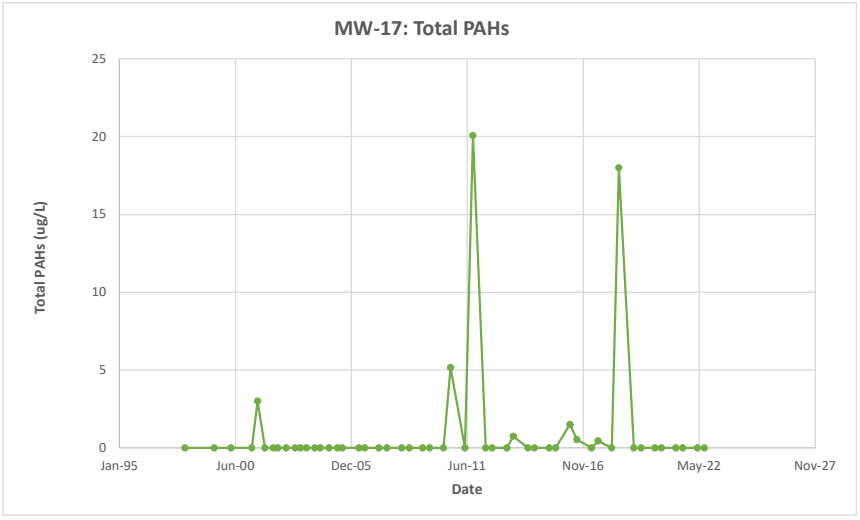

MW-14: Free CN
Free CN (ug/L)
45
40
35
30
25
20
15
10
5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

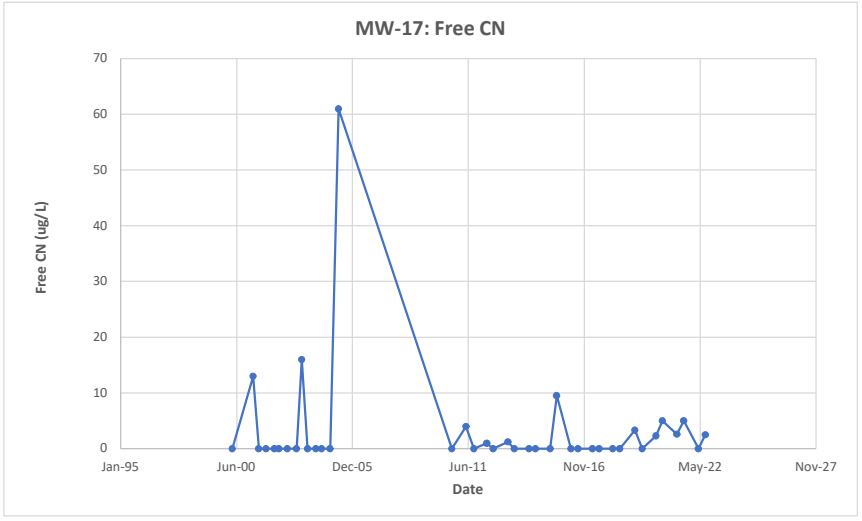

MW-16: Total CN
Total CN (ug/L)
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

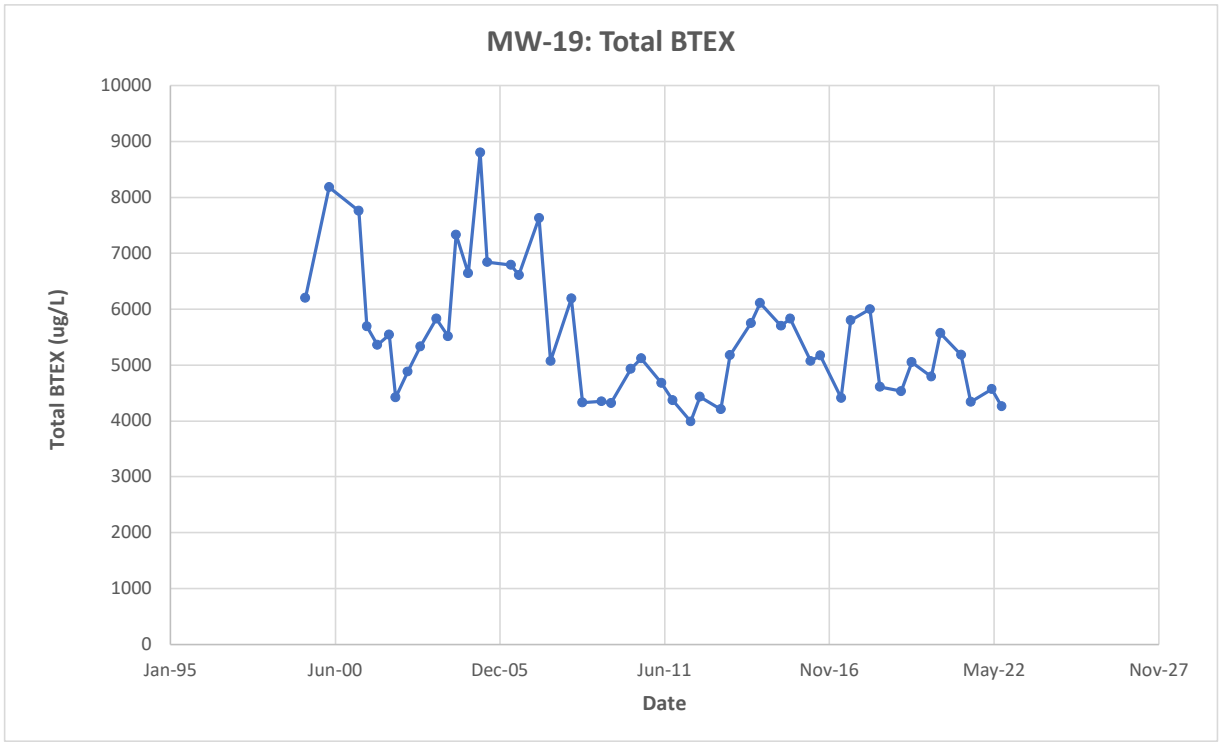

MW-16: Free CN
Free CN (ug/L)
160
140
120
100
80
60
40
20
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

