

Community Air Monitoring Plan

Groundwater Treatment System Consolidation

ExxonMobil Greenpoint Petroleum Remediation Project Greenpoint, Brooklyn, New York Site No: S224150

April 9, 2025

Prepared for:

ExxonMobil Environmental and Property Solutions

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1. Introduction

This Community Air Monitoring Plan (CAMP) has been prepared by Roux Environmental Engineering and Geology, D.P.C. (Roux) on behalf of ExxonMobil Environmental and Property Solutions Company, on behalf of ExxonMobil Oil Corporation (collectively, "ExxonMobil") for the construction of a new groundwater treatment facility for the ExxonMobil Greenpoint Petroleum Remediation Project (EMGPRP) project (Site; Figure 1). The proposed facility will consolidate the two existing EMGPRP groundwater treatment facilities and their respective treatment streams into a single facility to be located at 38 Varick Street, Brooklyn, New York (Property; Figure 2). The Property is approximately 0.68 acres in size and is located within a heavy industrial use area (Zoning District M3-1). The majority of the Property is surrounded by commercial and industrial use buildings; however, it should be noted that a residential property was identified on the second floor of the building located at 26 Varick Street, which is adjacent to a portion of the Property's southern boundary.

Compliance with this CAMP is required during all activities associated with the movement of soil that have the potential to generate airborne particulate matter and volatile organic compounds (VOCs). These earth moving activities include excavation, stockpiling, loading, and backfilling. This CAMP has been prepared to ensure that the activities associated with the construction of the new groundwater treatment facility do not adversely affect passersby, workers, or residents in the area immediately surrounding the Property or at the approved remote stockpiling location (i.e., 410 Kingsland Ave, also known as 400 Kingsland Avenue; Figure 2) and to preclude or minimize airborne migration of construction-related contaminants to offsite areas.

This CAMP is consistent with the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (included as Appendix A), which is included as Appendix 1A of the New York State Department of Environmental Conservation (NYSDEC) "DER-10 Technical Guidance for Site Investigation and Remediation (DER-10)," dated May 3, 2010.

2. Scope of Work

The scope of work for the consolidation project includes construction of a new groundwater treatment facility at 38 Varick Street (Property). The approximate location of the proposed new groundwater treatment facility is shown on Plate 1. Additional details regarding the basis of design for the consolidation project are provided in the Preliminary Engineering Report and Design Documents dated February 12, 2025.

The consolidation project is in the design and permitting phase; however, it is anticipated that the work will begin in late April 2025. Activities will include, but are not limited to:

- Mobilization and work site preparation;
- Implementation of a Site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP);
- Soil excavation;
- Stockpiling;
- Waste sampling, transportation, and offsite disposal;
- Building foundation installation and below grade tank construction;
- Utility installation;
- Backfilling;
- Pre-engineered metal building construction;
- Groundwater treatment system equipment installation; and
- Site restoration and demobilization.

Due to the limited footprint at the Property, it is anticipated that stockpilling will occur at both the Property and within the existing stockpile area at 410 Kingsland Avenue. Air monitoring procedures, described below, will be performed during earth moving activities at both locations.

3. Air Monitoring Procedures

Based on previous environmental investigations and the industrial history of the Property, real-time volatile organic compound (VOC) monitoring will be conducted during work activities in an effort to assess and minimize potential airborne migration to off-site areas. Due to the movement of soil during excavation, stockpiling, loadout of disposal vehicles, and backfilling, air particulate (dust) monitoring will be implemented as well. VOC and air particulate monitoring will be performed at the following locations:

- 38 Varick Property
 - o One monitoring station upwind of the work area
 - One monitoring station downwind of the work area
 - One fixed location on the southern Property perimeter adjacent to the residential building, monitored regardless of wind conditions
- 410 Kingsland Avenue
 - o One monitoring station upwind of the remote stockpile area
 - o One monitoring station downwind of the remote stockpile area

CAMP reports will be submitted to the NYSDEC and NYSDOH on a daily basis while ground-intrusive and soil handling activities are taking place. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers as soon as possible, within one business day, utilizing the Action Limit Report provided as Appendix B. In addition to daily reporting during the work, a complete record of CAMP data for the consolidation project will be provided in a future construction completion report.

3.1 Meteorological Data

The specific CAMP monitoring locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide one upwind and one downwind monitoring station at each property, as needed, with the exception of the fixed location on the southern 38 Varick Property perimeter. Appropriate site figures will be included on the contractor's daily report to record the wind direction and monitoring equipment locations (see Appendix C for base maps with example station locations given a specific wind direction).

