

FUGITIVE DUST CONTROL PLAN

BNSF SANGAMON RIGHT-OF-WAY CHICAGO, COOK COUNTY, ILLINOIS

December 2015

Prepared for:



BNSF Railway Company
Minneapolis, Minnesota

Prepared by



Chicago, Illinois

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**230 W. Monroe Street
Suite 2300
Chicago, IL 60606**

TRC Project No. 230870

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1.0 INTRODUCTION

TRC Environmental Corporation (TRC) has prepared this Fugitive Dust Control Plan (FDCP) to identify the measures that will be taken to reduce the potential for particulate emissions associated with remediation activities at the BNSF right-of-way (ROW) located along South Sangamon Street between 16th Street to 21st Street in Chicago, Cook County, Illinois (the Site). A Site Layout Map is provided in the Removal Action Work Plan. Although the Site includes the portion of the BNSF ROW between 16th and 18th Streets, no earthwork activities are planned for this portion of the Site (only limited fencing installation will be conducted); therefore, no dust control measures will be required for this portion of the Site. This FDCP will be implemented in conjunction with the Air Monitoring Plan also prepared for these remediation activities, which describes the air monitoring activities to be performed during the work.

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 Site is located in Section 20, Township 39N, Range 14E in Chicago, Cook County, Illinois. The Site is located in a predominantly residential area with outlying industrial properties east of the BNSF ROW.

The Site is the BNSF ROW that runs parallel to S. Sangamon Street between 18th Street to 21st Street. Initial activities at the Site will include the installation of temporary fencing and the removal of existing railroad track and ties. Excavation of lead-impacted soil will be completed to approximately 2 feet below ground surface (bgs), loaded into trucks and disposed off-site. While excavation activities are taking place, TRC will be conducting air monitoring, and fugitive dust control and associated management,. In addition, TRC 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.

1.2 Wind Monitoring and Dust Prevention Team

The FDCP will be implemented and overseen by TRC personnel yet to be determined. TRC personnel have the authority to implement additional dust control provisions and stop work provisions based on the results of the air monitoring described in the Air Monitoring Plan. TRC personnel will also maintain and revise the FDCP as needed to reduce the potential for dust emissions during 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 Remediation Contractor 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 removal activities
- Determine whether construction controls are effective in reducing ambient air concentrations of specific compounds to below Action Levels, and make appropriate and necessary adjustments.
- Develop a permanent record that includes a database of 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, and instances of dust approaching or exceeding the Action Levels.

2.0 MONITORING ACTIVITIES

TRC is the Air Monitoring Contractor for this project. TRC will be responsible for the collection, evaluation, presentation, and data management of the real-time air monitoring results. Other TRC responsibilities include maintenance of sampling equipment and developing on-site recommendations for response actions.

The plan for a full scale air monitoring program is detailed in the AMP and generally consists of the following:

- 2 perimeter air monitoring stations will be deployed as shown on Figure 1 of the *Air Monitoring Plan*. Mobilization and air monitoring equipment preparation for the Site will be initiated prior to the start of removal activities. The perimeter air monitoring stations will monitor ambient air continuously while removal activities are being conducted. Bulk material stockpiles will not be maintained at the Site. Small stockpiles will only be temporarily formed when pulling soil within the reach of the excavator while loading a truck; therefore, continuous 24/7 air monitoring will not be necessary.
- Three days of baseline air monitoring will be conducted for the Site before any removal activities occur.
- In addition to the air monitoring stations, a dedicated weather station will be established at the Site and operated to continuously monitor meteorological conditions during the removal activities.

2.1 Nature of the Dust

The Site is an out-of-use ROW in a formerly heavy industrial area. The investigation of the ROW was initiated based on a request from the USEPA in conjunction with investigation and remediation of the former Loewenthal Metals property that is adjacent to the ROW by W. Cullerton Street. Subsequent soil sampling discovered lead-impacted soil along the length of the ROW between W. 18th Street, to the north, and W. 21st Street, to the south. This FDCP is being developed to compliment upcoming remedial activities including excavation, disposal, and regrading of the Site.

