Generic Community Air Monitoring Plan
For Supplemental Investigation and
Interim Remedial Measures
R. Freedman & Sons Site
Site No. 401033
Green Island, New York

1.0 Overview

This Community Air Monitoring Plan ("CAMP") has been prepared for the R. Freedman & Son Site No. 401033. The CAMP provides the methods and procedures for the real-time monitoring for volatile organic compounds ("VOCs") and particulates (i.e. dust) at the downwind perimeter of each designated work area when certain site investigation or remediation activities are in progress. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, it 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 site-specific CAMP for supplemental investigation and interim remedial measures ("IRM") presented below will be sufficient to cover the planned site activities. The specific requirements have been reviewed with the Site Safety Officer and submitted to the New York State Department of Environmental Conservation ("NYSDEC") and the New York State Department of Health ("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.

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

2.0 Community Air Monitoring Plan

The site-specific CAMP for supplemental and IRM presented below will be sufficient to cover the planned site activities. The remedial investigation data indicates semivolatile organic compounds ("SVOCs"), PCBs, and metals are present in the soil and VOCs are located only in the groundwater. The IRM will largely focus on the soil removal or excavating activities with no possibility of encountering groundwater, but since a portion of the planned IRM will be conducted off-site, real-time air monitoring for VOCs and particulate levels at the perimeter of the exclusion zone and work area will be necessary. For activities being conducted off-site, along Tibbits Avenue, air monitoring will be conducted continuously between the work zone and the nearest residence or occupied building.

On the Site supplemental investigation involves the excavation of test pits to a depth where groundwater is expected and depending on soil and groundwater conditions, the saturated zone will be penetrated. During this portion of the planned activities, dust and VOC monitoring will be conducted in the work

area and at the perimeter of the exclusion zone. As the need arises, downwind areas of the Site will be monitored, and corrective actions taken to minimize the migration of contaminants.

2.1 Continuous Monitoring

Continuous air monitoring for dust and VOCs will be required for all intrusive in-ground activities conducted during the supplemental investigation and IRM. During these activities which continuous monitoring will be required and will include: sampling and development of monitoring wells (VOCs only), excavation of pits, and soil/waste excavation and handling.

2.2 Periodic Monitoring

Periodic monitoring for VOCs will be required during non-intrusive site activities such as the collection of soil samples or the collection of groundwater samples from 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, monitoring during well baling/purging, or disturbing the soil during off-site IRM confirmation sampling, and taking a reading prior to leaving a sample location. At this time the closest soil sampling location to an occupied building at the Site is less than 10 feet; therefore, continuous monitoring for VOCs is warranted. As sampling data is obtained, the CAMP will be re-evaluated.

2.2.1 VOC Monitoring, Response Levels, and Actions

VOCs will be monitored at the downwind perimeter of the immediate work area (i.e. the exclusion zone) on a continuous basis or as wind speed and as the concentration of VOCs at the point of measurement dictate. Upwind concentrations will be measured at the start of each workday and periodically (every 15 to 30 minutes) thereafter to establish background conditions, particularly if wind direction changes. The monitoring work will be performed using at least an organic vapor analyzer with a photoionization or flame ionization detector. The equipment will be checked in the field for calibration at least daily using a gas standard. As the field calibration of an instrument drifts beyond an acceptable limit a complete calibration will be performed, or the equipment will be replaced. The equipment will 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 the 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 5.0 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 the exclusion zone persist at levels in excess of 5.0 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. For the off-site IRM soil removal area, total VOCs will not exceed 5.0 ppm over the background concentration without corrective action.

    a. If the VOCs level is above 25.0 ppm at the perimeter of the work area, activities must be shutdown.

b. All 15-minute readings must be recorded and be available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

2.2.2 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations during actions where larger areas of the ground surface are disturbed with powered equipment (i.e., excavator) or when un-containerized waste is being handled. During off-site activities, particulate monitoring will also be done between the soil removal and the nearest residence.

The particulate monitoring equipment will be able to measure real time date to particulate sizes of less than 10.0 micrometers (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will provide an audible alarm to indicate an 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 terminated, 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 preventing visible dust migration.

3. If dust exceeds 150 mcg/m^3 at the upwind monitoring location during the IRM or supplemental investigative activities, Leader will instruct the EMR site manager, if appropriate, to take appropriate corrective action. If dust from the supplemental investigation activities IRM activities or waste handling activities exceed project thresholds at the downwind monitoring location compared to the upwind monitoring location the field manager will determine what is causing the problem and seek a remedy, and if needed, they will stop work until it can be corrected. As a result, air monitors will be located up and down wind of the investigation work.

4. All readings must be recorded and available for NYSDEC, NYSDOH and Albany County DOH personnel to review.