

*Prepared for*

**New York State Department of Environmental Conservation**

**Division of Environmental Remediation, Region 8**

6274 East Avon-Lima Road  
Avon, New York 14414-9519

# **SOIL/DUST CONTROL AND MONITORING PLAN**

**INTERIM REMEDIAL MEASURES**

**Former Sperry Remington Site – North Portion**

**777 South Main Street,**

**City of Elmira, Chemung County, New York**

**NYSDEC Project 808022**

*Prepared by*

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## 1. INTRODUCTION

This Soil/Dust Control and Monitoring Plan (SDCMP) was prepared by Geosyntec Consultants, Inc. and its New York affiliate Beech and Bonaparte Engineering, P.C. (collectively Geosyntec) to address the issue of soil and dust control during planned Interim Remedial Measures (IRM) activities at the Former Sperry Remington Site – North Portion (Site #808022) (Site) in Elmira, New York. The Site is located at the Elmira High School (EHS) property (formerly known as Southside High School), 777 South Main Street in Elmira, Chemung County, New York and owned by Elmira City School District (ECSD).

The SDCMP was developed to be consistent with New York State Department of Health's (NYSDOH's) Generic Community Air Monitoring Plan (CAMP) provided in New York State Department of Environmental Conservation (NYSDEC) *Technical Guidance for Site Investigation and Remediation* (DER-10) (See **Appendix E-1**). Geosyntec also reviewed dust control and monitoring plans presented in the 2009 Environmental Monitoring Plan (EMP) prepared for ECSD in preparation of the SDCMP.

## 2. PLAN ORGANIZATION

The remainder of the SDCMP is organized into the following Sections:

- Section 3, *Identification*, provides the required contact information for the project owner, contractor, and consultant;
- Section 4, *Scope of Work*, presents details on the specific work tasks for the remedial project;
- Sections 5.1 and 5.2, *Dust Mitigation and Dust Monitoring*, provide details of the dust mitigation and dust monitoring measures; and
- Section 6, *Action Levels and Maintenance*, presents the numeric criteria that will be used in conjunction with dust monitoring activities to control emissions from the Site.

### **3. IDENTIFICATION**

#### **3.1 Project Owner**

Project Owner: Unisys Corporation  
Address: 3199 Pilot Knob Road, MS F1B05  
Eagan, MN 55121  
Contact Person: Kevin Krueger  
Phone Number: (651) 687-2210

#### **3.2 IRM Contractor**

IRM Contractor: Remedial Construction Services, L.P. (RECON)  
Address: 950 West Valley Road  
Wayne, PA 19087  
Contact Person: John Geary  
Phone Number: (857) 378-9225

#### **3.3 Firm Preparing this Soil/Dust Control and Monitoring Plan**

Firm Preparing SDCMP: Geosyntec Consultants, Inc. and Its Affiliate  
Beech and Bonaparte Engineering, PC  
Address: 10211 Wincopin Circle, 4<sup>th</sup> Floor  
Columbia, MD 21044  
Project Manager: Aron Krasnopoler, Ph.D., P.E.  
Office Phone Number: (410) 381-4333

#### **3.4 Qualified Environmental Professional**

A qualified environmental professional (QEP) as defined in DER-10 Section 1.3 (b) shall be designated at the start of each phase of work. The QEP will be responsible for the implementation of the dust monitoring, control and mitigation measures.

QEP: Aron Krasnopoler, Ph.D., P.E.  
Mobile Phone Number: (202) 550-7724

On-site Representative: Ashwin Ranna  
Mobile Phone Number: (412) 552-4758

## **4. SCOPE OF WORK**

### **4.1 General**

The general scope of the Site remediation work consists of the following:

- Clearing of vegetation and debris;
- Soil excavation;
- Direct loading of hazardous soils for off-Site transport;
- Stockpiling of non-hazardous soil for backfill or off-Site transport.
- Backfilling and compaction of fill to achieve design grade; and
- Off-Site Transport.

The potential for the development of dust from soil may exist at each of these steps.

### **4.2 Excavation and Backfilling**

Soils will be excavated to achieve soil cleanup goals. Excavated soils that are characterized as hazardous waste will be direct loaded for off-Site transport and disposal. Non-hazardous soils will be stockpiled for either use as backfill on-Site or disposal off-Site. Backfilling and compaction of soils will occur on-Site as part of a re-grading restoration process. Imported fill and stockpiled soils will be used to achieve final grade for restoration. Soil will be moved and compacted on-Site during this process, therefore, continual dust monitoring will be required throughout the process.

### **4.3 Loading and Hauling**

Trucks may be loaded directly from the excavation or stockpile areas. Loads will be wetted and covered prior to relocation within or disposal off-Site. All soil transported within the Site will comply with the following:

- No material may extend above the sides or rear of the truck/trailer;
- Prior to covering, the surface of the loaded soils will be moistened;
- Beds of trucks/trailers carrying impacted soils will be completely covered to prevent particulate emissions to the atmosphere; and
- The exterior of the trucks/trailers shall be cleaned off prior to leaving the Site.

