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April 25, 2025

Ms. Michaela Cochran  
Project Manager, Remedial Bureau C  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway  
Albany, New York 12233-7017

**Oxygen Injection System #2 Removal Work Plan  
Hempstead Intersection Street Former Manufactured Gas Plant Site  
Hempstead, New York  
Site No. 1-30-086**

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Dear Ms. Cochran:

This letter provides the scope of work to remove the oxygen injection system located at 158 Hilton Avenue, Hempstead, New York (System #2), including abandoning the system injection lines and injection and monitoring wells associated with system. In October 2010 System #2 was brought online to remediate offsite portions of the dissolved-phase groundwater plume associated with the Hempstead Intersection Street Former Manufactured Gas Plant Site (the Site). System #2 is located in a primarily residential neighborhood about 800 feet south of System #1, extending from Mirschel Park to Kensington Court. In support of redevelopment taking place at Mirschel Park, the system will be abandoned ahead of the start of redevelopment work.

National Grid requested approval to shut down the system from the New York State Department of Environmental Conservation (NYSDEC) in accordance with approved system shutdown criteria established in a letter titled "Oxygen Injection System #2 Shutdown Evaluation." The letter was submitted to the NYSDEC on October 5, 2021, and approved on October 7, 2021.

System #2 was shut down on October 8, 2021, with NYSDEC approval. Per National Grid's October 5, 2021, shutdown request letter, groundwater concentrations upgradient and downgradient of the system met the NYSDEC Class GA ambient water quality standards and guidance values (AWQS); therefore, continued operation of the system would result in "diminishing returns". Following shutdown of System #2, post-system shutdown monitoring of key monitoring wells was conducted.

The system is still currently located on the 158 Hilton Avenue property and will be scheduled for removal. As part of the removal process, National Grid is requesting to abandon the associated injection wells and injection lines associated with the system, as well as monitoring wells HIMW-12S and HIMW-12I in Mirschel Park and HIMW-24 located at the entrance to the park.

The monitoring and injection wells requested for abandonment, along with construction information are provided in the tables below:

**Oxygen Injection System #2 Removal Work Plan  
Hempstead Intersection Street Former Manufactured Gas Plant Site  
Hempstead, New York  
Site No. 1-30-086**

**Table 1a. Injection Well Construction Information**

<b>Injection Point ID</b>	<b>Location</b>	<b>Casing Size</b>	<b>Screened Interval (feet)</b>	<b>Total Depth (feet)</b>
2	Kensington Court	1-Inch	87.2 - 89.2	90
3	Kensington Court	1-Inch	91.3 – 93.3	95
4	Kensington Court	1-Inch	91.3 – 93.3	95
5	Kensington Court	1-Inch	92.3 – 94.3	95
6	Kensington Court	1-Inch	92.7 – 94.7	95
7	Kensington Court	1-Inch	93 - 95	96
8	Kensington Court	1-Inch	93.3 - 95.3	96
9D	Kensington Court	1-Inch	93.7 – 95.7	97
9S	Kensington Court	1-Inch	72 - 74	75
10D	Kensington Court	1-Inch	95-97	97
11S	Hilton Avenue	1-Inch	73.5 – 75.5	77
11D	Hilton Avenue	1-Inch	97.8 – 99.8	100
12	Hilton Avenue	1-Inch	91 - 93	94
13S	Hilton Avenue	1-Inch	71 - 73	75
13D	Hilton Avenue	1-Inch	94 - 96	97
14	Hilton Avenue	1-Inch	93.4 – 95.4	97
15S	Hilton Avenue	1-Inch	72 - 74	75
15D	Hilton Avenue	1-Inch	91.6 – 93.6	95
16S*	System #2 Property	1-Inch	70.5 – 72.5	76
16D*	System #2 Property	1-Inch	91.1 – 93.1	94
17*	System #2 Property	1-Inch	92 - 94	95
18S*	System #2 Property	1-Inch	71.5 – 73.5	75
18D*	System #2 Property	1-Inch	92.5 – 94.5	96
19*	System #2 Property	1-Inch	93.1 – 95.1	96
20S*	System #2 Property	1-Inch	76 - 78	74
20D*	System #2 Property	1-Inch	93.6 – 95.6	97
21	System #2 Property	1-Inch	93.6 – 95.6	97
22S	System #2 Property	1-Inch	73 - 75	76
22D	System #2 Property	1-Inch	93.3 – 95.3	97
23	System #2 Property	1-Inch	94.2 – 96.2	97
24S	System #2 Property	1-Inch	74.8 – 76.8	78
24D	System #2 Property	1-Inch	94 - 96	97
25	System #2 Property	1-Inch	93 - 95	96
26S	System #2 Property	1-Inch	71 - 73	74
26D	System #2 Property	1-Inch	92 - 84	95
27	System #2 Property	1-Inch	90.5 – 92.5	94
28S	System #2 Property	1-Inch	73 - 75	76
28D	System #2 Property	1-Inch	89.1 – 91.1	92
29	System #2 Property	1-Inch	89.2 – 91.2	92
30S	System #2 Property	1-Inch	64.8 – 66.8	68
30D	System #2 Property	1-Inch	85 - 87	88

