

**Draft**  
**Dust Control & Air**  
**Monitoring Plan**  
**Non-Public Properties**  
**Newhall Street**  
**Neighborhood Site**  
Hamden, Connecticut

**Revision 0**

**Prepared for:**

**Olin Corporation**  
Cleveland, Tennessee

**February 2009**

TABLE OF CONTENTS

**1. INTRODUCTION ..... 1**

**2. SITE DESCRIPTION ..... 1**

**3. POTENTIAL FUGITIVE DUST SOURCES..... 2**

**4. DUST CONTROL AND MITIGATION PROCEDURES..... 2**

**5. BEST MANAGEMENT PRACTICES..... 3**

**6. AIR MONITORING AND CORRECTIVE ACTION..... 4**

## **1. INTRODUCTION**

This Dust Control and Air Monitoring Plan has been prepared to address the control of fugitive and airborne dust emissions from the Non-Public Properties (NPP), Newhall Street Neighborhood Project Site (the Site) located in Hamden, Connecticut. This Plan complies with the regulations for controlling fugitive dust emissions as specified in 22a-174-18 of the Regulations of Connecticut State Agencies, as well as federal regulations 29 CFR 1910.1025 and 29 CFR 1926.62. The primary objective of this plan is to formulate a strategy for controlling, to the greatest extent practicable, fugitive or airborne dust emissions at the Site. This will be accomplished by identifying specific sources and activities that have the highest potential to produce or generate fugitive or airborne dust emissions. This plan describes the engineering controls necessary to minimize and control dust emissions from those sources and activities. As necessary, the scope of this plan will be revised to reflect changes in dust control strategy as site conditions or activities may change in the future.

As a precautionary and control measure for this project, this Dust Control Plan will be used as a standard operating procedure. This plan will be used:

- To eliminate origins of dust from the site;
- To identify potential dust migration pathways;
- To monitor for dust produced by site activities; and
- To implement corrective actions as the need arises.

The plan is prepared and submitted with the understanding that it can be modified to accommodate actual site conditions as they arise. This plan will be implemented in conjunction with the project Site Health and Safety Plan.

## **2. SITE DESCRIPTION**

The Newhall Street Neighborhood is located in the southern part of Hamden, Connecticut, east of Dixwell Avenue and just north of New Haven. The Newhall Street Neighborhood comprises an area that historically consisted of wetlands and low-lying areas. Waste materials were used to fill these areas from the late 1800s to the mid-1900s. Subsequently, homes, public buildings, and parks were built on and next to the historic fill areas.

The primary potential human health risk associated with the Site is from direct exposure to the fill.

The Site contains contaminated fill material known to contain contaminants consisting primarily of metals (lead and arsenic), polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). The underlying groundwater generally does not pose a health risk to the residents because the area has a public water source, and the Site groundwater is not used for drinking or other domestic purposes.

The NPP consent order includes an 18-block area (approximately) consisting of approximately of 230 residential properties. In October 2007, the Connecticut Department of Environmental Protection (CTDEP) issued a final Remedy Selection Plan. The selected remedy for the residential properties (and other Non-Public Properties) located inside the Consent Order boundary is as follows:

- Excavation of fill within the top 4 feet and off-site disposal at authorized facilities.
- Backfill with clean soil.
- Restoration of pre-existing features (landscaping, patios, fencing, driveways, etc.) if disturbed during construction.

### **3. POTENTIAL FUGITIVE DUST SOURCES**

The primary contaminants of concern, with respect to fugitive dust emissions at the Site, are lead and arsenic. The following project work areas/tasks have been identified as potential sources of fugitive dust emissions. At a minimum, dust control techniques will be employed in:

- Areas of heavy equipment and vehicular traffic;
- Keeping streets clean of tracked soils or excavated fill materials;
- Soil and fill excavation activities;
- Exposed excavation faces or disturbed ground surfaces;
- Soil and fill stockpiles;
- Soil and fill loading and unloading operations; and
- Soil backfill placement, grading, and compacting.

### **4. DUST CONTROL AND MITIGATION PROCEDURES**

The following methods will be used to prevent conditions conducive to dust generation and suppress dust should it occur.

