

Dust Control Work Plan

**Former McLouth Steel Site
County Property
1491 West Jefferson Avenue
Trenton, Michigan**

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Prepared For:

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ASTI Project No. 10391

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FIGURE 1 - SITE LOCATION MAP

FIGURE 2 – COUNTY PROPERTY MAP

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ATTACHMENT A - DUST MONITORING LOGS

DUST CONTROL WORK PLAN

FORMER MCLOUTH STEEL SITE

APRIL 4, 2019

1.0 Introduction

ASTI Environmental Corporation (ASTI) has prepared this Dust Control Work Plan for the approximately 180-acre portion of the Former McLouth Steel site commonly known as the County Property (Parcel No: 54001990006705 and Parcel No: 54001990006706) located at 1491 W. Jefferson Avenue in the City of Trenton, Wayne County, Michigan (the “Property”). A Site Location Map is provided as **Figure 1**, and the Property is indicated on **Figure 2**.

This Dust Control Work Plan was developed to implement the Statement of Work (SOW) contained in Appendix D of the Administrative Settlement Agreement and Covenant Not to Sue (the “Agreement”) for the Property. Unless otherwise provided herein, all terms used in this Dust Control Work Plan are defined as provided in the Agreement. The purpose of this Dust Control Work Plan is to identify the measures that will be taken to reduce the potential for particulate emissions associated with the Demolition Requirement and SOW activities (other than items 2 and 3 in the SOW) at the Property (the “Site Activities”).

Site Activities that could produce airborne dust particles are planned at several locations throughout the Property; therefore, dust control measures will be undertaken at all locations where dust particles may become airborne. This Dust Control Work Plan includes an Air Monitoring Plan which will be performed during Site Activities. This Dust Control Work Plan includes activity-specific dust control criteria and dust suppression procedures. Best management practices (BMPs) will be implemented throughout the project. BMPs will include:

- Covering and maintaining haul roads with asphalt millings or other appropriate cover.
- Lightly spraying of work areas and access roads with water as necessary before and during dust-generating activities (demolition, excavation, loading, backfilling and truck traffic).
- After materials are loaded for transportation, truck beds will be covered with tarps to reduce the potential for significant fugitive dust emissions.

- While on the Property, all vehicles will maintain posted speeds or less to minimize dust generation.
- If during the SOW activities soils are stockpiled that are known to contain PCB impacted materials, the stockpiled soils will be kept to a minimal level and will be covered with a sprayed-on, dust suppressant material (or alternatively with fabric or plastic sheeting or equivalent) at the end of each workday.
- Other exposed surfaces will be wetted as required to control dust.
- Minimizing or ceasing outdoor activities during periods of sustained wind. Defined as winds in excess of 40 MPH for periods exceeding five minutes, as measured from the on-site weather station.
- Dust monitoring as described below.

1.1 Dust Control Summary

This Dust Control Work Plan will:

- Provide an early warning system to alert the on-site contractors when concentrations of respirable dust in ambient air are approaching Action Levels (relative to measured background concentrations, and as defined below).
- Provide a plan for preemptively limiting and controlling respirable dust (relative to measured background concentrations) during Site Activities.
- Determine whether 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, frequency of dust suppressant application, frequency 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 **Nature of Dust Impacts**

The Property was used as an integrated steel company between the years of 1948 and 1996. Existing contamination on the Property has been identified to include manganese from grade to

approximately 10 feet bgs in excess of the generic non-residential clean-up criteria (GNRCCs) for particular soil inhalation as defined by Part 201 of Michigan Act 451.

2.1 Responsibility

This Dust Control Work Plan will be implemented and overseen by Deanna Wilczek, ASTI Environmental Field Technician (FT). The FT will have the authority to implement additional dust control provisions and stop work provisions based on the results of the visual observations and air monitoring described in the Air Monitoring Work Plan section below. The FT will be responsible for data and sample collection, and the maintenance of sampling equipment. The FT will be responsible for data evaluation and presentation, will maintain the necessary records and reports and will, in consultation with and as approved by the Purchaser and EPA, revise this Dust Control Work Plan to reduce the potential for dust emissions during Site Activities.

Should EPA determine, based upon observations of conditions at the Property, that the approved dust control plan is not adequate because it fails to protect human health and the environment, EPA will notify the Project Coordinator, who will, in consultation with EPA, develop and implement additional dust control measures as appropriate to meet action level requirements. Once those options are identified, the Project Coordinator will instruct the FT to implement those dust control provisions. Monitoring and dust controls will be conducted in accordance with State and Federal laws.

3.0 Air Monitoring Plan

This section outlines the air monitoring activities.

3.1 Site Activity Real-Time Dust Monitoring

During Site Activities, real-time total dust monitoring will be performed using a TSI DUSTTRAK II Handheld/Portable 8532 Dust/Aerosol Monitor (or similar real-time air monitoring instrument). This instrument is a desktop battery-operated, data-logging, light-scattering laser photometer that gives real-time aerosol mass readings. The field instruments measure aerosol/dust concentrations corresponding to PM_{2.5}, and PM₁₀ size fractions.