**Oxygen Injection System #2 Removal Work Plan  
Hempstead Intersection Street Former Manufactured Gas Plant Site  
Hempstead, New York  
Site No. 1-30-086**

<b>Injection Point ID</b>	<b>Location</b>	<b>Casing Size</b>	<b>Screened Interval (feet)</b>	<b>Total Depth (feet)</b>
31	System #2 Property	1-Inch	83 - 85	86
32	System #2 Property	1-Inch	81 - 83	84
33	Mirschel Park	1-Inch	79.1 – 91.1	82
34	Mirschel Park	1-Inch	68 - 70	71
35	Mirschel Park	1-Inch	66.2 -68.2	70
36	Mirschel Park	1-Inch	61.8 – 63.8	65
37	Mirschel Park	1-Inch	59.8 - 61.8	63
38	Mirschel Park	1-Inch	59.1 – 61.1	62
39	Mirschel Park	1-Inch	57 - 59	60
40	Mirschel Park	1-Inch	58.7 – 60.7	62
41	Mirschel Park	1-Inch	58.7 – 60.7	62
42	Mirschel Park	1-Inch	58.6 - 60.6	62
43	Mirschel Park	1-Inch	58.4 – 60.4	62
44R	Mirschel Park	1-Inch	58.3 – 60.3	61
45	Mirschel Park	1-Inch	58.1 – 60.1	61
46	Mirschel Park	1-Inch	58 - 60	61
47	Mirschel Park	1-Inch	57.5 – 59.5	60

\*: Flush mounted. All other well boxes are buried.

**Table 1b. Monitoring Well Construction Information**

<b>Monitoring Well ID</b>	<b>Location</b>	<b>Casing Size</b>	<b>Screened Depth (feet)</b>	<b>Total Depth (feet)</b>
HIMW-12S	Mirschel Park	2-Inch	22-32	34
HIMW-12IR	Mirschel Park	2-Inch	63-73	74
HIMW-24*	Atlantic Avenue	2-Inch	44-54	55
MP-2-5	Mirschel Park	2-Inch	16-62	62
MP-2-4	Mirschel Park	2-Inch	19-70	70
MP-2-3D	System #2 Property	2-Inch	76-97	97
MP-2-3S	System #2 Property	2-Inch	28-74	74
MP-2-2	Hilton Avenue	2-Inch	23-94	94

\*: Recently destroyed. An attempt will be made to locate the well and abandon in-place.

## Scope of Work

The monitoring wells, injection wells and lines will be abandoned in accordance with the NYSDEC Technical Guidance CP43: *Groundwater Monitoring Well Decommissioning Policy*, dated November 3, 2009, and the NYSDEC Groundwater Monitoring Well Decommissioning Procedures dated August 2009, except as noted below for wells within Mirschel Park. Figure 1 presents the location of the System #2 and the wells to be abandoned. Please note that Injection Point 10S and monitoring well MP-2-1 were recently abandoned on October 29, 2024.

The System #2 shed is located on the eastern side of 158 Hilton Avenue, from there an injection line runs east into Mirschel Park while another injection line runs west towards Hilton Avenue

**Oxygen Injection System #2 Removal Work Plan  
Hempstead Intersection Street Former Manufactured Gas Plant Site  
Hempstead, New York  
Site No. 1-30-086**

then turns north along the eastern side of Hilton Avenue and finally crossing over Hilton Avenue into the southern side of Kensington Court.

