COMMUNITY AIR MONITORING PROGRAM

Prepared for:

CONSOLIDATED EDISON COMPANY OF NEW YORK
SILVERSTEIN PROPERTIES, INC.

for the property located at:

FORMER MANUFACTURED GAS PLANT SITE
WEST 42nd STREET, NEW YORK, NY
BLOCK 1089 TAX LOT 1 - SITE ID# C231024
BLOCK 1089 TAX LOT 3 - SITE ID# C231012

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I. EXECUTIVE SUMMARY

The following Community Air Monitoring Program (CAMP) has been developed to deal with anticipated work activities at the site known as the West 42nd Street - Former Manufactured Gas Plant Site - Brownfield Cleanup Program, Block 1089 Tax Lot 1 - Site ID# C231024 and Block 1089 Tax Lot 1 - Site ID# C231012. This program has been developed to include those provisions contained within the New York State Department of Health Generic Community Air Monitoring Plans (see Appendix A) in order to deal with the downwind, real-time monitoring of volatile organic compounds (VOCs) and particulates (i.e. dust) during disturbance activities to provide a measure of protection to downwind communities. This monitoring will establish Action Levels (i.e. levels at which increased monitoring is required) and Correction Actions (i.e. to abate or correct the conditions causing the elevated emissions).

The site is a former Manufactured Gas Plant site which has been found during past and current investigations to have elevated levels of by-products associated with its former use. The site is scheduled to be re-developed with a high-rise residential structure which will require significant ground intrusion, soil removal and site development. Since the anticipated soil intrusion and soil removal activities do not involve heavy metal contamination, but rather organic hydrocarbons (i.e. non-methane hydrocarbons), a CAMP requiring sampling for airborne particulate and Volatile Organic Compounds (VOCs) will be necessary.

II. PROGRAM INTRODUCTION

Airborne monitoring for non-methane hydrocarbons and particulates will be conducted at each property boundary and at the exclusion zone. Monitoring will be performed utilizing real-time devices with remote data logging capabilities. In addition to the airborne monitoring for non-methane hydrocarbons and particulates, GCI will install a Meteorological Station which shall record the parameters of barometric pressure, temperature, humidity, wind direction, wind speed and wind chill. One (1) Airborne Monitoring Station (AMS) will be positioned at each of the Northern, Southern and Eastern boundaries of the project site.

These boundaries are adjacent to public sidewalks and roads that are contiguous with neighboring commercial and industrial properties (See Appendix A - Figure 1 for AMS locations).

In addition to the above mentioned AMS, two (2) additional AMSs will be positioned along the Western boundary of the site which is contiguous with a high rise residential structure. This doubling of the AMSs will provide increased sensitivity and therefore a higher level of protection for this adjoining residential structure and its occupants.

All monitoring devices will be calibrated at a minimum once (1) per day for the AMS and in accordance with the frequency and procedures recommended by each device's manufacturer. The portable Gas Chromatograph will be calibrated every time the device is activated for use. Records of each calibration and/or calibration event will be recorded in the project notebook, maintained and copies of each submitted on a weekly basis. Readings will be recorded as "Net Readings" of each device which will be the "Total Reading" minus "Ambient Concentrations".

III. AIR QUALITY MONITORING

During each work day and prior to the initiation of any on-site remedial activities, the Meterological Station will determine wind direction and the corresponding AMS will be used to quantify a "daily ambient background concentration" for particulate and non-methane hydrocarbons. In addition, a sample of the ambient air will be collected and analyzed via gas chromatography to identify the corresponding hydrocarbons and the various chemical species. The gas chromatography analysis will provide data to assist in the identification of the source of the detected hydrocarbons (i.e. vehicle exhaust, diesel engine emissions, gasoline powered generators, etc.). The Gas Chromatograph will have a precision as measured by Relative Standard Deviation median values of between 3% and 20% and a 95th percentile value of 25% - 35%. Accuracy as measured by an Absolute Percent Difference median values of between 10% and 40% and 95th percentile values of 20% - 30%. Additionally, the Gas Chromatograph will have a minimum detection limit for specified hydrocarbons of 0.1 ppm. SUMMA canisters will be stored on-site for use during the project in collecting confirmatory air samples if sustained odors or organic vapors exceedences occur.