## **5. DUST MITIGATION PRACTICES**

### **5.1 General**

To mitigate the potential for fugitive dust from the Site, specific monitoring tasks as described in Section 5.2 will be conducted. Based on the results of monitoring actions, mitigation measures may be implemented.

#### **5.1.1 Water Application Practices**

Water application shall be used to suppress or mitigate the generation of fugitive dust or odors during excavation, backfilling, grading, and supplemental activities. Water will be applied by a water truck to carpet the targeted soil using fine atomized sprays. Water will be applied in the same manner to suppress dust on permanent and temporary haul roads, stockpiles, and areas undergoing the aforementioned activities. A direct spray may also be applied through the use of a fire hose and hydrant for more targeted dust mitigation at the Site.

#### **5.1.2 Stockpile Management Practices**

Additional practices shall be implemented for the control and mitigation of dust from the temporary stock piles created during soil grading:

- Stockpiles shall be maintained to avoid steep sides or faces;
- During periods of inactivity exceeding an hour, or as deemed necessary by the prevailing wind conditions, the soil stockpile shall be covered; and
- Stockpiles shall not be placed within 25 yards of off-Site occupied buildings.

#### **5.1.3 Grading Practices**

The following grading practices shall be followed to minimize dust generation:

- Construction excavators will be emptied slowly;
- Direct water spraying shall be directed at the load buckets and excavation face; and
- Drop height from the loader bucket shall be minimized.

#### **5.1.4 Vehicular Practices**

The following vehicular practices shall be followed to minimize dust generation:

- Prior to loading or unloading at the Site, all trucks will be staged on-Site as much as possible to avoid potential impacts on the local streets;
- Trucks will not be allowed to sit idling more than 5 minutes to avoid unnecessary exhaust fumes;
- While on-Site, all vehicles are required to maintain slow speeds, e.g., less than ten miles per hour (10 mph), for safety purposes and for dust control measures;
- Vehicular traffic in non-designated travel areas shall be minimized;
- The size of the vehicle staging areas shall be limited;
- The trucks will remain on clean areas to the extent possible in an effort to minimize the need to decontaminate the truck tires; and
- All haul trucks shall be covered with tarps prior to relocating soil at the Site.

## **5.2 Dust Monitoring**

### **5.2.1 Monitoring Locations**

Ambient air monitoring will be conducted on-Site during IRM activities to monitor potential impacts to the downwind community (potential receptors include the school community, residences, businesses, and workers not directly involved with IRM activities). As a component of this approach, air monitoring will be conducted around the working areas and at designated upwind and downwind locations that will vary as a result of daily prevailing wind patterns. A minimum of one (1) upwind and four (4) downwind locations shall be monitored. The four (4) downwind locations shall be equally distributed along the perimeter of the work area. During work activities within twenty (20) feet of potentially exposed populations or occupied structures, continuous monitoring locations will be selected based on the nearest potentially exposed individual and the location of ventilation system intakes for nearby structures. In those cases, permanent air monitoring locations will be installed near ventilation system intakes. If action levels are exceeded at those locations, then the source of the exceedance will be evaluated and the positioning of upwind and downwind monitoring stations will be reassessed.

### **5.2.2 Real-Time Dust Monitoring**

The air monitoring program will consist of real-time monitoring for particulate matter that are less than ten (10) micrometers in size (PM-10) using an aerosol monitor (Thermo Andersen DataRAM 4 or equivalent). The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities. Particulate concentrations will be monitored continuously at upwind and downwind



perimeters of the work area at temporary particulate monitoring locations. Monitoring equipment will be capable of integrating over a period of fifteen (15) minutes (or less) for comparison to airborne particulate action levels. Air monitoring records will be maintained electronically. All readings must be recorded and be available for review by NYSDOH, NYSDEC and Chemung County Health Department, if requested.

### **5.2.3 Action Levels**

Downwind PM-10 particulate levels will be compared to the background (upwind perimeter) PM-10 particulate level. If the difference between any downwind level and the background level exceeds the one hundred (100) micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) for the fifteen (15) minute averaging period or if airborne dust is observed leaving the work area, then dust control measures, including increasing water spraying, or stopping work, must be employed. If, after implementing dust suppression techniques, particulate levels above background (upwind) exceed one hundred fifty (150)  $\mu\text{g}/\text{m}^3$ , work will be suspended and controls will be re-evaluated. Work may resume provided that dust suppression measures and other controls are successful in reducing downwind particulate levels above background are below one hundred fifty (150)  $\mu\text{g}/\text{m}^3$  and visible dust migration is not observed. Also, if extreme wind conditions make dust control ineffective, remedial actions will need to be suspended.

Appendix E-1  
NYSDOH Generic CAMP

## 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.

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