There are 15 injection points located in Mirschel Park, 25 injection points located at 158 Hilton Avenue, six injection points on Hilton Avenue, and 10 injection points on Kensington Court. Points 16S, 16D, 17, 18S, 18D, 19, 20S and 20D are flush-mount injection wells, all remaining injection wells are below grade. The injection wells are constructed of 1-inch PVC piping and range in depth from 60 to 100 feet below grade surface (ft. bgs.)

There are four monitoring wells in Mirschel Park, two monitoring wells on 158 Hilton Avenue, one monitoring well on Atlantic Avenue, and one monitoring well located on Hilton Avenue. The monitoring wells are constructed of 2-inch PVC piping and range in depth from 34 to 97 ft. bgs.

Each injection well associated with the system and the identified groundwater monitoring wells (as noted above) will be abandoned using grouting in-place methods in accordance with guidance presented in Sections 2.1 and 2.3 of the NYSDEC Groundwater Monitoring Well Decommissioning Procedures, excluding the wells located in Mirschel Park as described below. Excluding the buried wells, each well will be pressure grouted in place using a tremie pipe with a bentonite/Portland cement grout mixture. If there is surface casing at an injection or monitoring well, it will be pulled. Abandonment of the buried wells will be accomplished by pumping the bentonite/Portland cement mixture from the HDPE tubing located at the system enclosure through the injection lines and down each injection well. Abandonment will be considered complete when the grout fills the lines and reaches the system enclosure. The injection lines will remain in place bgs. Any extensions of the injection lines will be cut bgs and removed.

Special abandonment procedures will be performed in all wells and injection lines within Mirschel Park excluding HIMW-12S and HIMW-12IR, as follows. All monitoring and injection wells within Mirschel Park will be grouted in-place to a depth of 25 ft bgs and then overdrilled to remove the casings at minimum depth of 25 ft bgs. Best efforts to remove all casing possible will be made by the drilling contractors. Following casing removal, the remaining borehole will be grouted to the surface. Monitoring wells HIMW-12S and HIMW-12IR will be overdrilled to base depth of the well, the casings removed, and the boreholes grouted to surface. In addition, an attempt will be made to locate previously abandoned monitoring well HIMW-12D. If located, this well will also be overdrilled and the casing removed to a depth of 25 ft bgs. All buried injection lines running to each injection well will be removed.

All above ground or at-grade structures associated with the oxygen injection system will be removed including the system enclosure, fencing and road boxes. The electrical service and telemetry will be discontinued. The areas will be backfilled and restored in kind.

Community air monitoring will be performed during all intrusive activities in accordance with the New York State Department of Health Generic Community Air Monitoring Plan included as Attachment 1 to this work plan.

## **Reporting**

A Well Decommissioning Record will be generated and maintained for each of the abandoned wells in accordance with the NYSDEC guidance. The record will indicate the method of abandonment, volume and mixture of grout used in the well, and the total number of grout

**Oxygen Injection System #2 Removal Work Plan  
Hempstead Intersection Street Former Manufactured Gas Plant Site  
Hempstead, New York  
Site No. 1-30-086**

batches mixed for each well. The decommissioning records will be submitted to the NYSDEC in a summary report.

### **Schedule**

National Grid will procure a contractor to complete the scope of work following NYSDEC approval of this scope of work and pending access to the work area. The field program will tentatively commence in Summer 2025 and will take approximately three to four weeks to complete.

If you have any questions, feel free to contact me at 516.220.4363 or by email at [michael.quinlan@nationalgrid.com](mailto:michael.quinlan@nationalgrid.com).