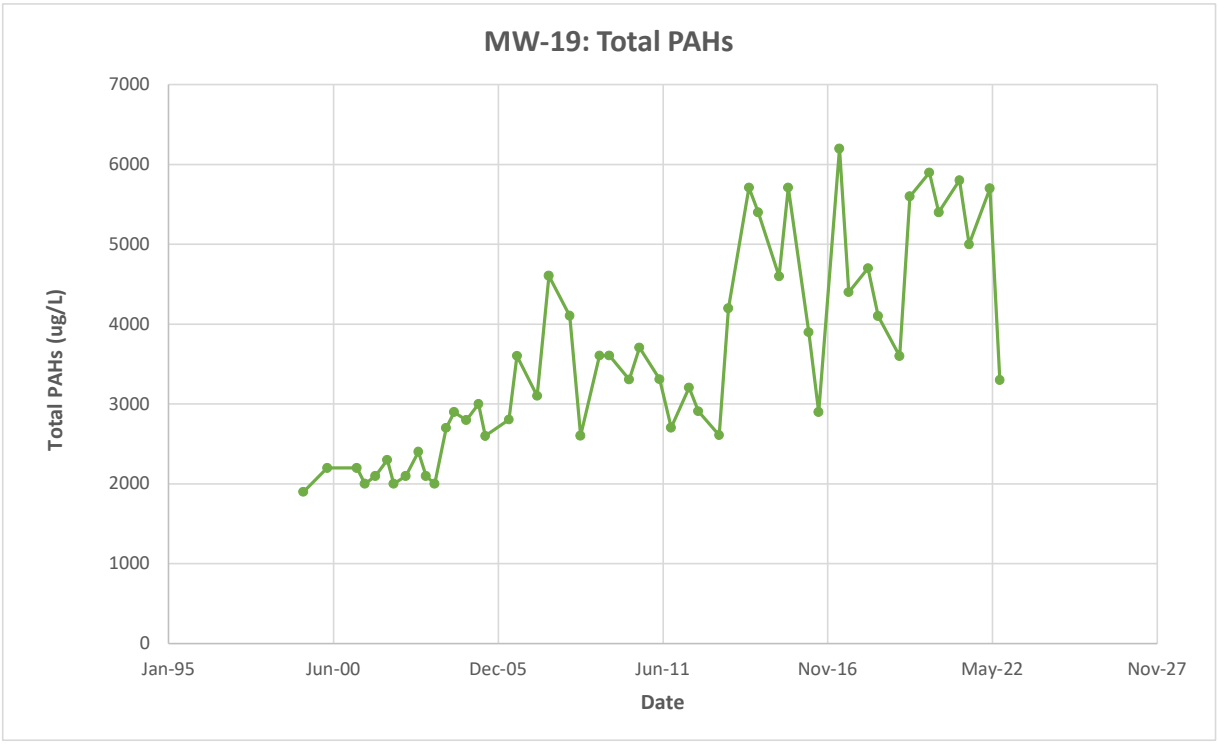

MW-17: Total BTEX
Total BTEX (ug/L)
16
14
12
10
8
6
4
2
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

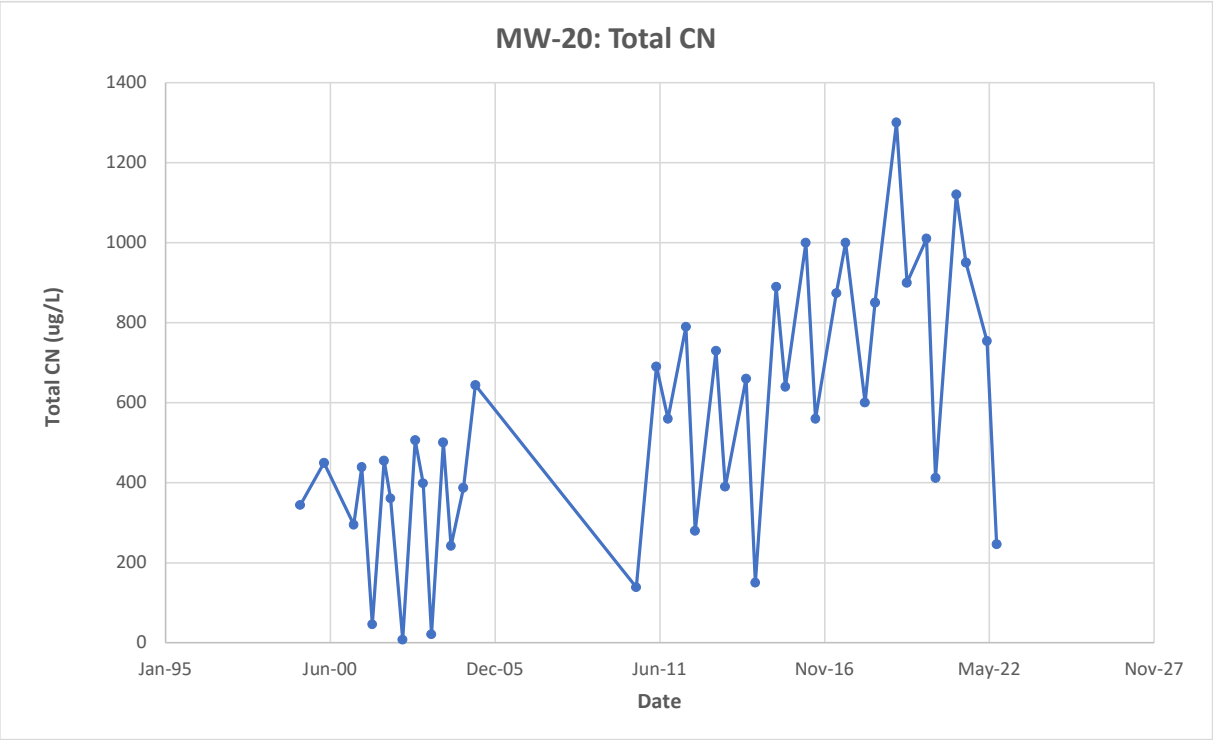

MW-17: Total CN
Total CN (ug/L)
400
350
300
250
200
150
100
50
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

