

Blue Skye/Coakley & Williams Construction

Fugitive Dust Control Plan

801 Men's Shelter



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1.0 INTRODUCTION

Blue Skye/Coakley & Williams Construction (BS/CWC) has created this Fugitive Dust Control Plan (FDCP) to identify the measures that will be taken to reduce the potential for particulate emissions associated with new construction for the

801 Men's Shelter located at
2700 Martin Luther King Jr. Ave SE
Washington, DC 20032.

The purpose of this FDCP is to identify the steps that will be taken to reduce the potential for particulate emissions during remediation activities. The FDCP includes activity-specific dust control criteria and dust suppression procedures. Best management practices (BMPs) will be implemented throughout the project. BMPs include wetting active remediation areas, minimizing or ceasing activities during periods of high wind, sweeping or wetting paved areas, wetting unpaved areas, application of dust suppressant materials and covering stockpiles. This FDCP provides specific information about the generation and control of dust emissions during the excavation of soil material, stockpiling of these materials and other activities associated with the remediation. This plan is to be used in conjunction with the Removal Action Work Plan, Site-Specific Health and Safety Plan (HASp), and the Air Monitoring Plan developed for this project. The following section details potential dust sources and dust control methods.

1.1 Site Description and Project Overview

The project includes a 375-capacity dormitory-style housing facility based within approximately 86,500 square feet for the homeless. The facility consists of multiple programs to include work/employment housing, senior/medically frail housing, medical respite care, low barrier housing, and a Day Center program. The building consists of multipurpose space, administrative areas.

Initial activities at the Site will include the installation of temporary fencing and the removal of shrubs and vegetation. Excavation of lead-impacted soil will be completed to approximately 2-20 feet below ground surface, loaded into trucks and disposed off-site. While excavation activities are taking place, BS/CWC will be conducting air monitoring, and fugitive dust control as needed, in addition, BS/CWC will coordinate traffic and road control at the Site. Following excavation activities, geotextile will be installed as well as a clean soil cap. The clean soil cap will be seeded with grass. Winter Rye will be used to stabilize soils.

1.2 Wind Monitoring and Dust Prevention Team

The FDCP will be implemented and overseen by the BS/CWC site personnel. The BS/CWC personnel have the authority to implement additional dust control provisions and stop work provisions if an excess amount of dust is noticed. BS/CWC personnel will also maintain and revise the FDCP as needed to reduce the potential for dust emissions during any remedial activities.

1.3 Fugitive Dust Control Objectives and Approach

The objectives of the FDCP are as follows:

- Provide an early warning system to alert the BS/CWC project team when concentrations of respirable dust in ambient air are approaching Action Levels due to removal activities.
- Provide a plan for preemptively limiting and controlling respirable dust during construction activities
- Determine whether construction controls are effective in reducing the amount of dust caused by construction activity and make appropriate and necessary adjustments.
- Record daily (daily reports) the total quantity of loaded or unloaded material in cubic yards or tons, total application of water, total amount of street cleaning and sweeping, instances of work-stopping weather events, results of the real-time air monitoring, (if applicable) and instances of dust approaching or exceeding the Action Levels.

2.0 MONITORING ACTIVITIES

BS/CWC does not anticipate that there will be a need for air monitoring for the [801 Men's Shelter located at 2770 Martin Luther King Jr. Ave SE Washington, DC 20032](#) Should Monitoring be necessary, BS/CWC will oversee the collection, and evaluation, of the real-time air monitoring results and provide a report to the stakeholders as required.

3.0 DUST CONTROL PLAN

Control of dust will be a high priority during construction activities. The primary mechanism for dust control will be the use of water trucks with a spray bar and hose(s). Only potable water will be used for dust control purposes. Proactive controls will be instituted to reduce the amount of dust generation during Site activities, including enforcement of low speed limits for vehicular traffic.

BS/CWC will cover dust control for all site personnel during the site safety orientation. We will review the potential sources of dust, individual responsibilities, and actions for controlling dust as described in this plan. The orientation will emphasize the importance of dust control to the overall success of the construction activities and familiarize site personnel with the appropriate dust control procedures that must be adhered to in accordance with this plan to minimize dust generation.

4.0 POTENTIAL DUST GENERATION ACTIVITIES AND PROPOSED CONTROLS

Construction activities will have the potential to generate emissions in the form of fugitive dust. Dust control methods will vary based on the activities occurring at the Site. Activities to be conducted during the construction activities which have the potential to generate dust, and the respective dust control measures, are described in the summary table below.

