GEI Consultants

March 15, 2023 ***Electronic Submittal***

Geotechnical
Environmental
Water Resources
Ecological

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Division of Environmental Remediation
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Subject: Response to Comments on the Period Review Report and the IC/EC Certification– December 2022, Revised February 2023
Mineral Springs Road MGP Site (NYSDEC Site #V00195)

Dear Ms. Monnin:

GEI Consultants, Inc. P.C. (GEI) has prepared this letter on behalf of National Fuel Gas Distribution Corporation (National Fuel) in response to the Department's comments transmitted via email on February 27, 2023 to Mr. William Snyder of National Fuel and our conference call on March 9, 2023 with the Department and National Fuel discussing groundwater conditions and actions proposed to be taken.

As far as addressing the Department's comments pertaining to the December 2022 and revised February 2023 Periodic Review Report and the IC/EC Certification for the Mineral Springs Road MGP Site (NYSDEC Site #V00195), those are addressed below (Department comment followed by National Fuel response). Regarding the approval status of the 2022 PRR, National Fuel will implement an assessment of monitoring wells MW-7, MW-12, MW-16, and MW-19 as discussed during our call. The details of the monitoring wells assessment are included in **Attachment A**. Follow-up work may be undertaken after review of sampling data collected during the April 2023 sampling event.

Response to Comments:

DEPARTMENT COMMENT:
Section 3.1-Please provide a more detailed description of the material staged in the DNAPL collection shed and if it has been disposed of yet. Disposal manifests and analytical characterization data should also be attached to the PRR if completed during this certifying period.

NATIONAL FUEL RESPONSE:

The material temporarily staged in the DNAPL collection shed consisted of one 55-gallon drum containing topsoil and clay cap material generated during the clay cap repairs south of Building 14. The material was held for further disposal characterization. The material was

generated during the 2023 PRR period and analytical data and disposal manifests will be presented in the 2023 PRR for the facility.

DEPARTMENT COMMENT:
Please note in the PRR that the excavation approached two feet which extends below the 1 foot clay cover.

NATIONAL FUEL RESPONSE:

The shovel excavations occurred on a steep slope where the total excavation depth from the high side to the bottom of the excavation on the low side measured about 2 feet. The actual depth of excavation was approximately 1 foot. Most importantly, as stated in the revised 2022 PRR, no visual or olfactory evidence of MGP impacts were identified. All excavated material were containerized in a 55-gallon drum for proper off-site disposal. Repairs to the cap at base of the transmission tower were be completed in late December 2022 and will be documented in the 2023 PRR.

DEPARTMENT COMMENT:
Section 3.2-Groundwater and Surface Water Quality Monitoring, last bullet within Surface Water sub-section: please add that the Class D Stream is a close potential receptor of contaminated groundwater that can impact surface water quality.

NATIONAL FUEL RESPONSE:

While National Fuel acknowledges that the Class D stream is a "close potential receptor of contaminated groundwater", during the 2022 reporting period the stream was a "losing stream" and was not a potential receptor of contaminated groundwater. Future PRR reports will identify the Class D stream as a receptor of contaminated groundwater if groundwater discharges to the stream during "gaining" conditions.

DEPARTMENT COMMENT:
Please revise the IC/EC Certification Form to check "No" for Box 5, number 2 and remove the signatures in Boxes 6 and 7

NATIONAL FUEL RESPONSE:

GEI's certifying engineer, Kelly McIntosh, does not agree with changing the box checked from Yes to No on Box 5 per the rationale discussed during our March 9, 2023, call.

GEI understands that the Department will provide conditional approval of the revised PRR with implementation of the On-Site Groundwater Quality Assessment described in Attachment A.

Please contact Mr. Brad Walker of National Fuel at 716-857-7247 if you have any further questions or comments.

GEI CONSULTANTS, INC., P.C.