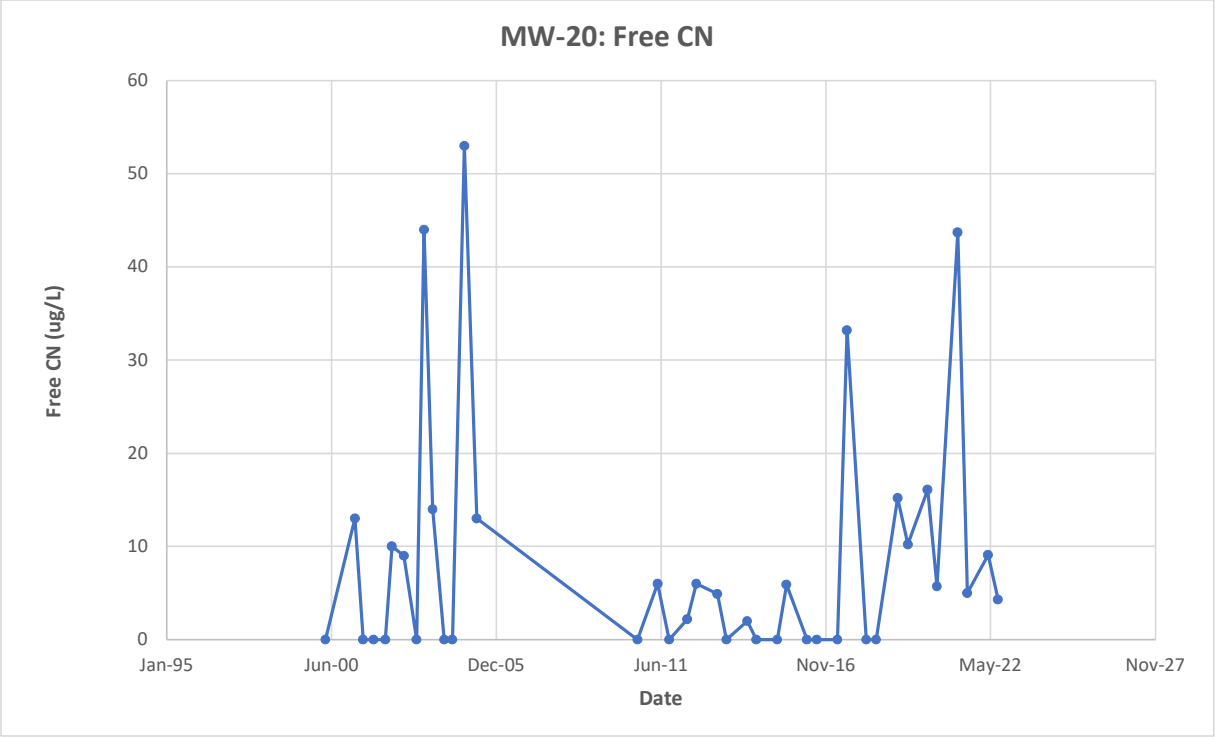

MW-17: Total PAHs
Total PAHs (ug/L)
25
20
15
10
5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

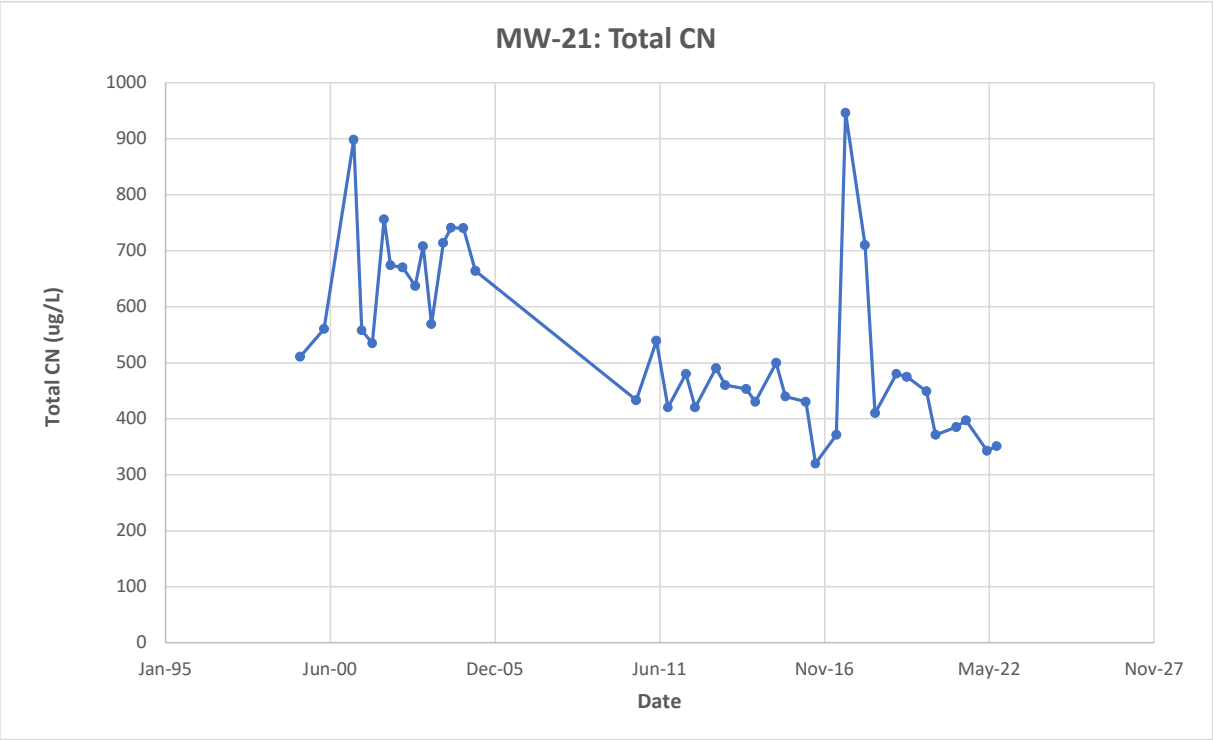

MW-17: Free CN
Free CN (ug/L)
70
60
50
40
30
20
10
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

