

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

June 29, 2018
REVISED August 27, 2018

**PERMIT TO INSTALL
72-18**

ISSUED TO
Waterfront Intermodal, LLC

LOCATED AT
5601 West Jefferson Avenue
Detroit, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
P0305

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

May 31, 2018

DATE PERMIT TO INSTALL APPROVED:

June 29, 2018

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO _{2e}	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM ₁₀	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM _{2.5}	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

The following conditions apply Source-Wide to: FGFACILITY

POLLUTION CONTROL EQUIPMENT:

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall not allow a throughput of more than 800,000 tons of dry bulk materials in FGFACILITY per 12-month rolling time period, as determined at the end of each calendar month. **(R 336.1205, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGFACILITY unless the fugitive dust control plan specified in Appendix A, or an alternate approvable plan submitted to the AQD District Supervisor, for all plant roadways, the plant yard, all material storage piles, and all material handling operations has been implemented and is maintained. **(R 336.1371, R 336.1372, Act 451 324.5524)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period, as determined at the end of each calendar month, records of the dry bulk materials throughput, in tons. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, 40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

APPENDIX A



**Fugitive Dust Plan
Revision 4.0**

**Prepared For:
Waterfront Intermodal, LLC
Detroit, Michigan**

**Revised March 2018
Project No.180365**



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List of Abbreviations/Acronyms

*C	Degrees Celsius
*F	Degrees Fahrenheit
FTCH	Fishbeck, Thompson, Carr & Huber, Inc.
MCL	Michigan Compiled Laws
MDEQ	Michigan Department of Environmental Quality
mph	Miles per Hour
PM	Particulate Matter
Statute	MCL 324.5524
tpy	Tons per Year



1.0 Introduction

Waterfront Intermodal LLC (Waterfront) is located along the Detroit River at 5601 West Jefferson Avenue Detroit, Michigan. Waterfront has developed a Fugitive Dust Plan to present how the facility complies the requirements of MCL 324.5524 (Statute) and Michigan Rules 371 and 372 – included as Attachments 1 and 2, respectively.

This document outlines the requirements of the Rules and Statute and demonstrates how Waterfront complies. It includes a brief description of the applicable regulations, a description of emission units and processes covered by this Plan, and anticipated control methods.

This program is subject to change based on weather conditions, changes in materials stored onsite, or feedback from affected parties. Waterfront is committed to the process of continuously evaluating potential improvements to the procedures, equipment, and products it uses for controlling fugitive dust. Products will be substituted on a trial basis to determine their effectiveness before being introduced permanently.

This document meets the requirements for a Fugitive Dust Plan included in the Statute and Rules 371 and 372.

2.0 Regulatory Requirements

The MDEQ has requested that Waterfront establish a Fugitive Dust Program as described in the Statute to allow issuance of a permit to install (PTI) that will include an approved State Operating Plan or Fugitive Dust Plan. It must also meet the requirements of the Statute and Rules 371 and 372.

2.1 MCL 324.5524

Fugitive emissions from several industrial groups located in specific areas of Michigan are regulated under the Statute as described in the following Sections.

2.1.1 Opacity Requirements [MCL 324.5524(2)]

Opacity from fugitive dust emissions associated with roads, lots, and storage piles is limited to 5% measured using Test Reference Method 9D, which uses a specific point of measuring opacity and a 3-minute averaging time. Other sources of fugitive dust are limited to 20% using Test Reference Method 9d, though these limits do not apply at times in which the wind speed exceeds 25 miles per hour (mph).

2.1.2 Storage Piles and Associated Material Handling [MCL 324.5524(3)]

The Statute includes specific requirements for facilities with storage piles having potential uncontrolled emissions of greater than 50 tons per year (tpy) of particulate matter (PM) and whose total potential uncontrolled emissions exceed 100 tpy/PM. These requirements, outlined in MCL 324.5524(3)(a)(i) through (iii) do not apply to the Waterfront facility as its emissions are much less than the thresholds referenced in the Statute. Because Waterfront does not operate any add-on control equipment, the requirements of MCL 324.5524(3)(a)(iv) do not apply either.

Crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, conveyor bagging operations, storage bins, and fine product truck and railcar loading operations must be controlled by water or surfactant application, choke feeding, or equivalent method(s) of air pollution control.

The Statute also includes special requirements for the transporting materials with a silt content greater than 1%, including the use of completely enclosed trucks, tarps, or similar controls in MCL 324.5524(3)(c), though there are some exceptions for handling slag and vehicles with a capacity under 2 tons.



The Statute also includes special requirements for the transporting materials with a silt content greater than 1%, including the use of completely enclosed trucks, tarps, or similar controls in MCL 324.5524(3)(c), though there are some exceptions for handling slag and vehicles with a capacity under 2 tons.

2.1.3 State Operating Program and Record Keeping [MCL 324.5524(4) and (5)]

Sources of fugitive dust subject to the Statute requirements must develop an operating program or Fugitive Dust Plan subject to review and approval by the MDEQ. The Statute also lists information which must be included in an operating program or Fugitive Dust Plan for it to be considered 'approvable.' Approved Fugitive Dust Programs must be incorporated into a legally enforceable order or PTI.

2.2 Michigan Rule 371

Michigan Rule 371 allows the MDEQ to request that a facility develop a Fugitive Dust Plan in the event that ambient air quality indicates a need to reduce fugitive emissions or if there have been a number of complaints. The Rule further details the types of information that must be included in a Fugitive Dust Plan and requires a description of bulk materials handled at the facility, control techniques used to reduce fugitive emissions, and record keeping methods that will be used to demonstrate compliance.

2.3 Michigan Rule 372

Rule 372 requires that facilities requiring a Fugitive Dust Plan may include typical control methods listed in the rule, as described below:

- (2) The following provisions apply to the loading or unloading of open storage piles of bulk materials as a source of fugitive dust:*
 - (a) Open storage piles of bulk materials, hereinafter referred to as "piles", which meet any of the following 3 conditions need not be included in a fugitive dust control program:*
 - (i) All piles of the same material at a manufacturing or commercial location which have a total volume of less than 100 cubic meters (131 yards³).*
 - (ii) Any piles at a manufacturing or commercial location if the total annual volumetric throughput of all the stored material at the site is less than 10,000 cubic meters (13,100 yards³).*
 - (iii) Any single pile at a manufacturing or commercial location that has a volume of less than 42 cubic meters (55 yards³).*
 - (b) Typical control methods for controlling fugitive emissions resulting from the loading or unloading of piles may include, but are not limited to, the following:*
 - (i) Completely enclosing the pile within a building furnished with department approved air pollution control equipment.*
 - (ii) Using pneumatic conveying or telescopic chutes.*
 - (iii) Spraying the working surface of the pile with water or dust-suppressant compound.*
 - (iv) Directing engine exhaust gases that are generated by the machine used on the piles for loading or unloading upwards.*
 - (v) Minimizing the drop distance from which the material is discharged into the pile. The drop distance shall be specified in the control program.*
 - (vi) Periodic removal of spilled material in areas within 100 meters (328 feet) from the pile. The frequency of removal shall be specified in the control program.*
- (3) All of the following provisions apply to the transporting of bulk materials as a source of fugitive dust:*
 - (a) Trucks which have less than a 2-ton capacity that are used to transport sand, gravel, stones, peat, and topsoil are exempt from the provisions of this sub rule.*
 - (b) Typical control methods for controlling fugitive emissions resulting from the transporting of bulk materials by truck may include, but are not limited to, the following:*