ACTIVITY	DUST CONTROL
Truck traffic	Wet down unpaved haul roads. Keep paved roads clean or wet down if damaged and cracked and cannot be kept clean.
Soil excavation, loading activities	Wind barrier. Water spray/mist, adjust excavation activities, suspend work under unfavorable conditions (sustained wind speed greater than 20 miles per hour).
Stockpiling	Wind barrier. Water spray/mist. Use of airborne dust wet suppression system as required. Cover stockpiles during sustained wind greater than 20 miles per hour and at the end of each day.
Soil Loading, Hauling, and Backfill Replacement	Use of airborne dust wet suppression system and water spray mist as required.
Concrete cutting, mixing	Use of airborne dust wet suppression system and water spray mist as required

4.1 Respirable Crystalline Silica Plan

Exposure to respirable crystalline silica can cause silicosis, lung cancer, other respiratory diseases, and kidney disease. Exposure can occur during common construction tasks such as using grinders, drills masonry saws, jackhammers and handheld powered chipping tools; operating vehicle-mounted drilling rigs; milling; operating crushing machines; and using heavy equipment for demolition or certain other tasks.

Personnel exposures must be limited to a permissible exposure limit (PEL) of 50 micrograms of respirable crystalline silica per cubic meter of air, averaged over an 8-hour day.

Regardless of exposure control method used, the following measures must be followed:

- Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Designate a competent person to implement the written exposure control plan
- Restrict housekeeping practices that expose workers to silica where feasible alternatives are available.
- Offer medical exams – including chest X-rays and lung function test every three years for workers who are required by the standard to wear a respirator for 30 or more days per year.
- Train workers on work operations that result in silica exposure and ways to limit exposure
- Keep records of workers' silica exposure and medical exams

Table 1 (below) matches common construction tasks with dust control methods, so employers know exactly what they need to do to limit worker exposures to silica. The dust control measures listed in the table include methods known to be effective, like using water to keep dust from getting airborne or using ventilation to capture dust. In some operations, respirators may also be needed.

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		5-4 hrs/shift	> 4 hrs/shift
Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions:		
	-When used outdoors	None	APF 10
	-When used indoors or in an enclosed area	APF 10	APF 10
Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less)	For tasks performed outdoors only: Use saw equipped with commercially available dust collection system Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency	None	None
Walk-behind saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions:		
	-When used outdoors	None	None
	-When used indoors or in an enclosed area	APF 10	APF 10
Drivable saws	For tasks performed outdoors only: Use saw equipped with integrated water delivery system that continuously feeds water to the blade Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions	None	None
Rig-mounted core saws or drills	Use tool equipped with integrated water delivery system that supplies water to cutting surface Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions	None	None

Handheld and stand-mounted drills (including impact and rotary hammer drills)	Use drill equipped with commercially available shroud or cowl with dust collection system Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism Use a HEPA-filtered vacuum when cleaning holes	None	None
Dowel drilling rigs for concrete	For tasks performed outdoors only: Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes	APF 10	APF 10
Vehicle-mounted drilling rigs for rock and concrete	Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector OR	None	None
	Operate from within an enclosed cab and use water for dust suppression on drill bit	None	None
Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF) 5 4 hrs/shift > 4 hrs/shift	
Jackhammers and handheld powered chipping tools	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact:		
	-When used outdoors	None	APF 10
	-When used indoors or in an enclosed area	APF 10	APF 10
	OR		
	Use tool equipped with commercially available shroud and dust collection system Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism:		
	-When used outdoors	None	APF 10
	-When used indoors or in an enclosed area	APF 10	APF 10

Handheld grinders for mortar removal (i.e., tuckpointing)	For tasks performed outdoors only: Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism	None	None
Handheld grinders for uses other than mortar removal	For tasks performed outdoors only: Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions	None	None
	OR		
	Use grinder equipped with commercially available shroud and dust collection system Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism:		
	-When used outdoors	None	None
	-When used indoors or in an enclosed area	None	APF 10
Walk-behind milling machines and floor grinders	Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions	None	None
	OR		
	Use machine equipped with dust collection system recommended by the manufacturer Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism When used indoors or in an enclosed area, use a HEPA- filtered vacuum to remove loose dust in between passes	None	None