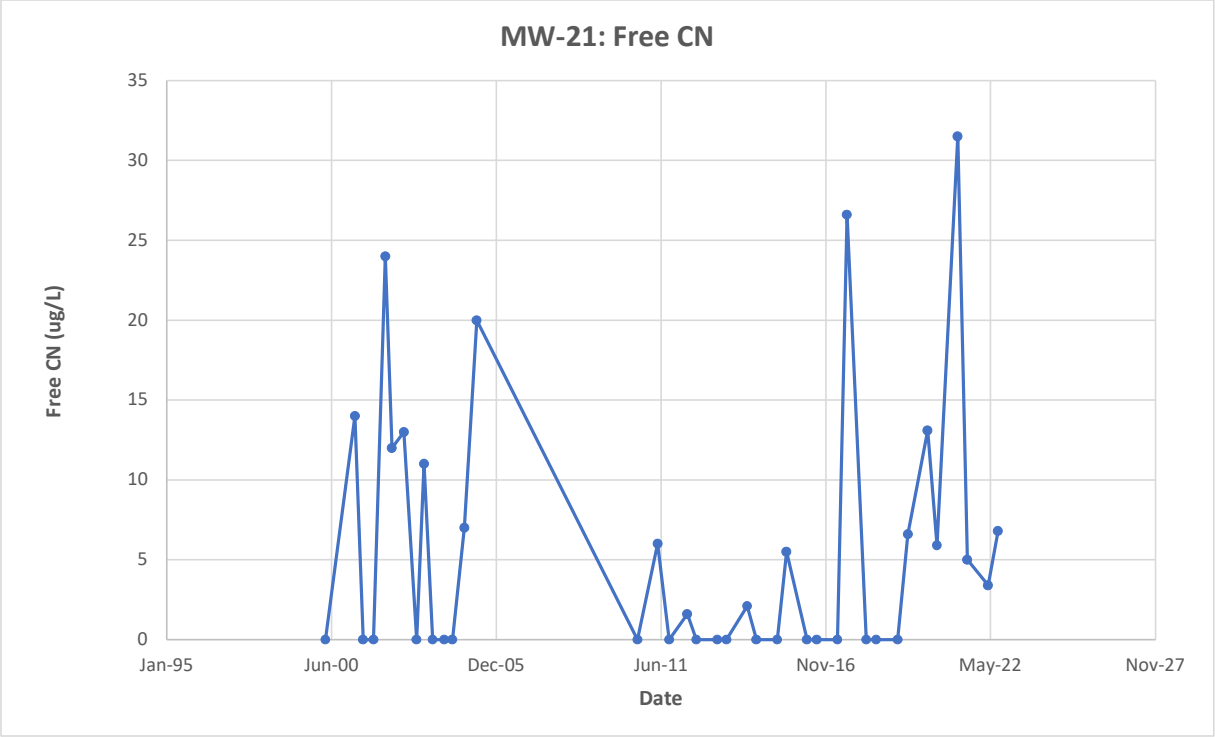

MW-19: Total BTEX
Total BTEX (ug/L)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

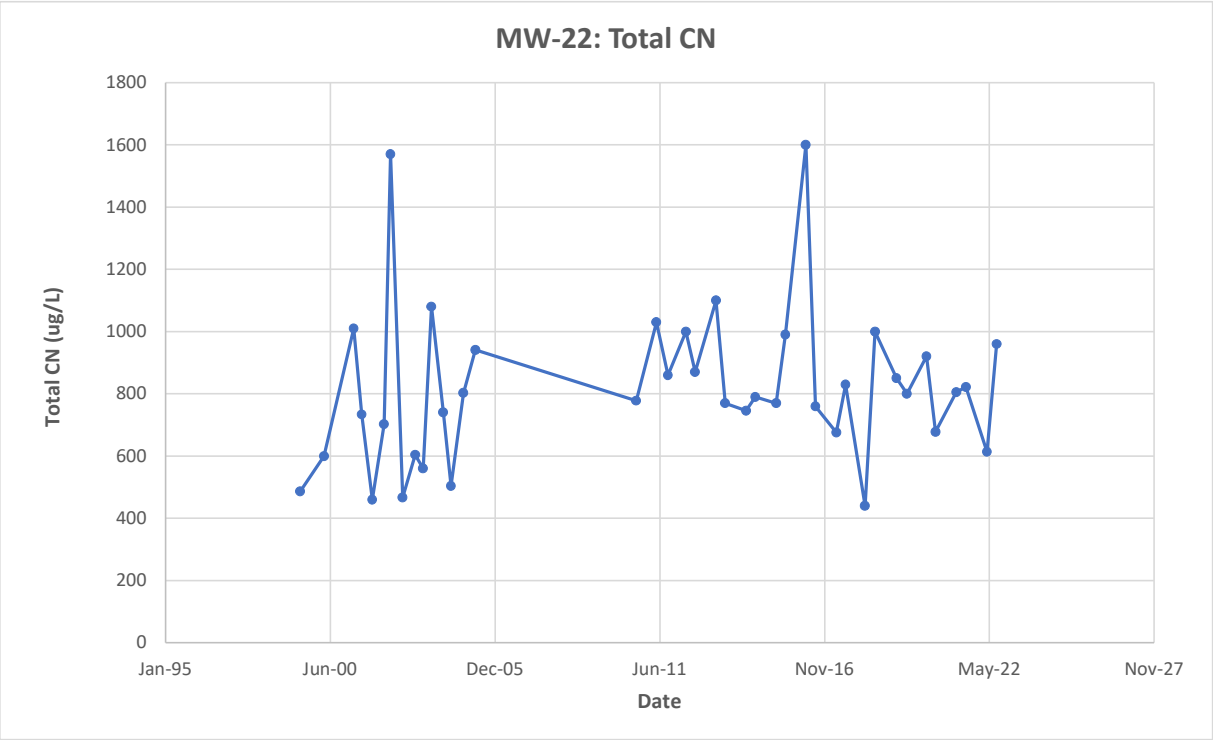

MW-19: Total PAHs
Total PAHs (ug/L)
7000
6000
5000
4000
3000
2000
1000
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