- (iv) Tarping the truck when operating empty if residue has not been completely removed after emptying.*
 - (v) Cleaning the residue from the inside of the truck after emptying.*
 - (vi) Loading trucks so that no part of the load making contact with any sideboard, side panel, or rear part of the load enclosure comes within 6 inches of the top part of the enclosure.*
 - (vii) Maintaining tight truck bodies so that leakages within the body will be eliminated and future leakages prevented.*
 - (viii) Spraying the material being transported in a vehicle with a dust suppressant. The frequency of spraying shall be specified in the control program.*
 - (ix) Restricting the speed of the vehicle which transports the material. The speed of the vehicle shall be specified in the control program.*
- (4) The following provision applies to outdoor conveying as a source of fugitive dust:
Typical control methods for controlling fugitive emissions resulting from conveying bulk materials may include, but are not limited to, the following:*
- (a) Completely enclosing all conveyor belts and equipping them with belt wipers and hoppers of proper size to prevent excessive spills.*
 - (b) Enclosing transfer points and, if necessary, exhausting them to a baghouse or similar control device at all times when the conveyors are in operation.*
 - (c) Equipping the conveyor belt with not less than 210-degree enclosures.*
 - (d) Restricting the speed of conveyor belts. The belt speed shall be specified in the control program.*
 - (e) Periodically cleaning the conveyor belt to remove the residual material. The frequency of cleaning shall be specified in the control program.*
 - (f) Minimizing the distance between transfer points. The distance between transfer points shall be specified in the control program.*
 - (g) Removing the spilled material from the ground under conveyors. The frequency of removal shall be specified in the control program.*



3.0 Process Description

Waterfront operates an Intermodal Freight Terminal at 5601 West Jefferson Avenue, Detroit, Michigan; the facility is located along the Detroit River. Operations include dry bulk materials being transported to the site by ship or truck, where they are stored and or handled for a period of time before being transferred or transported offsite. Dry bulk materials could include a variety of materials, including aggregates, ash, clinker, metals, minerals, scrap metal, limestone, clay, crushed concrete, cement blocks, aluminum ingots, slag, iron ore and asphalt grindings. This list is not intended to be all inclusive. Aggregate includes materials like sand, gravel, or crushed stone and is often used in concrete or other construction materials. Aggregates are divided into two distinct categories—fine and coarse. **Fine aggregates** generally consist of *natural sand or crushed stone with most particles passing through a 3/8-inch (or 0.375-inch) sieve*. **Coarse aggregates** are *any particles greater than 0.19 inch, but generally range between 0.375 inches and 1.5 inches in diameter*. Both types of aggregate are stored onsite. In some instances, a portable crusher may be temporarily brought onsite; in most cases, the portable crusher would be covered under its own air permit.

Total dust emissions from material storage piles result from several distinct activities within the storage cycle:

- Loading of material onto storage piles (batch or continuous drop operations).
- Equipment traffic in a storage area.
- Screening of aggregate.
- Loadout of material for shipment or for return to the process stream (batch or continuous drop operations).

3.1 Material Handling

Fugitive emissions can occur during material handling operations such as loading/unloading of bulk solid materials and onsite conveyance of the material. Either adding material to a storage pile or removing it from a pile typically involves dropping the material onto a receiving surface. *A truck dumping onto a pile or loading out from the pile to a truck with a front-end loader* are examples of **batch drop operations**. *Adding material to the pile by a conveyor stacker* is an example of a **continuous drop operation**. Employees are trained to identify material handling operations that can generate fugitive dust as well as methods to mitigate fugitive dust. These actions are summarized below:

- Material handling involves dropping material onto a receiving surface by use of a conveyor system, front-end loaders and/or truck dumping. Water will be employed during material handling operations if visible emissions are noted.
- Areas around the conveyor belts and transfer points will be maintained throughout the process by removing debris from around these points.
- Stacker operations will be limited when average wind speeds exceed 25 mph over two consecutive 5-minute intervals.
- Head ends of conveyors to all drop points shall have a minimal height as operationally practical.
- Material loading and unloading from trucks will occur in a timely and efficient manner to minimize transfer time.
- Trucks hauling bulk materials will be covered with tarps as required by the Statute.



3.2 Equipment Traffic

Fugitive emissions can occur from truck traffic or from other equipment, like front-end loaders. To control fugitive emissions from equipment traffic, the following measures will be employed:

- Open areas/lots and roadways will be treated with water via watering trucks when noncompliant visible emissions are observed. Water will not be applied during freezing temperatures or when precipitation is occurring.
- Roadways will be swept as needed.
- Material spilled onto roadways or open areas/lots will be cleaned immediately.
- A speed limit of 15 mph and enforced on all site roadways.
- Material will be removed from the tires and underside of trucks exiting the site by use of rumble strips, a gravel pad and/or water wash of the tires and the underside of the truck.