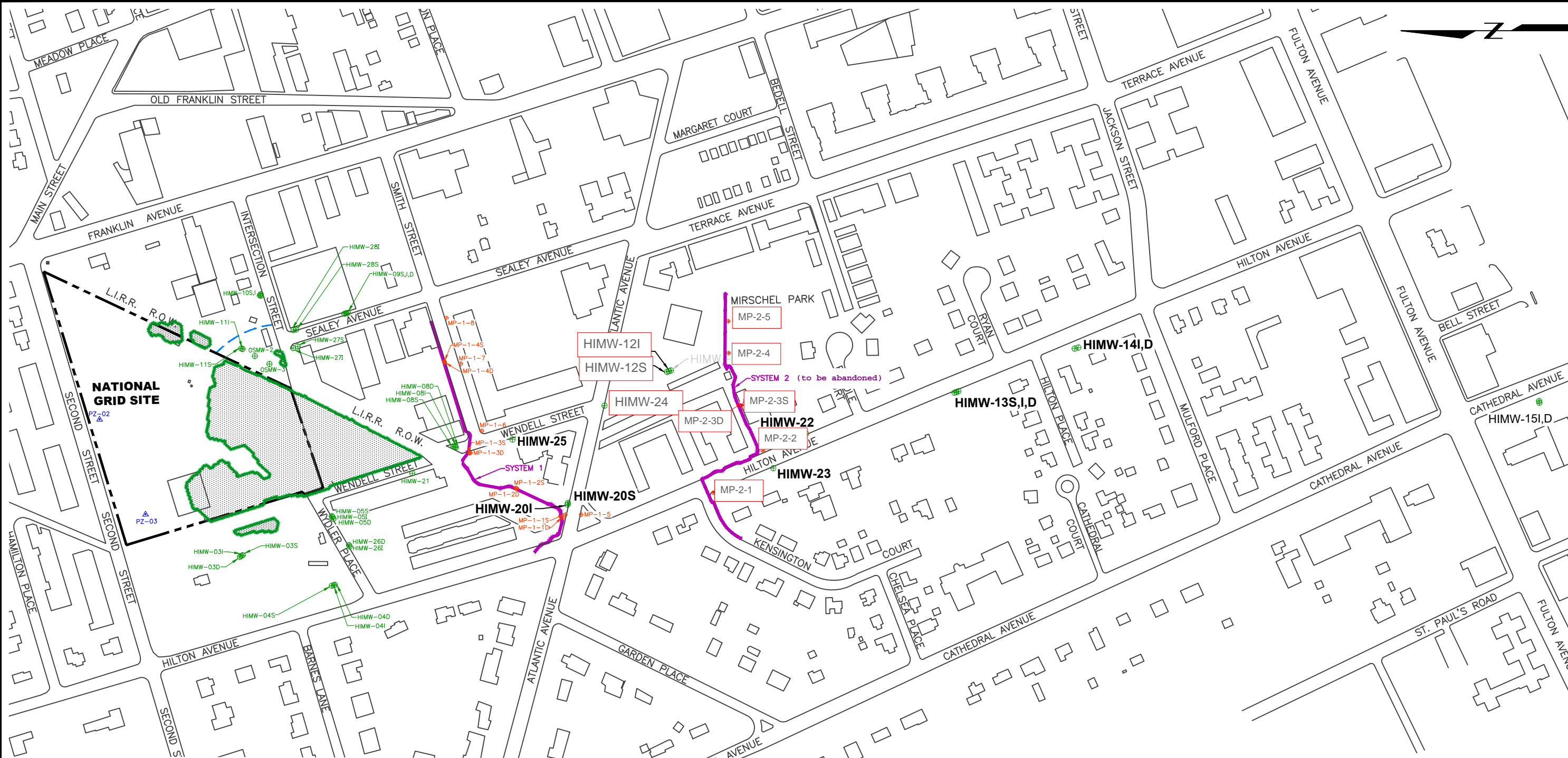
Sincerely,

A handwritten signature in black ink, appearing to read "Chi Mu", is written over a horizontal line.

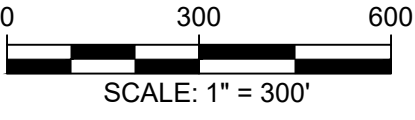
For: Michael Quinlan



### **Attachments**

cc: J. Sullivan (New York State Department of Health)  
W. Ryan (National Grid)  
J. Mitchell (National Grid)



**SOURCE:**  
FIGURE BASED ON FIGURE FROM AECOM FIGURE 9, TITLED "EXTENT OF DISSOLVED-PHASE PLUME AND GROUNDWATER ANALYTICAL RESULTS-SEPTEMBER 2018", DATED FEB. 2019.



Oxygen Injection System #2 Removal Work Plan Hempstead Intersection Street Former MGP Hempstead/Garden City, New York		LOCATION OF OXYGEN SYSTEM #2 AND WELLS TO BE ABANDONED
	Project 1905774	April 2025 <span style="float: right;">Fig. 1</span>

## **ATTACHMENT 1**

## 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 ( $\text{mcg}/\text{m}^3$ ) 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  $150 \text{ mcg}/\text{m}^3$  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  $150 \text{ mcg}/\text{m}^3$  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  $150 \text{ mcg}/\text{m}^3$  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