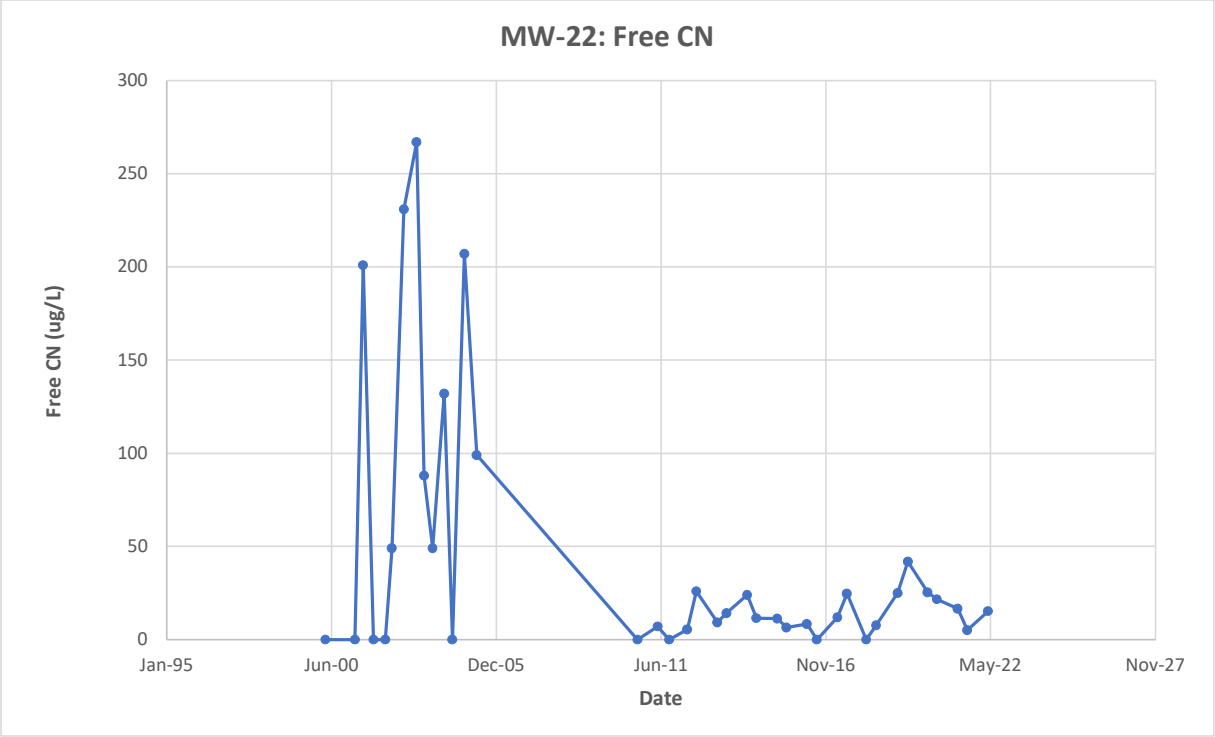

MW-20: Total CN
Total CN (ug/L)
1400
1200
1000
800
600
400
200
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

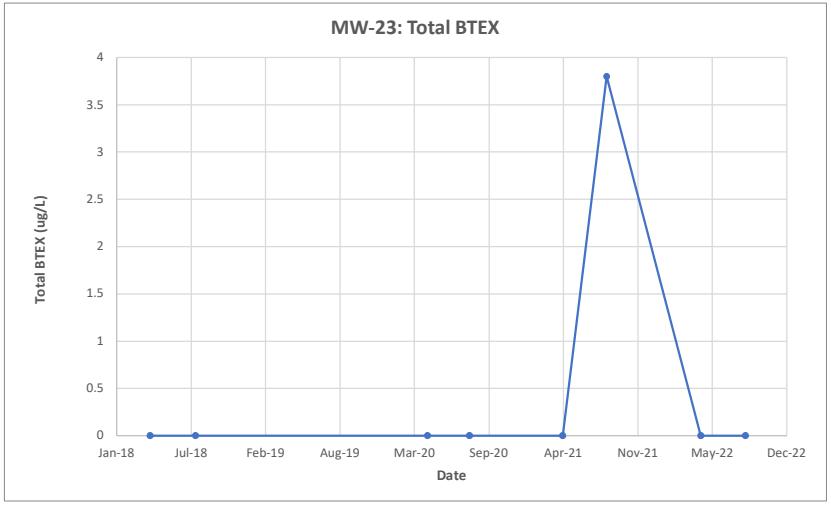

MW-20: Free CN
Free CN (ug/L)
60
50
40
30
20
10
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

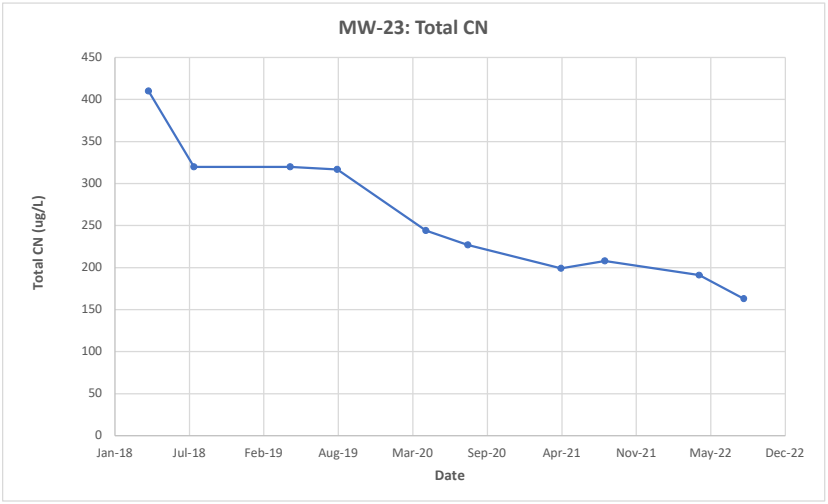

MW-21: Total CN
Total CN (ug/L)
1000
900
800
700
600
500
400
300
200
100
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