Air quality monitoring at each property line is necessary as wind directions are vectors that typically vary by 180 degrees throughout a twelve (12) hour period. The presence of large high-rise structures in the area further increases vector variation.

The simultaneous monitoring of the wind and air quality at each boundary of the site will aid in determining the source of any detected air quality data anomalies. An understanding of the source will aid in the selection of appropriate contingency measures (see Appendix A - Figures 2 - 4). In addition, the proposed monitoring will generate data that will assist in the identification and quantification of contributory off-site air pollution sources.

Real time air quality monitoring for non-methane hydrocarbons will be performed utilizing MultiRAE Plus portable photo ionization detection meters manufactured by RAE Systems. The MultiRAE Plus has a hydrocarbon detection range of 0-2000 ppm with 0.1 ppm resolution, and it combines a photo ionization detector with the standard four (4) gases of a confined space monitor [O_2, LEL, and two (2) toxic gas sensors]. The MultiRAE Plus detector is wireless allowing real-time monitoring information from the detector to be integrated into an existing AreaRAE system. A wireless, radio frequency modem allows detectors to communicate and transmit readings and other information on a real-time basis with a remote location AreaRAE base controller which can be positioned up to two (2) miles away. Data from all of the detectors will be compiled with PC-based software that can show all historic data in graphic or text form. This data will be included within final closure documentation.

Real time air quality monitoring for particulates will be performed utilizing a ThermoRAE Data Ram electromagnetic radiation sensor. The instrument can be configured to respond only to dust particles less than 10 microns in diameter, dust particles less than 2.5 microns in diameter or total suspended particulate. A wireless, radio frequency modem allows detectors to communicate and transmit readings and other information on a real-time basis with a remotely located base controller. Data from all of the detectors will be compiled with PC-based software that can show all historic data in graphic or text form. This data will be included within final closures documentation.

Site generated odors will be measured over a fifteen (15) minute period using the n-butanol scale adapted from ASTM E544-99. Additional mitigation actions may be required if the DEC/DOH believes that odors are oppressive or if complaints are received from adjacent property owners.

IV. AIR QUALITY DETERMINATIONS

The results of the AMS at the various locations at the site will be utilized to define site conditions during the work. The results of each testing will be generalized utilizing a color-coding schematic displaying the colors of Green, Preliminary Yellow, Yellow and Red. Audible and visual alarms will be installed throughout the site that will identify air quality conditions.

Decisions and prompts flow diagrams for each air quality parameter are included in Appendix A - Figures 2 - 4. 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 capable of calculating fifteen (15) minute running average concentrations which will be compared to the levels specified below.

A. Organic Vapors - Response Levels and Actions

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

ii. If total vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of five (5) ppm over background but less than twenty five (25) ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate these emissions, and the monitoring continued. After these steps have been performed, work activities can resume provided that the total organic vapor level two hundred (200) feet downwind of the exclusion zone or one-half (½) the distance to the nearest potential receptor or residential/commercial structure, whichever is less, but in no case less than twenty (20) feet, is below five (5) ppm over background for the fifteen (15) minutes average.

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

iv. All fifteen (15) minute readings will be recorded and available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision making purposes will also be recorded.

2. Particulate Monitoring - Response Levels and Actions

i. If the downwind PM-10 particulate level is one hundred (100) micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the fifteen (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 one hundred fifty (150) $\mu g/m^3$ above the upwind level and provided that no visible dust is migrating from the work area.

ii. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than one hundred fifty (150) $\mu g/m^3$ 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 one hundred fifty (150) $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

iii. All fifteen (15) minute readings will be recorded and available for State (DEC and DOH) personnel to review.