3.3 Storage Piles

Storage piles are generally located toward the center of the facility. Figure 1 provides a current layout of the facility. Fugitive emissions occur during material handling at the facility when material is dropped from/to a conveyor system, front-end loader or from truck dumping. Water is employed during material handling operations as needed to control visible emissions. In addition:

- All storage piles will be treated with water when noncompliant fugitive dust emissions are observed, such as truck-mounted water cannons. Additional chemical dust suppressant solutions will be used if needed.
- Weather conditions, such as during dry and windy conditions, may warrant regular water treatment.
- Waterfront personnel will monitor weather conditions and will use a wind sock to ensure that onsite material handling activities are limited when average wind speeds exceed 25 mph for more than two consecutive 5-minute periods.
- Water treatment will not be required during freezing conditions or when adequate moisture is present.
- Sweeping around the storage piles will be conducted as necessary.
- Pile heights will be limited to 50 feet (as measured against the nearby storage tanks) to minimize wind shear effects on the piles.

Figure 2 presents a typical site map indicating possible locations for storage piles and other site information.

3.4 Screening and Crushing Operations

Occasionally, screening or crushing operations are performed onsite by a contractor. Each contractor conducting screening or crushing operations at the Waterfront site will be required to reduce fugitive emissions to the extent that is practical using wet suppression, misting or other means. Weather conditions may warrant regular water treatment, such as during dry or windy weather. The contractor will monitor weather conditions to ensure compliance with this Fugitive Dust Plan as well as any other applicable requirements.



4.0 Fugitive Dust Plan Record Keeping

Waterfront has developed a record keeping form (Attachment 3) and keeps records of:

- Weather conditions (wind direction/speed)
- Type and volume of materials stored
- Records of all dust suppressant (water and other) applied to roadways, storage piles and open areas/lots

The log sheet will generally be filled out in the morning on days the facility is operating and used for planning fugitive dust control activities for the day. Records will be kept in a log format and will be kept for a minimum of five years. Safety data sheets will also be available for any dust suppressants used at the site beside water.

This Plan also needs to clearly identify the site address and responsible person with contact information:

Mr. Harry Warner, Managing Member
Waterfront Intermodal LLC
5601 West Jefferson Avenue
Detroit, MI 48209
Phone: 313.554.1100