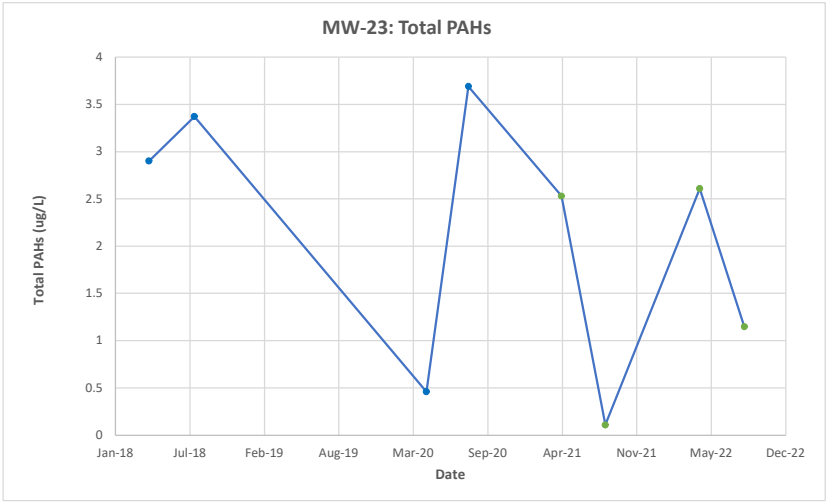

MW-21: Free CN
Free CN (ug/L)
35
30
25
20
15
10
5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

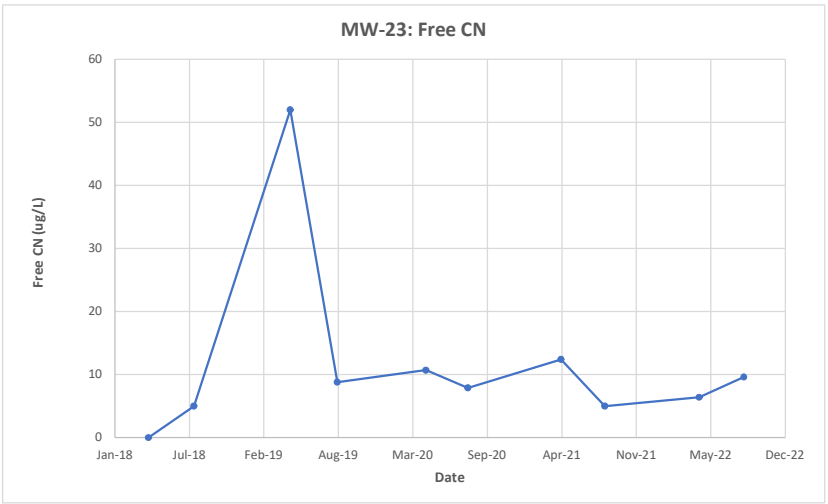

MW-22: Total CN
Total CN (ug/L)
1800
1600
1400
1200
1000
800
600
400
200
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

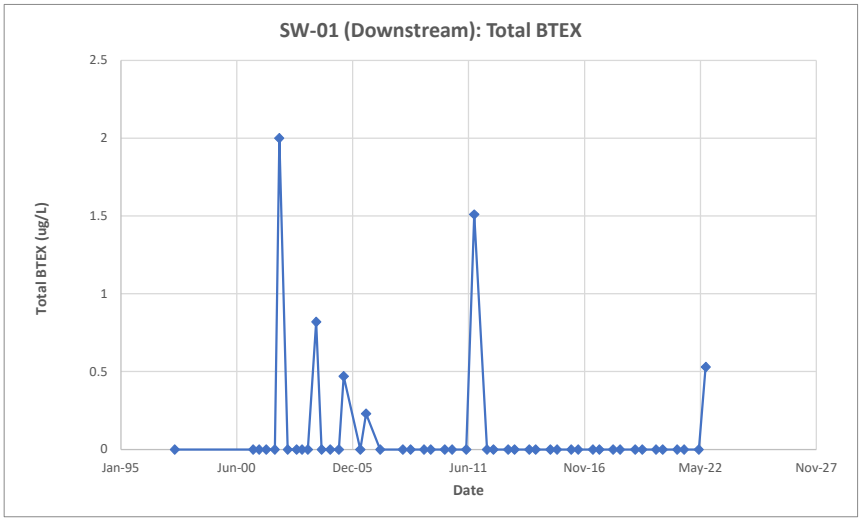

MW-22: Free CN
Free CN (ug/L)
300
250
200
150
100
50
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

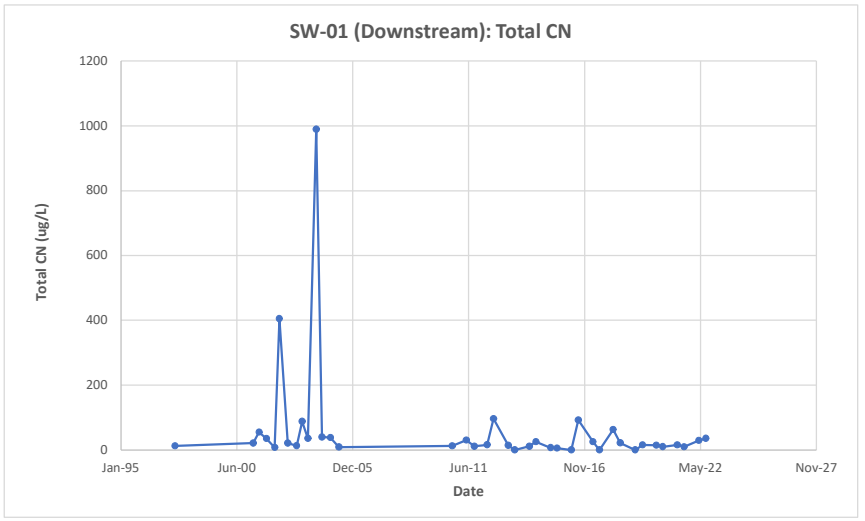

MW-23: Total BTEX
Total BTEX (ug/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
Jan-18
Jul-18
Feb-19
Aug-19
Mar-20
Sep-20
Apr-21
Nov-21
May-22
Dec-22
Date