Except in cases of heavy fog or precipitation, the real-time particulate air monitoring data and visual dust monitoring observations will be recorded by the FT on daily field logs every hour during Site Activities. Monitoring locations will be in proximity to the Site Activities and typically not more than approximately 50 feet up-wind and 50 feet down-wind of Site Activities (or a

distance deemed appropriate based on the site-specific, health and safety hazards relative to the Site Activities). Monitoring will be conducted at one location upwind and two locations downwind of all Site Activities that have the potential to generate dust. Data and a map showing the location of the perimeter monitoring points will be recorded on preformatted data sheets (**Attachment A**) and maintained in a log binder. Copies of the dust monitoring logs will be included in air monitoring report(s), as applicable.

3.2 Perimeter Dust Monitoring

Four perimeter monitoring stations will be located around the Property as depicted on **Figure 3**. During Site Activities, perimeter dust monitoring will be performed at each of the four locations using a TSI 8530 DustTrak II Aerosol Monitor (or similar real-time air monitoring instrument) to measure particulate. These field instruments measure aerosol/dust concentrations corresponding to PM_{2.5} size fractions. Dust monitoring will be conducted each work day during the first two weeks, and then weekly. In addition, dust monitoring will be conducted every work day for two weeks following an exceedance of the action level detected at a downwind station during perimeter monitoring. Following any period of two week work day monitoring, the weekly monitoring will be conducted on work days corresponding to every fifth work day in order to provide representative samples on various work days. Dust monitoring will be conducted each work day during of Mill Building demolition (refer to paragraph 4.1 below for the definition of Mill Building demolition). In the absence of Mill Building demolition, perimeter monitoring will revert to the regularly scheduled pattern of every fifth work day, during hours of operation.. Except in cases of heavy fog or precipitation, the perimeter air monitoring stations will monitor ambient air for particulates on work days during Site Activities for the following

- NIOSH Method 0600 Respirable Dust (PM_{2.5})

3.2.1 Dust Sampling

Perimeter dust sampling will be performed using Mass Flow Controlled PM₁₀ high volume samplers at three of the four locations indicated in Figure 3. These locations may change based on prevailing winds, but will be selected to represent one location upwind and two locations downwind. Dust samples at these three locations will be collected each work day during the first two weeks, and then weekly. In addition, dust samples will be collected every work day for two weeks following each exceedance of the action level detected during real-time sampling in a downwind station. Following any period of two week work day sampling, the weekly samples will be collected on work days corresponding to every fifth work day in order to provide representative samples on various work days. Dust samples will also be collected every work day during Mill Building demolition, or following each exceedance of the action level

and will continue until analysis indicates that there is no longer an exceedance. The laboratory air sampling result will be used to support the dust monitoring program. Except in cases of heavy fog or precipitation, one twenty four hour sample from each station will be analyzed for the following:

- NIOSH Method 7300 Manganese

Before the commencement of Site Activities, five-days of background data will be collected from the perimeter monitoring system for both dust monitoring and dust sampling for manganese to establish benchmark dust concentrations.

3.3 Site-Specific Action Levels and Required Actions

Action Levels for dust monitoring at the Property will be defined as follows:

- RealTime Dust Monitoring
 - Total Particulate: The Action Level will be the greater of 150% of the average value of the up-wind sampling locations or 7.5 mg/m³.
 - PM-10: The Action Level will be the greater of 150% of the average value of the up-wind sampling locations or 2.5 mg/m³
- Perimeter Dust Monitoring Stations
 - PM-2.5 Action Level, based on a 24-hour time weighted average value, will be the greater of 15% higher than the average concentration at all upwind perimeter monitoring locations, or 35 ug/m³ TWA, which is the NAAQS standard.
 - Manganese Air **Sample** 0.3 ug/m³ TWA over 24 hrs, which is the ATSDR MRL standard

If any single downwind reading exceeds the above listed Action Levels, additional control measures will be implemented as described in Section 4 of this Work Plan.

If other concerns that are not addressed by the manganese monitoring are identified during the work, those concerns will be addressed as described in Section 2.1.

3.4 Weather Station

In addition to the air monitoring stations, a dedicated weather station will be established at the Property and operated to continuously monitor meteorological conditions during Site Activities. Wind speed and direction will be recorded as part of the air monitoring reports

3.5 Instrument Calibration and Frequency

Monitoring instruments will be calibrated in accordance with the manufacturer's specifications, as detailed in the instrument operating manuals. Documentation on calibration procedures used will be recorded in the log book.

3.6 Monitoring Limitations

The Property conditions may become a potential hazard for personnel to safely traverse the designated area. Given these conditions, personnel will collect data in safely accessible areas at or near the locations described above. At all times safe access will take precedence in determining monitoring locations, and will note in field notes any deviations required for safety reasons.