These Decisions and Prompt flow diagrams are summarized below in CAMP TABLE #1:

CAMP TABLE #1

Target	CAMP Action Level	Green Level	Preliminary Yellow Level	Yellow	Red
Total non-methane hydrocarbons	5 ppm above ambient	<3.7 ppm	3.7 - 5.0 ppm over 1 sample cycle	3.7 - 5.0 ppm over 3 sample cycles	> 5.0 ppm over 3 sample cycles
Respirable Particulate Matter (PM10)	150 $\mu g/m^3$ above ambient	<113 $\mu g/m^3$	114-150 $\mu g/m^3$ over 1 sample cycle	114-150 $\mu g/m^3$ over 3 sample cycle	150 $\mu g/m^3$ above ambient
Odor	3	<3 and no odor complaints	–	–	–

Airborne monitoring will continue during all work site conditions, however, where the site is determined to be in either conditions Yellow or Red additional hydrocarbon sample collection and analysis will be performed utilizing a portable gas chromatograph. The data generated from this additional analysis will be utilized to assist in determining the source of the detected hydrocarbons. If an off-site source is determined to be the primary factor in the elevated readings, then this additional monitoring and analysis will be performed until such time as the influence of this or these off-site sources has been discontinued. All reasonable efforts will be undertaken whenever and wherever possible to expedite the discontinuance of the off-site source(s).

V. CONTINGENCY PLAN

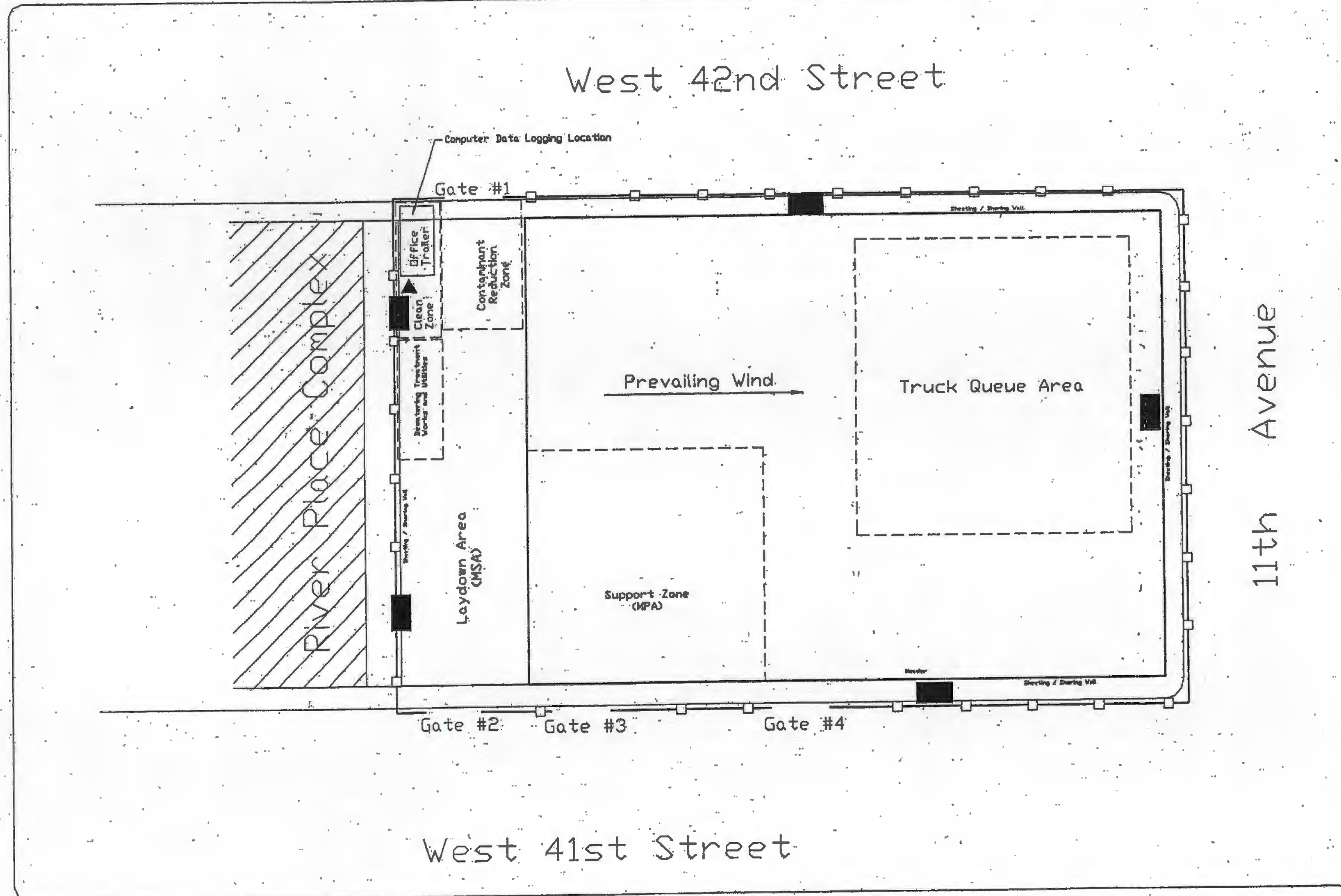
When Yellow or Red Conditions are identified during the course of the project, then the contingency measures as defined in CAMP Table #2 will be implemented. In addition, all key personal identified within the site specific CHASP will be electronically paged or contacted by cell phone:

CAMP TABLE #2

Site Condition	Contingency Measures
Yellow	• Continue monitoring air quality • Establish trend of data and determine if evaluation/wait period is warranted • Temporarily stop work • Temporarily re-locate work to an area with potentially lower emissions • Apply water to the area of activity or haul roads to minimize dust • Re-schedule work activities • Cover all or part of the excavation area • Apply VOC emission suppressant foam over open excavation front or stockpiles • Slow the pace of the offending activity • Install a localized perimeter barrier fence • Adjust the physical setup of the spray bar mister to increase coverage in the work area • Adjust chemical odor/dust suppressant solution used with misters
Red	• Continue monitoring air quality • Apply the Yellow Condition Contingency measures presented above • Encapsulate construction area and treat air exhaust • Perform work during cold temperatures (if applicable and feasible) • Cease construction activities • Re-evaluate air monitoring plan
Note	The bulleted response actions outlined above can be implemented in any order that is the most appropriate under the existing or current site conditons.

The contingency plan will be incorporated into the CHASP as a separate summary document for quick access and reference by all site and field personnel and will contain the following sections:

- Fixed AMSs map
- Emergency contact list
- Sample Contingency Meeting Report
- Target concentrations for Site Alert Conditions
- Response actions for Site Alert Levels
- Total VOC decision diagram
- Respirable particulate matter decisions diagram
- Odor decision diagram



Legend Scale: 1" = 40'