Based on the previously sampling results, the nature of the dusts principally contain inorganic constituents, such as lead-containing respirable particulate matter (PM₁₀).

3.0 DUST CONTROL PLAN

Control of dust will be a high priority during remediation 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, decontamination of trucks leaving the remediation work areas and height limits for stockpiles, if applicable.

TRC will implement a dust control training program for all Site personnel. This training program will review the potential sources of dust, individual responsibilities, and actions for controlling dust as described in this plan. The training will emphasize the importance of dust control to the overall success of the remedial activities and familiarize Site personnel with the air monitoring requirements and 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

Remediation 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 remediation 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.

4.1 Dust Suppression Measure Details

4.1.1 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.

4.1.2 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.

4.1.3 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. TRC 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, TRC will have erosion and sedimentation controls, such as silt fencing, sediment logs, or manhole silt screens, installed as necessary to manage runoff.

4.1.4 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 ROW (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.

4.1.5 Roadways

In order to keep roadways clean and free of accumulation, TRC will coordinate with the City of Chicago and Waste Management, Inc. (the disposal facility) 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. Sidewalks along Cullerton and 21st Street, where trucks will need to cross the sidewalk to enter/exit the Site, will be maintained in a “broom clean” condition at all times by using a skid steer loader (e.g., BobCat) equipped with a power broom or manual tools (e.g., push broom, shovels, etc.).

All trucks are to take the most efficient and direct route to the disposal facility as possible as described in the Transportation and Road Control Plan.

5.0 EMERGENCY PLAN

5.1 Emergency Contact List

In the event that Action Levels have been exceeded or removal activities have been suspended for any reason, utilize the following emergency contact lists to inform the necessary personnel of the incident.

5.1.1 Primary Contact List

Organization	Contact	Order	Contact Number
TRC	Lisa Meagher	1	312-405-8794
TRC	Brian Voss	2	312-720-2026
Excavation Contractor	TBD	3	TBD
TRC	Chris Harvey	As Necessary	312-909-0043
TRC	Work Care	As Necessary	888-449-7787

5.1.2 Secondary Contact List

Organization	Contact	Order	Contact Number
BNSF	Greg Jeffries	As Necessary	
USEPA	TBD	As Necessary	
City of Chicago	TBD	As Necessary	

6.0 REPORTING

6.1 Record of the Material

Daily summaries of the amount of material, in tons or cubic yards that has been removed or delivered will be maintained. These records will include the number of trucks leaving the facility, including empty trucks, and all manifests for the disposal of material at the landfill.

6.2 Record of Watering

A record of water application will be maintained, including number of times applied and a daily total of water used in gallons. Records shall also include the manner of application, such as spraying or misting. Any incidents of pooling or runoff will be noted as well, including the areas of the Site affected by the incident.

6.3 Record of Street Sweeping

A record of street sweeping will be maintained, including the time of day that street cleaning was performed.

7.0 REFERENCES

City of Chicago, Department of Public Health, Article II. Air Pollution Control, Proposed Rules and Regulations for the Handling and Storage of Bulk Material Piles, December 19, 2013.

USEPA. National Ambient Air Quality Standards for Particulate Matter, Final Rule, 40 CFR Parts 50, 21, 52 et al.

USEPA. National Exposure Research Laboratory, Human Exposure & Atmospheric Sciences Division (MD-D205-03), List of Designated Reference and Equivalent Methods for Particulate Matter, June 18, 2015.

USEPA. EPA Guidance for Quality Assurance Project Plans, EPA QA/G-5, EPA/600/R-98/018, February 1998.

USEPA. Guidance for the Data Quality Objectives Process, EPA QA/G-4, EPA/600/R-96/005, August, 2000.

USEPA. *Guidance for the Data Quality Objectives Process for Hazardous Waste Sites*, EPA QA/G-4HW EPA/600/R-00/007, January 2000.

USEPA. *Guidance on Systematic Planning using the Data Quality Objectives Process*, EPAQA/G-4, [EPA/240/B-06/001, February 2006](#).

USEPA. Integrated Risk Information System, October, 2009