



# Former House Street Site Remedial Action

Fugitive Dust Control  
Plan

DRAFT

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# 1. Introduction

Remedial Construction Services, L.P. (RECON) has prepared this Fugitive Dust Control Plan (FDCP) to describe the measures that will be implemented at the Former House Street Remedial Action (FHSRA) located at 1855 House Street NE, Plainfield Township, Kent County, Michigan, for minimizing fugitive dust emissions from various on-site activities completed through the execution of the Remedial Action. A Site Layout Map is provided in *GZA Revised Work Plan – Final Remedy*. This FDCP will be implemented in conjunction with the Air Monitoring Plan (Compiled by GZA) prepared for the on-site remedial activities, which describes the air monitoring activities to be performed during the project work.

The purpose of this FDCP is to identify the steps that will be taken to reduce the potential for off-site particulate emissions during on-site remediation activities. This FDCP provides Best Management Practices (BMPs) that will be implemented throughout the project as a method of early detection of on-site fugitive dust, and the associated contingency measures intended to expedite any necessary mitigation measures to eliminate or reduce the potential for the community to be exposed to particulates at levels above the accepted and recommended guidelines. BMPs include wetting of active remediation work areas, minimizing or ceasing activities during periods of high wind, sweeping, or wetting paved areas, wetting of unpaved areas, and the application of dust suppressant materials (water/soil stabilizers) to waste stockpiles, which will subsequently be covered. This FDCP provides information about the generation and control of fugitive dust emissions during all phases of this remedial action plan and is completed in conjunction with the Remedial Action Work Plan, Site-Specific Health, and Safety Plan (HASp), and the Air Monitoring Plan Developed for this project.

The fugitive dust control activities selected for the site are based on the following:

- Michigan's Fugitive Dust Regulations under Act 451 of 1904, Section 324.5524.

## 1.1 Site Description and Work Activities

The site is located directly north of 1855 House Street NE, Plainfield Township, Kent County, Michigan. The site is in a predominantly rural residential area, that encompasses approximately 76 acres of undeveloped land, which is split in the northern portion by an electric utility right-of-way and associated high-voltage transmission lines.

Initial activities at the site will include the installation of temporary Erosion and Sediment controls, temporary haul road installation, and the excavation and grading of laydown and storage areas for use throughout the duration of the project. Excavation and relocation of impacted soils shall be implemented to achieve the subgrade elevations provided at each of the four mound areas, or subsequent design addendums to house the relocation of waste from outside the capping areas. Following excavation, relocation, and grading activities of waste, geomembrane capping materials will be installed at all four mounds, with a subsequent barrier soil cap, and topsoil application. During all intrusive activities on site, RECON shall implement fugitive dust control and the associated management of these tasks.

## 1.2 Wind Monitoring and Dust Prevention Team

This FDCP will be implemented and overseen by RECONs on-site Construction Manager, and/or Assistant Project Manager/Field Engineer. These RECON personnel shall have the authority to implement dust control provisions, add additional dust control provisions, and implement stop-work provisions based on the results of personnel on-site air monitoring based on RECONs Air Monitoring Plan included in RECONs Site Specific Health and Safety Plan, as well as on-site perimeter air monitoring data, managed by GZA GeoEnvironmental. These RECON personnel shall also maintain and revise the FDCP as required to reduce the potential for fugitive dust emissions throughout the lifecycle of the project.

**FDCP On-Site Main Point Of Contact:** Douglas Jumper

Phone Number: (570) 382-4313

**FDCP On-Site Alternate:** Robert Rivers

Phone Number: (504) 401-2061

## 1.3 Fugitive Dust Control Objectives and Approach

The objectives of this FDCP are as follows:

- To provide an early warning system to alert RECON when concentrations of organic and particulate matter in the ambient air are approaching Action Levels due to remedial activities.
- Provide a plan for preemptively controlling and limiting fugitive dust generation during remedial activities.
- Determining whether in-place BMPs are effectively managing fugitive dust particulate concentrations to below Action Levels and making appropriate and timely adjustment(s) to in-place BMPs.
- Develop a permanent record that includes such items as the total quantity of loaded or unloaded materials in cubic yards or tons, total application of water, amount of street cleaning and sweeping efforts, work-stopping weather events, and instances of fugitive dust generation approaching or exceeding the project Action Levels.