■ Perimeter Air Quality Monitoring Station

▲ Weather Station

Figure 1: Perimeter Air Quality Monitoring Stations

Figure 2
Odor Decisions and Prompts Flow Diagram

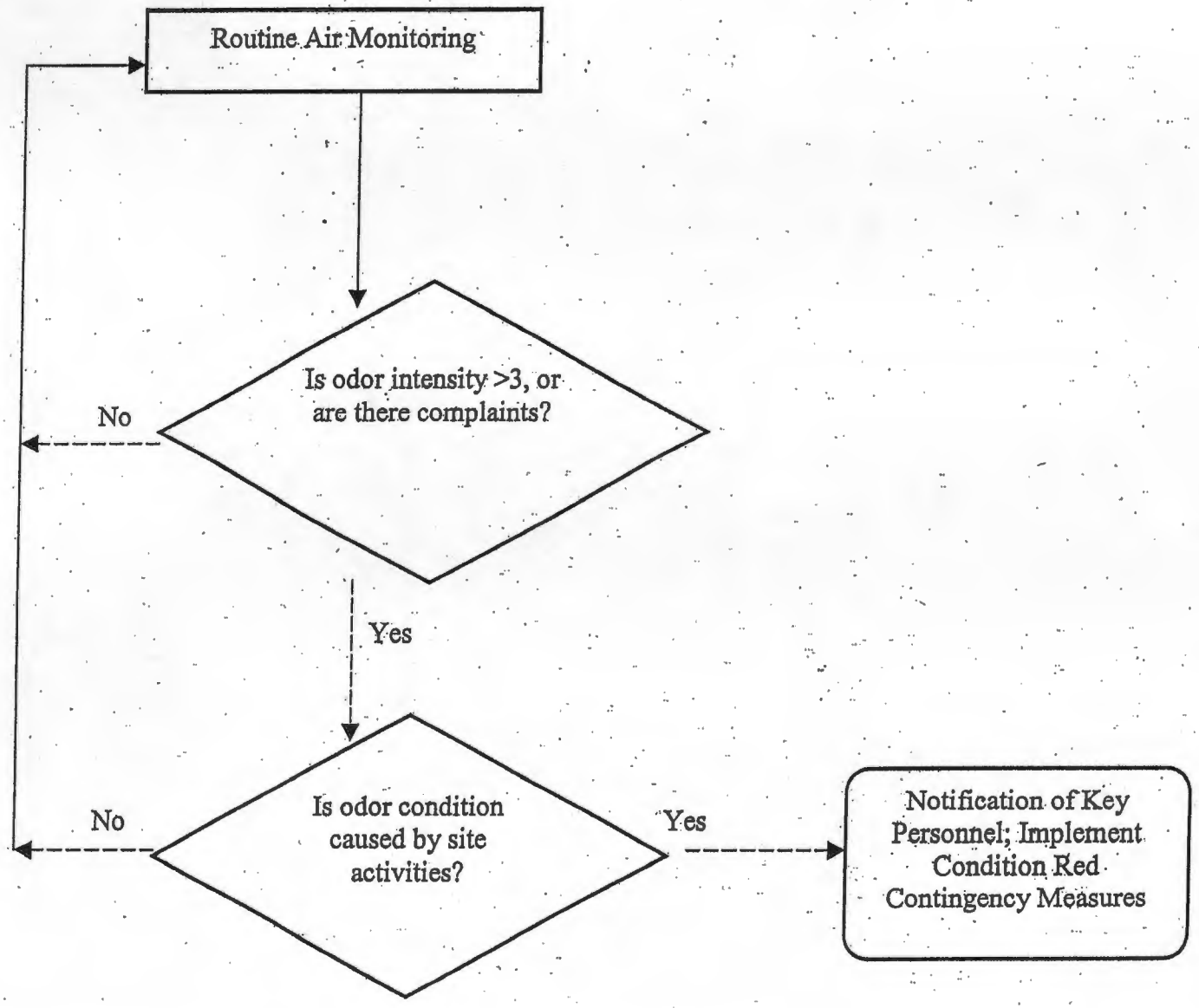


Figure 3
Particulate [PM10] Decisions and Prompts Flow Diagram

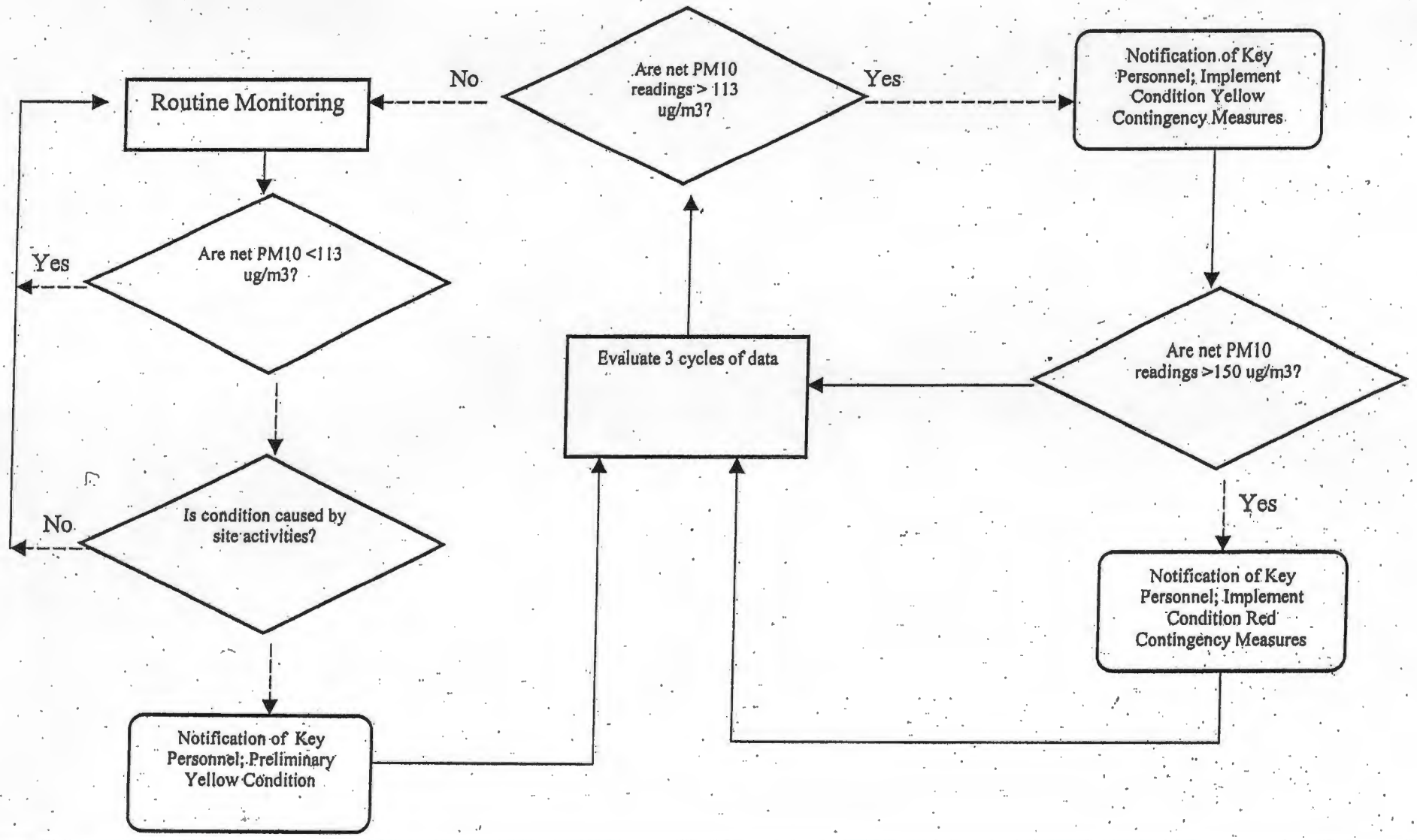
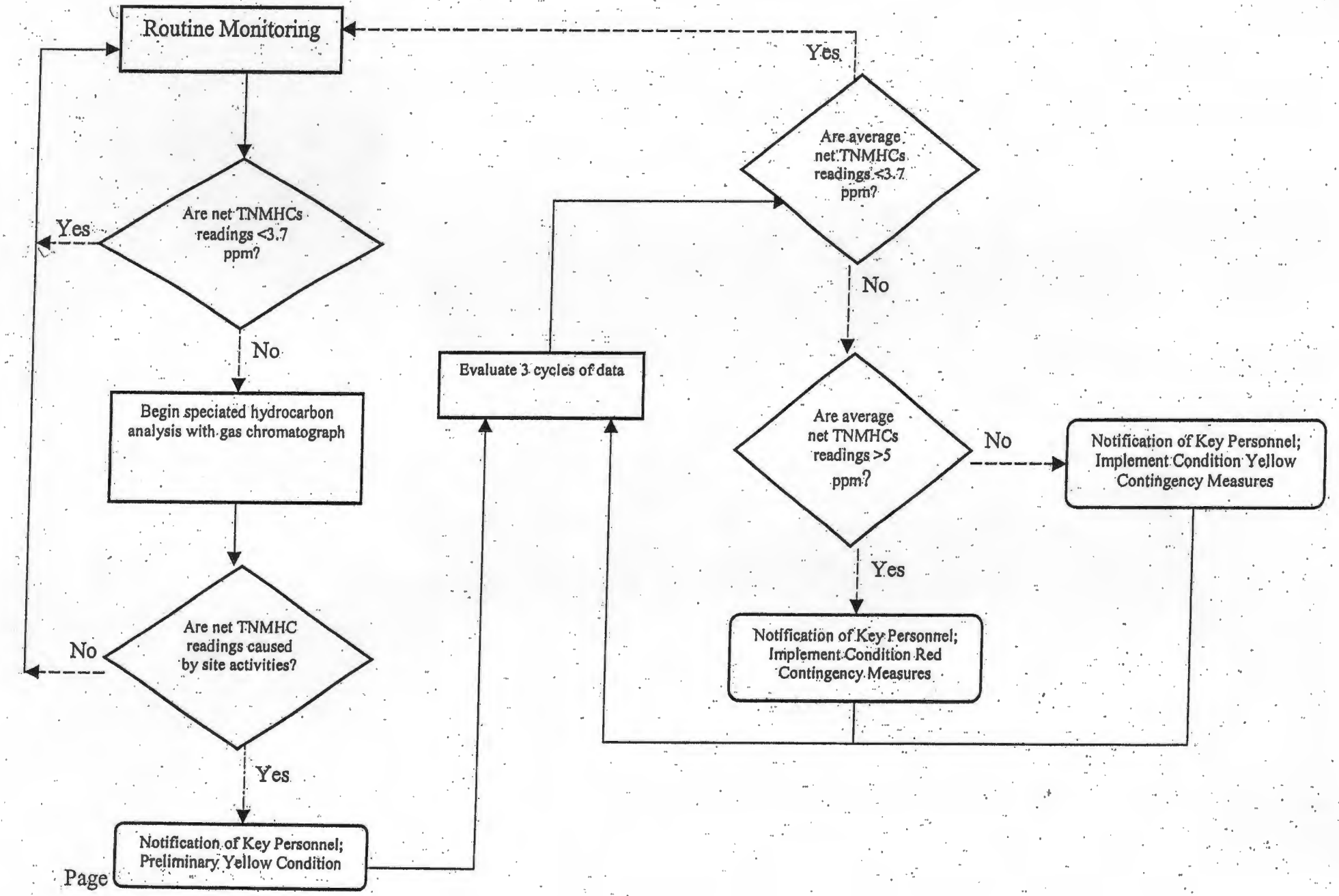