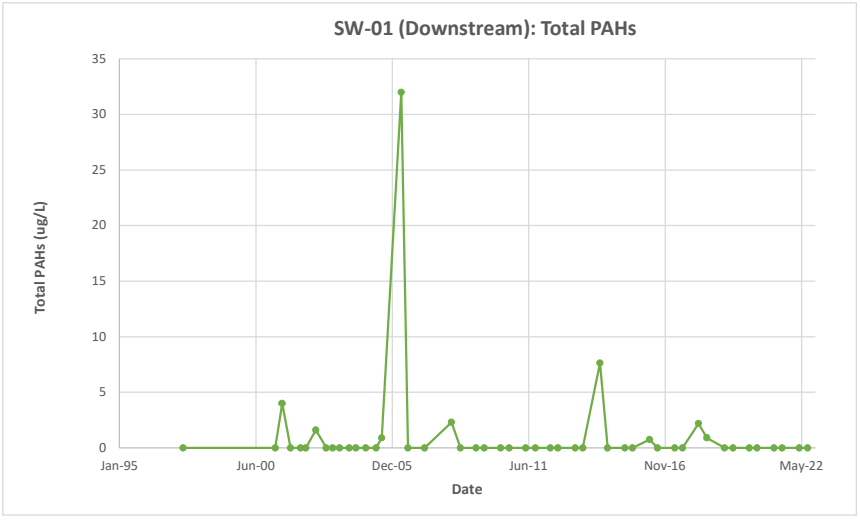

MW-23: Total CN
Total CN (ug/L)
450
400
350
300
250
200
150
100
50
0
Jan-18
Jul-18
Feb-19
Aug-19
Mar-20
Sep-20
Apr-21
Nov-21
May-22
Dec-22
Date

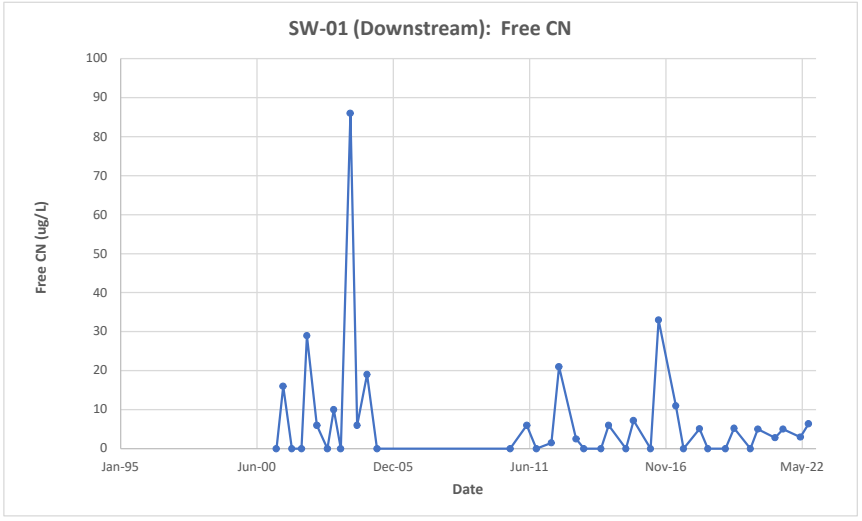

MW-23: Total PAHs
Total PAHs (ug/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
Jan-18
Jul-18
Feb-19
Aug-19
Mar-20
Sep-20
Apr-21
Nov-21
May-22
Dec-22
Date

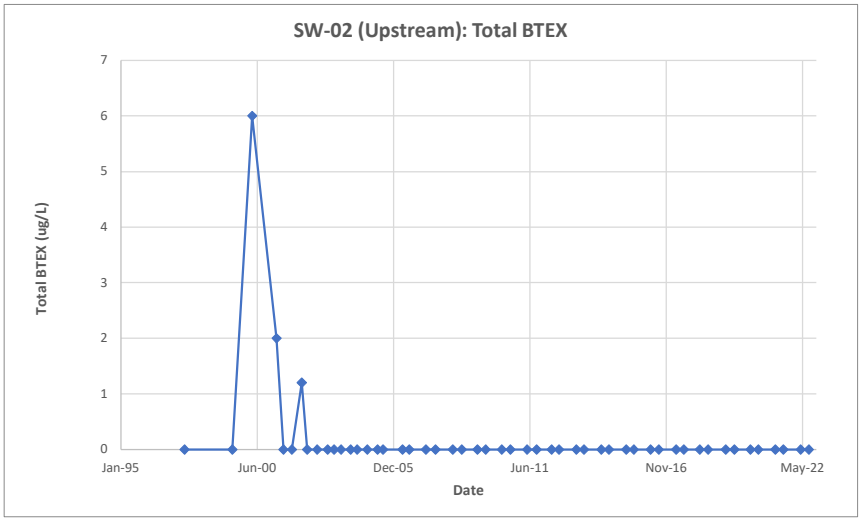

MW-23: Free CN
Free CN (ug/L)
60
50
40
30
20
10
0
Jan-18
Jul-18
Feb-19
Aug-19
Mar-20
Sep-20
Apr-21
Nov-21
May-22
Dec-22
Date

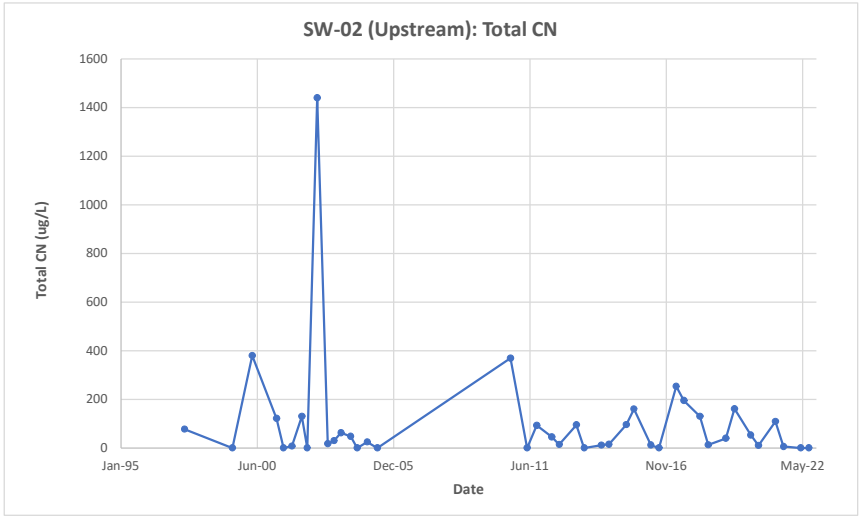

SW-01 (Downstream): Total BTEX
Total BTEX (ug/L)
2.5
2
1.5
1
0.5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