3.2 Volatile Organic Compound Monitoring

During all earth moving activities, VOCs will be continuously monitored using a photoionization detector (PID) at the upwind and downwind perimeter of the immediate designated work area(s) and at the fixed location along the southern perimeter of the property in accordance with the Special requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures (see Appendix A). A portable, hand-held five-gas meter will be used to monitor airborne VOC within the work area(s) during excavation activities. A PID capable of measuring total VOC concentrations and integrating (averaging) these concentrations over periods of 15 minutes or less will be configured at the upwind, downwind, and fixed locations, at a height of approximately four to five feet above land surface (i.e., the breathing zone). The upwind station will be used to determine background conditions for the downwind location. Background VOC readings for the fixed location will be collected prior to commencement of the planned work. The background readings

collected at the fixed location prior to commencement of work will be detailed in the first CAMP report. The audible alarm on the downwind PID will be set at five parts per million (ppm). All VOC monitoring will be performed using a PID calibrated at least once per day prior to work activities and recalibrated as needed thereafter. The upwind and downwind monitoring stations are subject to change in response to evolving weather conditions.

The following summarizes VOC action levels and the appropriate responses:

- If the 15-minute average of total VOCs concentrations at the fixed location station on the southern Property perimeter exceeds 1 ppm above background levels, benzene-specific monitoring with an UltraRAE 3000, or equivalent, will be performed. If benzene levels exceed 1 ppm, work activities must be halted within the relevant work area, the source of vapors identified, corrective actions implemented to abate emissions, and monitoring continued. If the benzene concentration readily decreases (per instantaneous readings) below 1 ppm over background, work activities can resume with continued total VOCs monitoring.
- If the 15-minute average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 ppm above background conditions (upwind perimeter), work activities must be temporarily halted within the relevant work area 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.
- If total organic vapor concentrations at the downwind perimeter of the work area persist at levels in excess of 5 ppm but less than 25 ppm over background conditions (upwind perimeter), work activities must be halted within the relevant work area, the source of vapors identified, corrective actions implemented to abate emissions, and monitoring continued. After these steps are performed, work activities can resume, provided the total organic vapor level is less than 5 ppm over background for the 15-minute average measured 200 feet downwind of the work area or half the distance to the nearest potential receptor or residential/commercial structure whichever is less, but in no case less than 20 feet from the nearest potential receptor.
- If the total organic vapor concentration at the downwind perimeter of the work area is more than 25 ppm above background conditions (upwind perimeter), activities must be shut down within the relevant work area, the source of vapors identified, and corrective measures taken to abate the emissions, as described below.

Vapor and odor suppression may consist of applying water mist, vapor suppression mists/sprays, such as Biosolve® Pinkwater or odor suppression foam to open excavations and/or stockpiled materials. Other mitigative measures may include direct loading of excavated materials into trucks for transport offsite, adjusting excavation and material handling rates and quantities and modifying the excavation locations and schedule based on weather conditions (e.g., not excavating or handling odorous materials during when winds are moving toward a sensitive receptor).

3.3 Particulate Monitoring

Air monitoring for particulates (i.e., dust) will be performed continuously during earth moving activities using both air monitoring equipment and visual observation at the upwind, downwind, and fixed monitoring locations. Monitoring equipment capable of measuring particulate matter smaller than 10 microns (PM10) and capable of integrating (averaging) over periods of 15 minutes or less will be set up at upwind, downwind, and fixed locations, at heights approximately 4 to 5 feet above land surface (the breathing zone). The upwind station will be used to determine background conditions for the downwind location. Background particulate readings for the fixed location will be collected prior to commencement of the planned work. The background readings collected at the fixed location prior to commencement of work will be detailed in the

first CAMP report. Monitoring equipment will include MIE Data Ram monitors or equivalent. The audible alarm on the particulate monitoring device will be set at 100 micrograms per cubic meter (µg/m3). This setting will allow for proactive evaluation of worksite conditions prior to reaching the action level of 150 µg/m3 above background. The monitors will be calibrated at least once per day prior to work activities and recalibrated as needed thereafter. In addition, fugitive dust migration will be visually assessed during all intrusive work activities.

The following summarizes particulate action levels and the appropriate responses:

- If the 15-minute average of total particulate concentrations at the fixed location station on the southern Property perimeter exceeds 150 μg/m3 above background levels, work activities will be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 μg/m3 or less above background levels.
- If the downwind PM-10 particulate level is 100 μg/m3 greater than background conditions (upwind perimeter) for a 15-minute period, or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed within the relevant work area. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 μg/m3 above the upwind level and that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 μg/m3 above the background conditions (upwind perimeter), work must be stopped within the relevant work area, and an evaluation of activities initiated. Work can resume when dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 μg/m³ of the upwind level and in preventing visible dust migration.