- Adjacent paved areas and roads used for construction traffic will be maintained free of tracked soil or fill materials. At minimum, paved traffic areas, driveways, sidewalks, and streets will be cleaned on a daily basis by wet sweeping and/or washing. More frequent cleaning will be provided as necessary. Adjacent paved areas and roads will be left clean at the end of each day.
- Exposed excavations, disturbed ground surfaces, and unpaved traffic areas will be maintained in a moist condition.
- During non-working hours, the Site will be left in a condition that will prevent dust from being generated. At the end of each work day, disturbed areas will be wetted down and security fencing will be installed and or inspected to prevent access and additional disturbance.
- Provide temporary cover and daily maintenance for soil or fill stockpiles and keep active surfaces moist.
- A temporary decontamination pad and/or a stabilized construction entrance will be provided at active site entrance/egress locations to keep adjacent paved areas clean.

Construction activities will be conducted using methods that minimize dust generation. Dust control procedures will comply with 22a-174-18 of the Regulations of Connecticut State Agencies and as specified in the technical specifications.

## **5. BEST MANAGEMENT PRACTICES**

The following Best Management Practices (BMPs) will also be followed to help minimize and control dust emissions at the Site to the greatest extent possible:

**Roads**—All onsite traffic will be restricted to specific designated roads. Off-road travel will only be authorized on a case-by-case basis (e.g., access to a remote monitoring well, etc.). Traffic speed will also be restricted to an appropriate level on all designated roads. All designated roads will be considered as high potential dust source areas, and as such, will be a priority for dust controls utilizing water and/or gravel.

**Hours of Operation**—This Plan will be in effect during all hours of operation at the Site. During non-business hours, there will be no activities generating dust; therefore, dust control actions will be restricted to hours of operation only. However, as a best management practice, if high winds are

evident at the close of a business day (or immediately prior to a weekend, holiday, etc.), site personnel should evaluate vulnerable areas and implement controls, as appropriate, to minimize off-hours emissions.

## **6. AIR MONITORING AND CORRECTIVE ACTION**

During the remedial action, an air monitoring program will be implemented to identify and quantify safety and health hazards and airborne levels of particulates or dust. The air sampling program will be used to assure proper selection of engineering controls, work practices, and personal protective equipment for affected site workers, as well as evaluate the potential impacts to adjacent residences.

The Contractor will perform real time particulate monitoring in the work zone. The primary purpose of this monitoring is to determine worker exposure to the two major contaminants of concern, arsenic and lead. This will be accomplished by comparing the real time particulate result with the action level that is prescribed in the Site Health and Safety Plan. The action level was developed based upon the soil concentration of the contaminants, their OSHA permissible exposure level, and an assigned safety factor. This data will be transmitted via telemetry to the safety and health trailer where it will be constantly monitored. In real time, the Contractor will be able to determine significant increases in the particulate level in the work zone so that control measures can be immediately implemented.

The Contractor will implement all dust-monitoring/correction programs. Daily site safety meetings will reinforce the need for all workers to be cognizant and responsive to conditions or activities that generate visible dust. The area foreman and supervisors will be notified immediately if dust is observed or if conditions exist where dust could be a problem. The initial step of the program is to visually observe the infraction.

The sequential corrective action task list for the elimination of fugitive dust at this site is presented below:

1. Reduce the pace of, or cease, dust producing activity until the problem is corrected.
2. Notify the area supervisor of dust conditions and implement dust suppression procedures.

3. Remove accumulated dirt and soil from problematic areas, and/or cover, enclose, or isolate dust-generating areas/surfaces to shield them from wind, sunlight, or heat sources.
4. Increase frequency, volume, and/or coverage of water misting, sprays, and foggers to prevent soil and dirt from drying.
5. Provide additional dust suppression systems and operating personnel during the task duration.
6. Modify operating procedures and methods to eliminate problematic conditions.
7. Increase level of worker awareness and instruct them on implementation of any new or modified operating procedures.
8. Report and document all procedural modifications and results.
9. Perform routine audits of dust suppression methods and work areas for dust sources.

The Contractor's Project Manager and Site Safety Officer have the responsibility and authority to implement this Dust Control Plan.