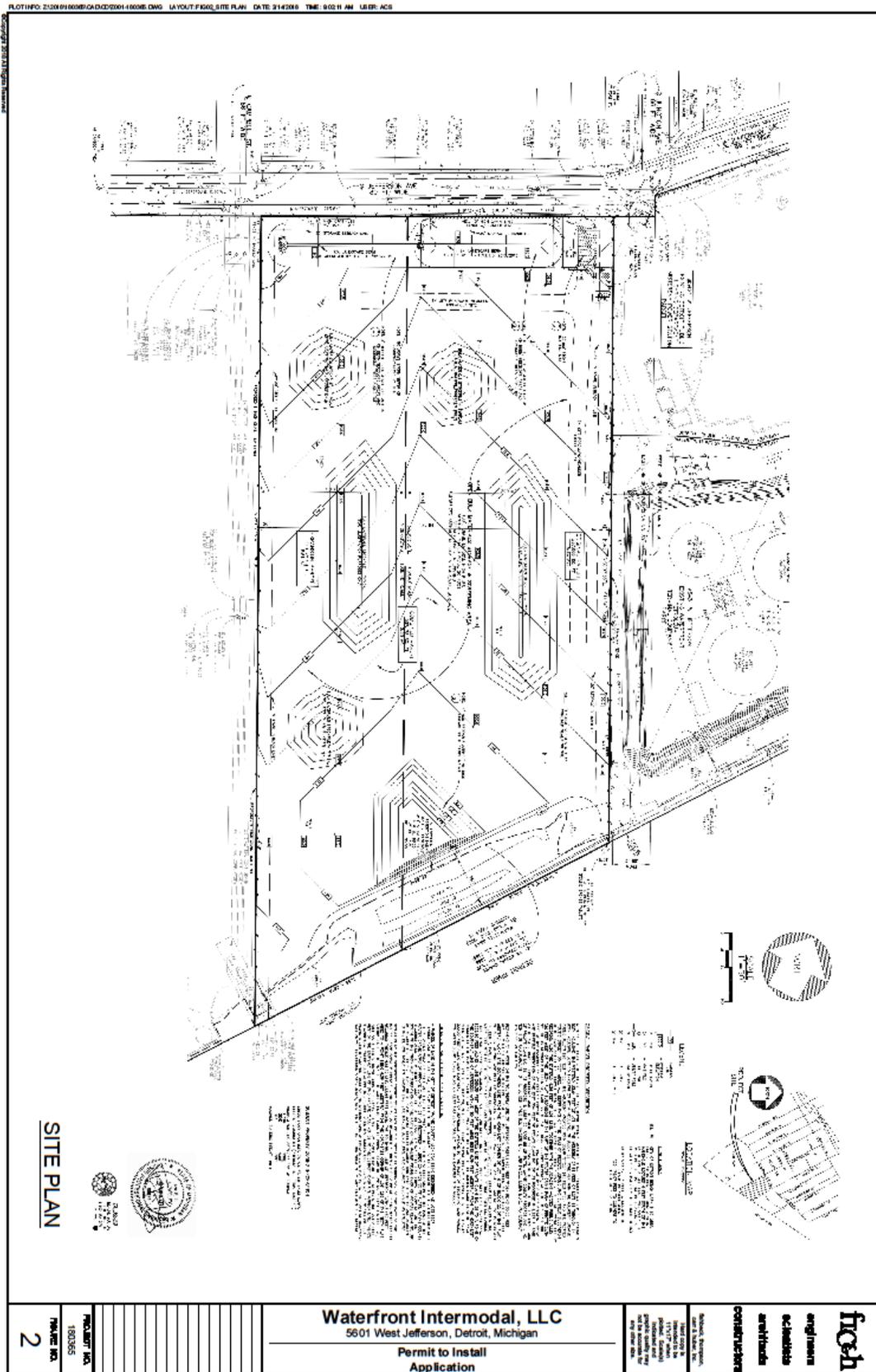
5.0 Fugitive Dust Plan Revision History

<u>Revision</u>	<u>Date</u>	<u>Purpose</u>
0.0	January 30, 2014	Initial Plan Created (NTH)
1.0	September 29, 2015	Update to include additional property (NTH)
2.0	October 6, 2015	Update to include BSEED ¹ Comments (NTH)
3.0	December 18, 2015	Update to include screening operations (NTH)
4.0	March 2018	Update for PTI Application (FTCH) ²

¹ BSEED City of Detroit Buildings, Safety Engineering and Environmental Department

² FTCH Fishbeck, Thompson, Carr & Huber, Inc.

Figures



Attachment 1

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT (EXCERPT)
Act 451 of 1994

324.5524 Fugitive dust sources or emissions.

Sec. 5524. (1) The provisions of this section, including subsection (2), shall apply to any fugitive dust source at all mining operations, standard industrial classification major groups 10 through 14; manufacturing operations, standard industrial classification major groups 20 through 39; railroad transportation, standard industrial classification major group 40; motor freight transportation and warehousing, standard industrial classification major group 42; electric services, standard industrial classification group 491; sanitary services, standard industrial classification group 495; and steam supply, standard industrial classification group 496, which are located in areas listed in table 36 of R 336.1371 of the Michigan administrative code.

(2) Except as provided in subsection (8), a person responsible for any fugitive dust source regulated under this section shall not cause or allow the emission of fugitive dust from any road, lot, or storage pile, including any material handling activity at a storage pile, that has an opacity greater than 5% as determined by reference test method 9d. Except as otherwise provided in subsection (8) or this section, a person shall not cause or allow the emission of fugitive dust from any other fugitive dust source that has an opacity greater than 20% as determined by test method 9d. The provisions of this subsection shall not apply to storage pile material handling activities when wind speeds are in excess of 25 miles per hour (40.2 kilometers per hour).