4.0 **Dust Control Plan**

Control of dust will be a high priority during Site Activities. The primary mechanisms for dust control will be covering of haul roads and the use of water trucks with a spray bar and hose(s). On-site water, where concentrations of Contaminants of Interest are below the federal drinking water standards, will be used for dust suppression. Proactive controls will be instituted to reduce the amount of dust generation during Site Activities, including enforcement of low speed limits for vehicular traffic, covering haul roads, decontamination of trucks leaving the remediation work areas, and height limits for stockpiles, as applicable.

4.1 Dust Control Measures

Dust control measures to be implemented during Site Activities will include, but are not limited to, the following:

- Truck traffic: Cover haul roads with crushed concrete or asphalt millings, or use existing paved areas or wet down haul roads as necessary to control dust. Wet down work areas that are not haul roads if truck traffic in that area requires dust control. Wetting operations will be conducted as necessary based on visual observations of dust generation. Wetting operations will be conducted without creating ponding or mists that travel beyond the Property boundaries, and water shall be applied in a manner to reduce the potential for significant runoff:
- Dust boss machines: In areas where dust is anticipated to be released during demolition activities, dust boss machines, or other equivalent means will be used to provide a mist curtain. The accumulation of water will be monitored during usage of the dust boss

machines in order to avoid a water runoff that could migrate and cause sediment transport or erosion.

- Sludge excavation, loading activities: If materials are dry and may create a dust hazard, water spray/mist as necessary.
- Stockpiling: If materials are dry and may create a dust hazard apply water spray mist as necessary. Cover stockpiles at the end of each day with a sprayed-on, dust suppressant material (or alternatively with fabric or plastic sheeting or equivalent), as necessary to reduce dust.
- Backfill/ replacement: Use of airborne dust wet suppression system and water spray mist as necessary.
- Wet sweeping jobsite paved traffic ways where work is in progress as necessary. Wetting operations will be conducted each work day, or as necessary based on visual observations of dust generation.
- Wash station: Prior to structural demolition a wheel wash station, tracking pad/mat, or equivalent, for semi-trucks will be installed for dust control prior to exit onto the road system.
- Truck tarping; All trucks being used for transport and disposal of materials at the Property are required to be fitted with solid, sliding or slot-top type covers. Trucks shall be covered immediately after loading and are to remain covered throughout the transportation and disposal of excavated material. Continuous Perimeter Air Monitoring and Sampling shall be conducted in accordance with paragraphs 3.2 and 3.2.1 above, and during any demolition operations of structures greater in size than 5,000 square feet
- During Mill Building Demolition the following measures will be taken/observed:
 - Using a manlift and fire hose with nozzle, high pressure water will be used to flush dust from the structure
 - Demolish smaller sections of the building, 2 columns wide, approximately 50', to reduce the volume of dust that could potentially become airborne and require greater resources and attention to manage
 - Deploy water trucks with water cannons and water with tackifying agent to saturate the dust washed from above that is on the ground prior to demolition. This will serve to prevent the material from becoming airborne and being added to any remaining dust on the building, creating during demolition
 - Deploy water trucks with water cannons, as well as Dust Bosses, to trap/knock down and airborne dust generated during demolition
 - Continuous Perimeter Air Monitoring and Sampling shall be conducted during any Mill Building demolition operations. In this context, Mill Building demolition is defined as the removal of steel columns in order to drop the roof section to the ground
 - Mill Building demolition will not proceed at wind speeds greater than 10 MPH

- In the event that action levels are exceeded, other exposed surfaces will be wetted as required to control dust

5.0 Schedule

Initial baseline monitoring and sampling (duration of 5-days) will be conducted before Site Activities begin, with the exception of items 2 and 3 of the SOW contained in Appendix D of the Agreement. The Dust Control Plan will be implemented immediately upon beginning Site Activities, and will remain in effect for the duration of the project, or until deemed unnecessary by the Owner, EPA, and DEQ. All laboratory filter analysis requires 5 business-day turnaround time.

If modifications to the Dust Control Plan are required, the modified plan will be provided to the US EPA within 30 days of written notice that the existing plan is inadequate.

6.0 Applicable or Relevant & Appropriate Requirements

The following are the Applicable or Relevant and Appropriate Requirements (ARARs) for the work conducted as part of this Work Plan

- 40 CFR 110-140 – The Clean Water Act (Environmental Protection Agency (EPA))
- 40 CFR 50-99 – The Clean Air Act (EPA)
- 40 CFR 305 – The Comprehensive Environmental Response Compensation and Liability Act (EPA)
- Part 201 of Michigan P.A. 451 of 1994 – Environmental Response (MDEQ)

Figures

1 - Site Location Map

2 - County Property Map

3 – Perimeter Air Monitoring & Sampling Stations

Attachment A

Dust Monitoring Logs