## 2. Fugitive Dust Control Plan

Fugitive dust control is and will be of high priority during the execution of remedial activities on site. Throughout the execution of on-site remediation activities, the primary mechanism for fugitive dust control will be through the use of an on-site minimum 2000-gallon water truck, filled with water from the adjacent township fire hydrant, which is equipped with a side sprayer, rear spray bar, as well as a retractable hose. In addition to dust suppression through the use of water, RECON shall implement proactive controls to reduce the amount of dust generation during all on-site activities, such as the enforcement of low-speed limits on-site, decontamination of trucks leaving the site or work areas, tree chipping or shredding, and

height limits for waste stockpiles, as applicable. It is important to note, that fugitive dust generation during chipping activities is generally of low probability, but RECON and RECONs subcontractors will actively manage this activity to manage the potential for off-site generation of fugitive dust. Best Management Practices that will be implemented to manage fugitive dust, are ridding root balls or stumps of accumulated dirt, which is typically practiced to reduce wear and tear on chipping machinery, as well as the application of water to knock down potential dust generation.

Prior to implementing work on site, RECON shall implement a fugitive dust control program for all on-site personnel. This training program will review the sources of potential dust, individual responsibilities, and the actions for controlling fugitive dust as described within this plan.

### 3. Potential Dust Generation Activities and Proposed Controls

On-site remedial activities inherently have the potential to generate emissions in the form of fugitive dust. Dust control methods for this project will vary based on the activities being executed at the site but are anticipated to be executed through the use of water application(s), tarping of waste stockpiles, or through the use of a soil stabilizer agent (such as Soil Glue, as approved). All activities to be conducted throughout the execution of this remedial plan inherently have the potential to generate dust. Below is a summary of the high-level tasks that have the potential to generate dust, with their respective control measures highlighted in the below summary.

ACTIVITY	CONTROL MEASURE
Vehicular Traffic	Apply water to unpaved haul roads. Maintain exterior paved roads through the use of sweeping and/or spraying with water. Any areas that were identified as previously damaged or cracked prior to mobilization will be swept and sprayed with water.
Soil Excavation and Loading activities	Water spraying/misting, adjustment of excavation activities, and/or suspension of work under unfavourable wind conditions, as necessary.
Waste Stockpiling	Water spraying/misting. Cover stockpiles (tarps or approved soil stabilizers) at minimum during sustained winds, and at the end of each day.
Soil Loading, Hauling and Backfilling	Water spraying/misting as required

## 3.1 Dust Suppression Measure Details

### 3.1.1 Tarping

RECON anticipates for most of the on-site excavation and relocation activities, that both waste materials and on-site clean fill designated for reuse will be directly loaded into trucks and moved to their anticipated final installation areas. Though most bulk materials will be relocated using “live” measures, bulk piles or waste stockpiles will be generated on-site during the duration of this project. All waste stockpiles will be at minimum tarped or stabilized with a spraying additive when not actively in use and will be tarped or sprayed at the end of each shift to limit any wind-blown dust. Though stockpiling of clean soils for reuse on-site is not anticipated, all potential stockpiled soils will be tarped or stabilized through other means, that are approved by the Owners on-site representative, prior to use.

All trucks used for the relocation of waste and clean fill for reuse on site are off-road articulating trucks, and as such will not have retractable tarps to cover loads. All trucks utilized for the transport of off-site materials, such as aggregates for roadways, supplemental backfill, etc. shall be fitted with retractable tarps when entering the project site. RECON will actively monitor any trucks entering or exiting the site to determine if water spraying/misting is necessary to control/eliminate any dust generation. Monitoring of trucks entering or exiting the site will include visual observations as trucks pass through or exit the site for dust generation, and as necessary will be addressed to manage dust generation.

### 3.1.1 Soil Stabilizers

RECON anticipates for most of the on-site excavation and relocation activities, that both waste materials and on-site clean fill designated for reuse will be directly loaded into trucks and moved to their anticipated final installation areas. In lieu of tarping/poly, RECON assumes that soil stabilizing methods such as soil glue, or tackifier can be used to expedite the covering of piles, with proper management and approvals from the on-site Owners representative. Prior to use, any soil stabilizing additive shall be submitted to the on-site Owners representative for approval of use, which includes information on the suggested additive, Safety Data Sheets, and the chemical compounds of the suggested additive.

### 3.1.2 Geomembrane Barrier

Following waste excavation, subgrade grading, and anchor trench installation, a geomembrane shall be installed before backfilling each mound to its respective grades/contours. This geomembrane cap/barrier shall encapsulate the waste soils on-site in each mound, which will also aid in minimizing any contaminated respirable dust generation from this soil layer during subsequent barrier soil backfilling activities.

### 3.1.3 Watering

RECON shall conduct all site operations maintaining a site that minimizes the creation and/or dispersion of respirable dust. Clean water, acquired from the adjacent House Street fire hydrant shall be applied to the site as necessary to manage dust during excavation, loading/unloading, and backfilling activities. Excavation, Grading, and Backfilling areas, as well as on-site haul roads, shall be kept damp, as necessary throughout on-site activities, without creating ponding that could potentially migrate beyond the site

boundaries. All water applications shall be applied in a manner to prevent runoff.