The primary dust suppression technique for the Site will be water misting/spraying. Water mist/spray may be applied to the source areas from which particulates may be released into the air to mitigate the generation and migration of fugitive dust. Work may continue with dust suppression techniques provided that downwind PM-10 levels are not more than 150 μ g/m³ greater than background levels.

There may be circumstances where visible dust generated by earth moving activities migrates toward downwind locations but is not detected by the monitoring equipment at or above the action level. If this occurs, dust suppression techniques will be employed. If visible dust persists, work will be suspended until appropriate corrective measures are identified and implemented to remedy the situation.

Respectfully submitted,

ROUX ENVIRONMENTAL ENGINEERING AND GEOLOGY, D.P.C.

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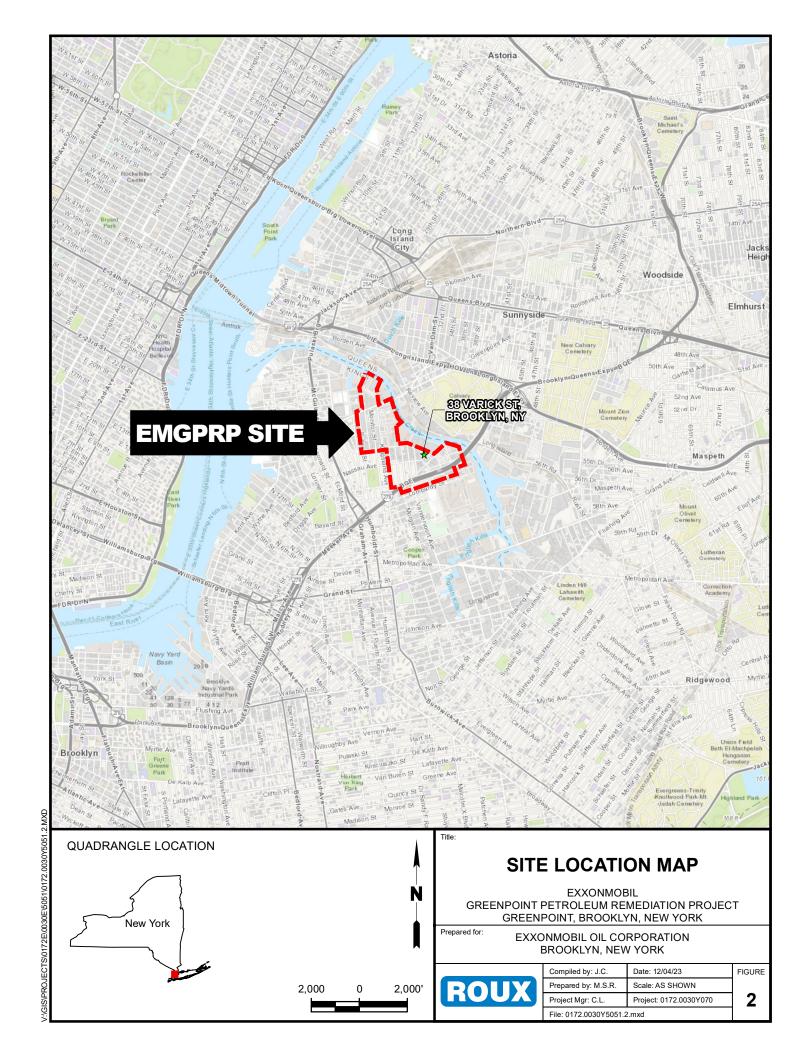
Andrew Baris, P.G.