Equipment/Task	Engineering and Work Practice Control Methods	Required Respiratory Protection and Minimum Assigned Protection Factor (APF)	
		5-4 hrs/shift	> 4 hrs/shift
Small drivable milling machines (less than half-lane)	Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant Operate and maintain machine to minimize dust emissions	None	None
Large drivable milling machines (half-lane and larger)	For cuts of any depth on asphalt only: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust Operate and maintain machine to minimize dust emissions	None	None
	For cuts of four inches in depth or less on any substrate: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust Operate and maintain machine to minimize dust emissions	None	None
	OR		
	Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant Operate and maintain machine to minimize dust emissions	None	None
Crushing machines	Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points) Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote-control station	None	None
Heavy	Operate equipment from within an enclosed cab	None	None

equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials	When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions	None	None
Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: Demolishing, abrading, or fracturing silica-containing materials	Apply water and/or dust suppressants as necessary to minimize dust emissions	None	None
	OR When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab	None	None

4.2 Dust Suppression Measure Details

a. **Tarping**

Bulk material piles will not be created other than while gathering material to load into trucks (e.g., pulling soil into a pile for the excavator to load into trucks). If any bulk material piles are left on the site overnight (e.g., due to equipment failure, transportation delays, etc.), they will be tarped as necessary to limit wind-blown dust.

All trucks being utilized for transport and disposal of excavated material at the site are required to be fitted with solid, sliding or slot-top type covers with no gaps when fully deployed. Trucks shall be covered immediately after loading and are to remain covered throughout the transportation and disposal of excavated material. The cover must not contact the excavated material and must be installed in such a way to prevent wind from entering over the leading edge of the trailer rim.

b. Geotextile Barrier

Following the soil excavation, a geotextile marker barrier will be installed prior to backfilling the excavated area with clean fill material. The geotextile barrier will cover the potential lead-containing soil currently located below 2 feet and minimize any respirable dust generation from this soil layer during backfilling activities.

c. Watering

The Remediation Contractor shall conduct operations and maintain the Site as to minimize the creation and dispersion of respirable dust. Clean water, provided by the Remediation Contractor, shall be applied to the Site as necessary to prevent dust during excavation, loading/unloading, and backfilling activities. Excavation areas and on-site

roadways will be kept damp, as necessary, without creating ponding or mists that travel beyond the Site boundaries. The watering operations shall be sufficient to control fugitive dust. BS/CWC assumes that tanker trucks will be utilized to provide and apply clean water for removal activities.

Water shall be applied in a manner to prevent runoff. As a contingency measure, BS/CWC will have erosion and sedimentation controls, such as silt fencing, sediment logs, or manhole silt screens, installed as necessary to manage runoff.

d. Transfer Points

Transfer points refer to any time material is loaded or unloaded during removal activities. For the purposes of this project, the primary transfer points of concern will be the transfer of soil material from the excavator to a waiting truck. The secondary transfer points of concern will be the unloading of the clean soil for use in backfilling the excavated areas. At all transfer points, the following guidelines will be maintained:

- During loading of impacted soil, the material must be moist during the transfer, and the transfer shall be into an overhead truck trailer only. The material drop into the trailer must not exceed 4 feet.
- All trucks entering and leaving the Site will adhere to the posted speed limit, which shall be no more than 8 miles per hour (mph).
- All trucks shall adhere to the tarping policy established in 4.1.3.

- All trucks leaving unpaved areas to paved areas of the public (i.e., sidewalk or street), whether full or empty, will be visually inspected for loose material. Stabilized construction exits (e.g., 3- to 6-inch cobblestone or rip rap placed on top of a geotextile) will be used to assist with cleaning of truck tires as the vehicles leave unpaved areas. Any loose material is to be removed and placed into the truck trailer.
- All loading of impacted soil must be completed on pavement where possible.

e. Roadways

In order to keep roadways clean and free of accumulation, BS/CWC will coordinate with the Earthwork subcontractor for routine street sweeping during removal activities. The street sweeper must be equipped with a water spray and vacuum system to prevent fugitive dust. Street sweeping must be completed at the end of every day or as needed, but at a minimum of once a day as long as there is excavation or dust producing activities on site. All trucks are to take the most efficient and direct route to the disposal facility as possible as outlined in the Traffic Control Plan.