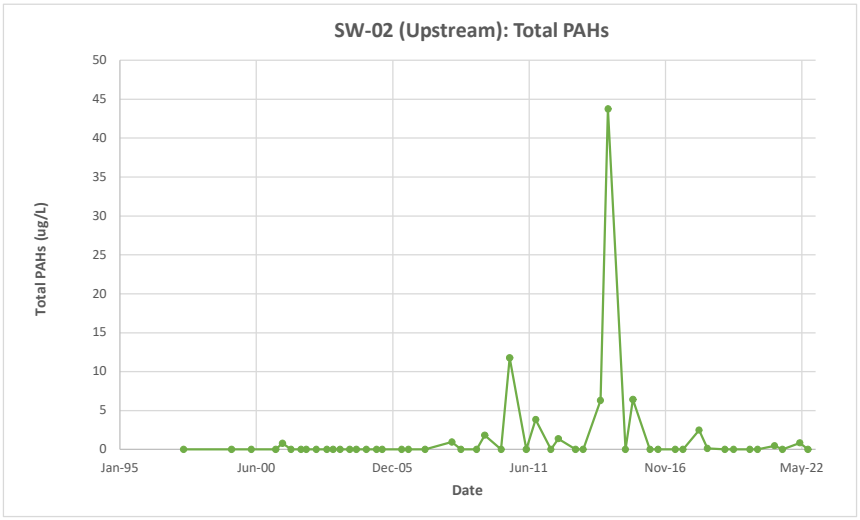

SW-01 (Downstream): Total CN
Total CN (ug/L)
1200
1000
800
600
400
200
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Nov-27
Date

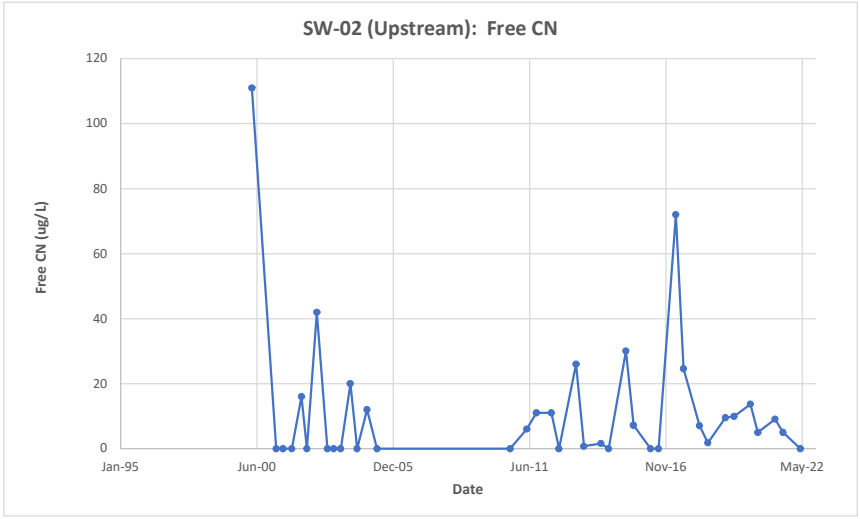

SW-01 (Downstream): Total PAHs
Total PAHs (ug/L)
35
30
25
20
15
10
5
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Date


SW-01 (Downstream): Free CN
Free CN (ug/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Date


SW-02 (Upstream): Total BTEX
Total BTEX (ug/L)
0
1
2
3
4
5
6
7
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Date


SW-02 (Upstream): Total CN
Total CN (ug/L)
0
200
400
600
800
1000
1200
1400
1600
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Date


SW-02 (Upstream): Total PAHs
Total PAHs (ug/L)
0
5
10
15
20
25
30
35
40
45
50
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Date


SW-02 (Upstream): Free CN
Free CN (ug/L)
0
20
40
60
80
100
120
Jan-95
Jun-00
Dec-05
Jun-11
Nov-16
May-22
Date

Appendix C

Institutional and Engineering Controls Certification Forms

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. V00195

Site Name NFG - Mineral Springs MGP

Site Address: 365 Mineral Springs Road Zip Code: 14210
City/Town: West Seneca
County: Erie
Site Acreage: 80.000

Reporting Period: November 15, 2021 to November 15, 2022

	YES	NO
1. Is the information above correct?	X	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	X

Box 2

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

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. V00195 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
123.16-2-8	National Fuel Gas Distribution Corp.	Ground Water Use Restriction Landuse Restriction

i. All identified capped areas shall continue to be protective of public health and the environment, and shall continue to be maintained and monitored to be consistent with industrial/commercial use.

ii. The owner of the Property shall prohibit the Property from ever being used for purposes other than for an industrial/commercial operation, office, warehouse and garage facility and for the services associated with such use without the express written waiver of such prohibition by the Relevant Agency.

iii. The owner of the Property shall prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Relevant Agency.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
123.16-2-8	Cover System Fencing/Access Control

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

YES	NO
X	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

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

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____

Signature of Owner, Remedial Party or Designated Representative Date

IC CERTIFICATIONS
SITE NO. V00195

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I William Snyder at 365 Mineral Springs Rd, Buffalo, NY 14210,
print name print business address

am certifying as Owner (Owner or Remedial Party)

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

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

12/13/2022
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

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

I Kelly R McIntosh (print name) at GEI Consultants 100 Sylvan PKwy, Amherst, NY. (print business address)

am certifying as a Professional Engineer for the National Fuel Gas (Owner or Remedial Party)

STATE OF NEW YORK
KELLY R. McINTOSH
No. 68079
LICENSED PROFESSIONAL ENGINEER

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

Stamp (Required for PE)

Date 12/13/22