Richard H. Frappa, P.G.
Senior Professional/Hydrogeologist

Kelly R. McIntosh, PhD, P.E.
Senior Professional/Engineer

cc: Brad Walker – National Fuel (eCopy)
Tanya Alexander – National Fuel (eCopy)
Andrea Caprio – NYSDEC (eCopy)

Enc. **Attachment A** - On-Site Groundwater Quality Monitoring Assessment

On-Site Groundwater Quality Monitoring Assessment
Mineral Springs Facility Site #V00195

1.0 Introduction

The New York State Department of Environmental Conservation (NYSDEC) is requesting an assessment of on-site groundwater quality at the Mineral Springs Facility to support Periodic Review of Institutional Controls/Engineering Controls (IC/ECs). Specifically, NYSDEC requested in correspondence dated February 27, 2023, further assessment of previously detected concentrations of volatile organic compounds (VOCs) benzene-toluene-ethylbenzene-xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) at wells MW-7 and MW-19 and total and free cyanide at wells MW-12 and MW-16. The locations of the specified monitoring wells are shown on **Figure 1**. The proposed groundwater assessment was discussed with the Department during a conference call held among the parties on March 9, 2023.

2.0 Rationale for Assessment

As discussed, GEI believes that certain site-specific conditions may affect the quality and representativeness of groundwater samples collected from the wells using low flow sampling methods. These conditions include: 1. well integrity (wells are decades old with the possibility of poor surface seals); 2. entrainment of NAPL or solids in the sample tubing and/or well screen affecting representative water quality; 3. slow rate of groundwater movement affected by the low hydraulic gradient measured across the site and low soil permeability; and 4. the well screens straddle multiple soil horizons consisting of clay, silty clay, silty sand, sandy gravel, and sand (formation heterogeneity) and the intake position of sample tubing may not reflect water quality of the most transmissive unit.

3.0 Assessment Methodology

For these reasons, GEI will complete the following to resolve the concerns for representativeness of sample water quality:

1. Review well construction records, geologic information presented on the logs, and compare field conditions to as-built conditions, and assess well integrity through inspection of surface seals. The assessment will help to determine if well integrity is suitable for the collection of representative groundwater samples. If well integrity is suspected to be compromised, the well will be decommissioned and replaced. The Department will be notified if this situation is identified and before any actions are taken. If wells are replaced, community air monitoring will occur in upwind and downwind positions during times of intrusive activity. The CAMP is described in more detail in Section 5.

2. Remove existing sampling tubing from each well and dispose.

3. Re-develop each of the four groundwater monitoring wells as described in Section 4.

4. Approximately 24-hours after re-development, collect groundwater samples from each well with a disposable PVC bailer after removing a minimum of one well volume (more

well volumes may be evacuated if the well yield allows). Sampling is described in Section 4.

5. Approximately 24-hours after the sampling event using a bailer, install new sample tubing for low flow sampling methods with the tubing intake positioned in the well screen at a depth that is coincident with more transmissive soil types (i.e., silty sands, gravels, and sands rather than silty clay determined from information obtained from No. 1 above. Collect groundwater samples from each re-developed well using low flow sampling methods consistent with protocols currently employed at the site.

6. The sample results from the low flow sampling methods will be compared to results obtained from sampling methods utilizing a bailer.

7. The data collected from the well integrity assessment and post-redevelopment sampling will be presented in the Spring 2023 Semiannual Groundwater/Surface Water Monitoring Report.

8. If results for the two sampling methods are similar and are consistent with sampling results from the past several quarters, then the results will be discussed with the Department and a plan will be submitted to address down gradient groundwater quality.

9. If results suggest that the low flow sampling method is providing samples considered not representative of the formation, then the OM&M Plan for the facility will be updated to reflect a revision in sampling methods.