Though site activities are not anticipated during sustained freezing temperatures, sustained below-freezing temperatures could be realized during the execution of on-site work activities. Examining the historical weather for Belmont, MI for the months of both November and December, extreme below-freezing temperatures are uncommon, but in months such as December, if activities are ongoing at the HSP, RECON shall continue to utilize water for fugitive dust suppression. Through misting, RECON points of potential dust generation such as on-site haul roads shall be adequately saturated and not flooded to manage the potential for dust generation. In the unlikely event that watering is deemed to be ineffective to proactively manage dust generation, alternative measures (with the approval of the Owners representative) such as snow machines or additives such as Durasoil will be submitted for review and approval prior to use.

### 3.1.4 Transfer Points

Transfer points refer to materials that are loaded or unloaded during the on-site remedial plan. For this project, the primary transfer point of concern will be the transfer of soil materials from an excavator to an off-road articulating truck. The second transfer point of concern will be the unloading of soils on-site. At all project transfer points, the following guidelines will be maintained to reduce the potential for fugitive dust generation:

- During loading of impacted soils, materials loaded into each truck shall be dropped at a minimal safe height above each truck to aid in mitigating fugitive dust.
- All truck traffic entering and leaving the site shall adhere to posted site speed limits. Speed limit signs shall be affixed to entrance point(s) to the site, and be visually monitored throughout the course of the project. RECON staff shall proactively monitor and adjust speed limits for truck traffic both entering and exiting the site, as well as monitoring truck traffic within the boundaries of the project site.
- All off-site truck traffic shall adhere to the tarping policy established in 3.1.1
- All trucks leaving the site to the paved area of the public ROW, full or empty, will be visually inspected for loose material(s), any loose material identified will be removed either by brushing or by removal by other means and placed into the truck or remain on-site at the direction of the on-site owner representative. A stabilized construction entrance will be installed as part of the remedial plan, which will assist in cleaning vehicular tires as they transition from unpaved on-site roads to the public ROW.
- As part of the project daily reporting, a log of truck traffic entering or exiting the site shall be recorded that addresses proper on-site speed limits were adhered to, tarping of loads established in 3.1.1 was adhered to, and a visual inspection of each truck was conducted prior to its departure from site. This log will also report if any corrective actions were taken during these activities.

### 3.1.5 Roadways

On-site roadways will be actively maintained throughout the duration of the HSP. BMPs to proactively manage dust generation during the project include saturating non-paved road surfaces, as well as proactively managing all stabilized construction entrances through the life cycle of the project. Stabilized

construction entrances shall be kept free of substantial accumulation, through the turning of aggregate materials with on-site machinery, and the addition of additional stone to maintain the effectiveness of these devices.

Truck traffic exiting from on-site roadways shall be aided by a RECON installed wheel wash/decontamination station to manage accumulated materials from truck tires. This wheel wash/decontamination station shall be constructed through the use of a flooded basin wheel wash area lined with appropriate-sized aggregate to facilitate wheel washing, in conjunction with sediment trapping controls to eliminate runoff or flooding of adjacent areas. All effluent washing fluids shall be containerized for off-site treatment/disposal at an approved facility. The on-site Decontamination Pad/Wheel wash station shall be approved by the owner's On-Site representative prior to construction or implementation.

To keep off-site roadways clean and free of accumulation, RECON will implement the use of a skid steer-mounted broom, or street sweeper for routine street sweeping during on-site activities. Street sweeping will be completed as necessary, but at minimum once per day to keep the roadway free of accumulation. Depending on the method of sweeping (skid steer-mounted broom, street sweeper), an application of water may be applied prior to sweeping to manage dust emissions. Street sweeping/cleaning of roads will be suspended when on-site work is not completed, such as weather events that suspend on-site work, as well as during winter months when on-site activities are not occurring, due to weather reasons and the limitations of road sweeping equipment.

## 4. Reporting

### 4.1 Material Recording

Daily summaries shall be compiled of all materials entering or exiting the project site. This record shall be compiled recording the total tonnage or cubic yardage of each load, with an aggregate total for the day. All on-site relocation of materials (i.e. excavation of waste materials, barrier soils, topsoil) shall be calculated off total trucks and their anticipated capacities, with subsequently surveyed quantities of materials at a later date, both for record-keeping and measurement of payment. These records shall include the number of truckloads moved within the project site, and/or off-site and all disposal manifests for loads transported off-site for disposal at an approved TSDF.

### 4.2 Watering Recording

A record of water application shall be maintained through the duration of the project, which will include the number of truckloads applied daily, with the start and end meter readings (if available) to establish a daily total for water used in gallons. Any incidents of pooling and/or runoff will be noted, including the area affected.

### 4.3 Street Sweeping Recording

A record of street sweeping will be maintained, including the time(s) in which street sweeping was completed.