Figure 4

Total Non-Methane Hydrocarbons [TNMHCs] Decisions and Prompts Flow Diagram



New York State Department of Health
Generic Community Air Monitoring Plan

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 volatile organic compounds (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 NYSDEC/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. 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.

- 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.

- 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.

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

All 15-minute readings must be recorded and be available for State (DEC and DOH) 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.

- 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.

- 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.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

Technical and Administrative Guidance Memorandum #4031

Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites

More information from this division:

Division of Environmental Remediation
More TAGMs

To: Regional Hazardous Waste Remediation Engrs., Bur. Directors & Section Chiefs

From: Michael J. O'Toole, Jr., Director, Division of Hazardous Waste Remediation (signed)

Subject: Technical and Administrative Guidance Memorandum -- Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites

Date: Oct 27, 1989

1. Introduction

Fugitive dust suppression, particulate monitoring, and subsequent action levels for such must be used and applied consistently during remedial activities at hazardous waste sites. This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

2. Background

Fugitive dust is particulate matter--a generic term for a broad class of chemically and physically diverse substances that exist as discrete particles, liquid droplets or solids, over a wide range of sizes--which becomes airborne and contributes to air quality as a

nuisance and threat to human health and the environment.

On July 1, 1987, the United States Environmental Protection Agency (USEPA) revised the ambient air quality standard for particulates so as to reflect direct impact on human health by setting the standard for particulate matter less than ten microns in diameter (PM_{10}); this involves fugitive dust whether contaminated or not. Based upon an examination of air quality composition, respiratory tract deposition, and health effects, PM_{10} is considered conservative for the primary standard--that requisite to protect public health with an adequate margin of safety. The primary standards are 150 ug/m^3 over a 24-hour averaging time and 50 ug/m^3 over an annual averaging time. Both of these standards are to be averaged arithmetically.

There exists real-time monitoring equipment available to measure PM_{10} and capable of integrating over a period of six seconds to ten hours. Combined with an adequate fugitive dust suppression program, such equipment will aid in preventing the off-site migration of contaminated soil. It will also protect both on-site personnel from exposure to high levels of dust and the public around the site from any exposure to any dust. While specifically intended for the protection of on-site personnel as well as the public, this program is not meant to replace long-term monitoring which may be required given the contaminants inherent to the site and its air quality.

3. Guidance

A program for suppressing fugitive dust and monitoring particulate matter at hazardous waste sites can be developed without placing an undue burden on remedial activities while still being protective of health and environment. Since the responsibility for implementing this program ultimately will fall on the party performing the work, these procedures must be incorporated into appropriate work plans. The following fugitive dust suppression and particulate monitoring program will be employed at hazardous waste sites during construction and other activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.
2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may

generate fugitive dust from exposed waste or contaminated soil. Such activities shall also include the excavation, grading, or placement of clean fill, and control measures therefore should be considered.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM_{10}) with the following minimum performance standards:

   Object to be measured: Dust, Mists, Aerosols
   Size range: <0.1 to 10 microns
   Sensitivity: 0.001 mg/m^3
   Range: 0.001 to 10 mg/m^3
   Overall Accuracy: ±10% as compared to gravimetric analysis of stearic acid or reference dust

   Operating Conditions:
   Temperature: 0 to 40°C
   Humidity: 10 to 99% Relative Humidity

   Power: Battery operated with a minimum capacity of eight hours continuous operation

   Automatic alarms are suggested.

   Particulate levels will be monitored immediately downwind at the working site and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task; the P-5 Digital Dust Indicator as manufactured by MDA Scientific, Inc. or similar is appropriate.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the entity operating the equipment to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.
5. The action level will be established at 150 ug/m^3 over the integrated period not to exceed 15 minutes. While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150

ug/m^3, the upwind background level must be measured immediately using the same portable monitor. If the working site particulate measurement is greater than 100 ug/m^3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see Paragraph 7). Should the action level of 150 ug/m^3 be exceeded, the Division of Air Resources must be notified in writing within five working days; the notification shall include a description of the control measures implemented to prevent further exceedences.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM_{10} at or above the action level. Since this situation has the potential to migrate contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.
7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:
    1. Applying water on haul roads.
    2. Wetting equipment and excavation faces.
    3. Spraying water on buckets during excavation and dumping.
    4. Hauling materials in properly tarped or watertight containers.
    5. Restricting vehicle speeds to 10 mph.
    6. Covering excavated areas and material after excavation activity ceases.
    7. Reducing the excavation size and/or number of excavations.

Experience has shown that utilizing the above-mentioned dust suppression techniques, within reason as not to create excess water which would result in unacceptable wet conditions, the chance of exceeding the 150 ug/m^3 action level at hazardous waste site remediations is remote. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. If the dust suppression techniques being utilized at the site do not lower particulates to an acceptable level (that is, below 150 ug/m^3 and no visible dust), work must be suspended until appropriate corrective measures are approved to remedy the situation. Also, the evaluation of weather conditions will be necessary for proper fugitive dust control--when extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended.

There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require appropriate toxics monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

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