4.0 Well Development and Groundwater Sampling Methods

Well Development:

Well re-development (or development if new wells are installed) will employ the most appropriate method based on well yield. Water removal methods may include the use of a Waterra™ positive displacement inertia pump, Whale pump, bottom loading stainless steel bailer, or combination of several methods. A surge block may be used to remove scale build up or to remove material more aggressively if entrained in the sand pack around the well screen. After the well bottom is sounded, a 1.5-inch clear PVC bailer will be placed to the well bottom to check for DNAPL presence. Re-development/development water will be collected in 5-gallon buckets, transferred to 55-gallon drums, and labeled for proper disposal by National Fuel. Well re-development will be documented on appropriate well development forms with recording of pH, specific conductance, temperature, and turbidity after each well volume. The presence of odors, water discoloration, light NAPL and/or dense NAPL, and/or particulates will be recorded during well development and after re-development/development water has been containerized. A goal of 10 wells volumes has been established for this assessment; however, if well yields are slow then a lesser volume will be acceptable provided sample water quality yields relatively low

turbidity samples (goal is 5 NTU but 50 NTU will be acceptable if no improvement in water quality during development is noted in late well volume removal).

Groundwater Sampling:

Groundwater samples at each well location will be collected and analyzed for the constituents of concern (COCs) in Table 1 below. As mentioned in Section 2, the heterogeneity of the soils may influence low flow sampling methods. Therefore, two sets of groundwater samples will be collected from each well using two sampling methods:

- disposable 1.5-inch clear PVC hand bailers after proper purging, and
- low-flow/low-stress purge sampling methods.

TABLE 1

Monitoring Well	Testing Parameters
MW-07 and MW-19	BTEX (USEPA SW846 8260C)
	17 PAHs (USEPA SW846 8270D)
MW-12 and MW-16	Cyanide, Total (USEPA SW846 9012B)
	Cyanide, Free (USEPA SW846 9016)

The sample collected from the bailer will be collected the day following well re-development. On the day of sampling, one well volume will be removed by slow purging methods with a bailer, and a sample will be collected for laboratory analysis. One well volume is considered adequate as several well volumes would have been removed during a one-to-two-day period the day prior to sample collection and the need to minimize sample turbidity. On the following day, a sample will be collected from the same well using low flow sampling methods. The downhole intake of the sample tubing will be positioned in the well screen at a depth corresponding to a more transmissive soil type (i.e., sand rather than clayey silt) based on the review of monitoring well logs described in Section 3, No. 1.

If it is determined that new monitoring wells are required, the sampling described above will be completed no sooner than one week following well development.

The groundwater samples will be collected into the appropriate laboratory-provided sampling containers. The sample containers will be labeled, placed in a laboratory-supplied cooler, and packed on ice (to maintain a temperature of 4˚ C). The cooler will be delivered to Eurofins-Buffalo laboratory for analysis. The laboratory maintains a NYSDOH ELAP certification for the parameters tested for at Mineral Springs. Chain-of-custody procedures will be followed using the chain-of-custody form.

5. Community Air Monitoring Plan (CAMP)

Community air monitoring will be performed to provide real-time measurements of total VOCs and particulate (airborne dust) concentrations in air at the upwind and downwind perimeters of each designated work area when intrusive investigation activities such as drilling and well installation are in progress at the site. The monitoring is designed to provide protection for the downwind community, including residences and businesses and on-site workers not directly involved with the Groundwater Quality Assessment work activities, from potential releases of airborne constituents resulting from drilling/well installation activities, if required.

The procedures used will follow methods described in the New York State Department of Health Generic CAMP (Appendix A). Additionally, site personnel will monitor downwind work areas to assess if odors are being produced because of the intrusive sampling activities. The NYSDOH-specific action levels for VOCs and particulates are provided in the CAMP. If action levels are reached during the intrusive activities, intrusive activities will cease, the Department will be notified, and engineering controls will be evaluated and implemented with concurrence from the NYSDEC. Controls will be used to mitigate odors as necessary and are discussed in the CAMP.

6. Schedule

After Department approval of the groundwater quality assessment, this work would be conducted concurrently with the Spring 2023 Semiannual Groundwater/Surface Water Monitoring sampling program scheduled for April 2023. Results will be summarized in the monitoring report and discussed with the Department (June – July 2023 timeframe). Actions affecting implementation of the O&M Plan for the facility and potential for risk to off-site groundwater quality will be discussed with Department prior to the Summer sampling event scheduled for August 2023.

Enclosure: Figure 1 – Site Layout
Appendix A – NYSDOH GCAMP

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

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009