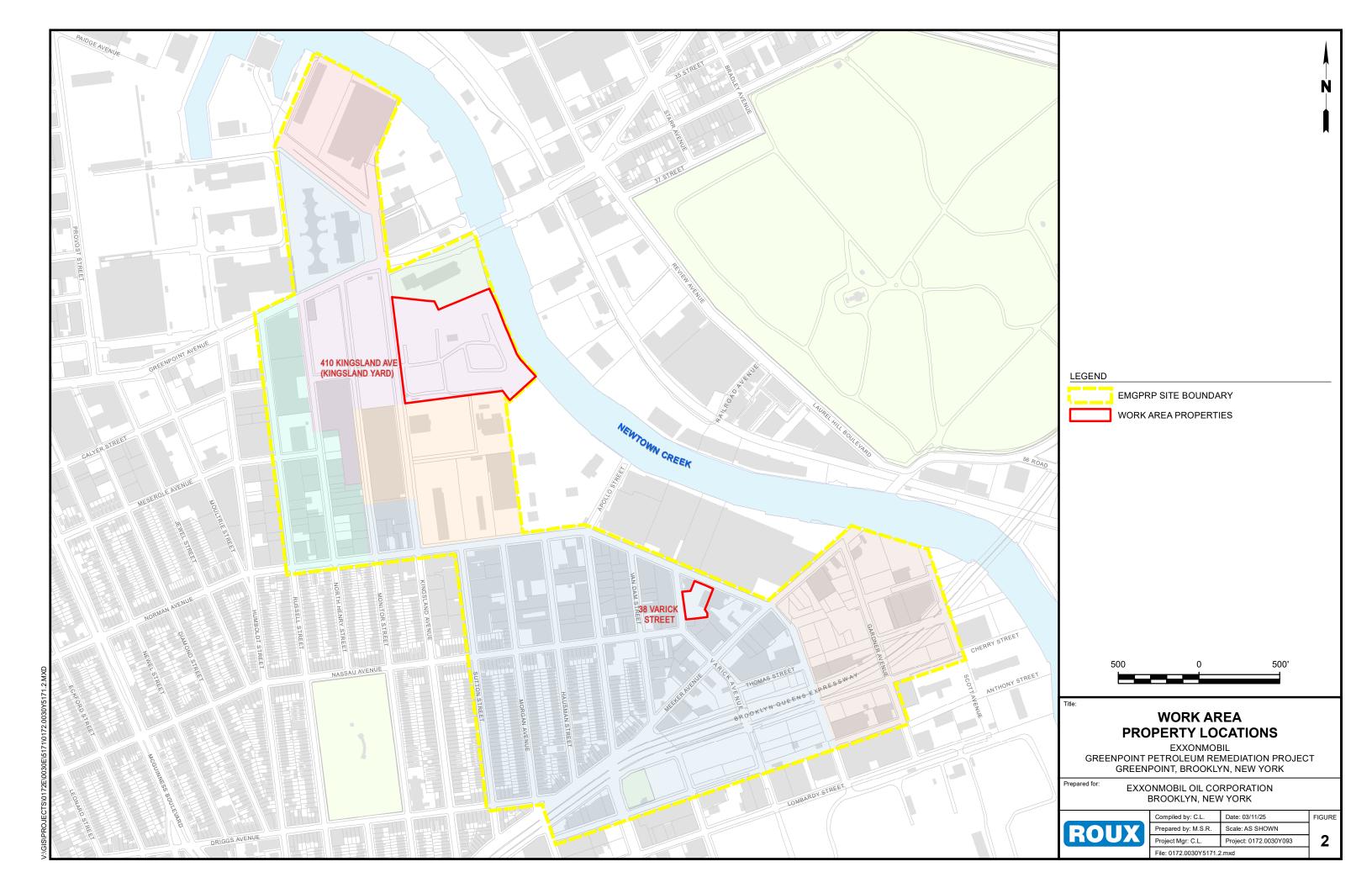
Executive Vice President / Principal Hydrogeologist

Community Air Monitoring Plan (CAMP) ExxonMobil Greenpoint Petroleum Remediation

FIGURES

- 1. Site Location Map
- 2. Work Area Property Locations





APPENDICES

- A. NYSDOH Generic Community Air Monitoring Plan and Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures
- B. Action Limit Report
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0172.0030Y093.5171/CVRS

APPENDIX A

NYSDOH Generic Community Air Monitoring Plan and Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

0172.0030Y093.5171/CVRS

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 <u>ground intrusive</u> 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 <u>non-intrusive</u> 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

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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.

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- 1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m³) 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/m³ 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/m³ 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/m³ 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.

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Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative - pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake
 vents exceed 1 ppm, monitoring should occur within the occupied structure(s).
 Depending upon the nature of contamination, chemical-specific colorimetric tubes of
 sufficient sensitivity may be necessary for comparing the exposure point concentrations
 with appropriate pre-determined response levels (response actions should also be predetermined). Background readings in the occupied spaces must be taken prior to
 commencement of the planned work. Any unusual background readings should be
 discussed with NYSDOH prior to commencement of the work.
- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m₃, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m₃ or less at the monitoring point.
- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work with Co-Located Residences or Facilities Unless a self -contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under "Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures" except that in this instance "nearby/occupied structures" would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g. weekends or evenings) when building occupancy is at a minimum.

APPENDIX B

Action Limit Report

ACTION LIMIT REPORT

Project Location:				
Date:				
Name:				
Contaminant: PM-10:	VOC:			
Wind Speed:				
Temperature:				
DOWNWIND DATA				
Monitor ID #:	Location:	Level Reported:		
Monitor ID#:	Location:	Level Reported:		
UPWIND DATA				
Monitor ID #:	Location:	Level Reported:		
Monitor ID#:	Location:	Level Reported:		
BACKGROUND CORRECTED LEVELS				
Monitor ID #:	Location:	Level Reported:		
Monitor ID#:	Location:	Level Reported:		
ACTIONS TAKEN				



APPENDIX C

CAMP Report Figure Base Maps





PLATES

1. 38 Varick Proposed Property Plan