(3) In addition to the requirements of subsection (2), and except as provided in subdivisions (e), (f), and (g), a person shall control fugitive dust emissions in a manner that results in compliance with all of the following provisions:

(a) Potential fugitive dust sources shall be maintained and operated so as to comply with all of the following applicable provisions:

(i) All storage piles of materials, where the total uncontrolled emissions of fugitive dust from all such piles at a facility is in excess of 50 tons per year and where such piles are located within a facility with potential particulate emissions from all sources including fugitive dust sources and all other sources exceeding 100 tons per year, shall be protected by a cover or enclosure or sprayed with water or a surfactant solution, or treated by an equivalent method, in accordance with the operating program required by subsection (4).

(ii) All conveyor loading operations to storage piles specified in subparagraph (i) shall utilize spray systems, telescopic chutes, stone ladders, or other equivalent methods in accordance with the operating program required by subsection (4). Batch loading operations to storage piles specified in subparagraph (i) shall utilize spray systems, limited drop heights, enclosures, or other equivalent methods in accordance with the operating program required by subsection (4). Unloading operations from storage piles specified in subparagraph (i) shall utilize rake reclaimers, bucket wheel reclaimers, under-pile conveying, pneumatic conveying with baghouse, water sprays, gravity-feed plow reclaimer, front-end loaders with limited drop heights, or other equivalent methods in accordance with the operating program required by subsection (4).

(iii) All traffic pattern access areas surrounding storage piles specified in subparagraph (i) and all traffic pattern roads and parking facilities shall be paved or treated with water, oils, or chemical dust suppressants. All paved areas, including traffic pattern access areas surrounding storage piles specified in subparagraph (i), shall be cleaned in accordance with the operating program required by subsection (4). All areas treated with water, oils, or chemical dust suppressants shall have the treatment applied in accordance with the operating program required by subsection (4).

(iv) All unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying, or other equivalent methods.

(v) Crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, conveyor bagging operations, storage bins, and fine product truck and railcar loading operations shall be sprayed with water or a surfactant solution, utilize choke-feeding, or be treated by an equivalent method in accordance with an operating program required under subsection (4). This subparagraph shall not apply to high-lines at steel mills.

(b) If particulate collection equipment is operated pursuant to this section, emissions from such equipment shall not exceed 0.03 grains per dry standard cubic foot (0.07 grams per cubic meter).

(c) A person shall not cause or allow the operation of a vehicle for the transporting of bulk materials with a silt content of more than 1% without employing 1 or more of the following control methods:

(i) The use of completely enclosed trucks, tarps, or other covers for bulk materials with a silt content of 20% or more by weight.

(ii) The use of tarps, chemical dust suppressants, or water in sufficient quantity to maintain the surface in a wet condition for bulk materials with a silt content of more than 5% but less than 20%.

(iii) Loading trucks so that no part of the load making contact with any sideboard, side panel, or rear part

of the load comes within 6 inches of the top part of the enclosure for bulk materials with a silt content of more than 1% but not more than 5%.

(d) All vehicles for transporting bulk materials off-site shall be maintained in such a way as to prevent leakage or spillage and shall comply with the requirements of section 720 of the Michigan vehicle code, Act No. 300 of the Public Acts of 1949, being section 257.720 of the Michigan Compiled Laws, and with R. 28.1457 of the Michigan administrative code.

(e) The provisions of subdivisions (c) and (d) do not apply to vehicles with less than a 2-ton capacity that are used to transport sand, gravel, stones, peat, or topsoil.

(f) The provisions of subdivision (c)(i) and (ii) do not apply to fly ash which has been thoroughly wetted and has the property of forming a stable crust upon drying.

(g) The provisions of subdivision (c) do not apply to the transportation of iron or steel slag if the vehicles do not leave the facility and the slag has a temperature of 200 degrees Fahrenheit or greater.

(4) All fugitive dust sources subject to the provisions of this section shall be operated in compliance with both the provisions of an operating program that shall be prepared by the owner or operator of the source and submitted to the department and with applicable provisions of this section. Such operating program shall be designed to significantly reduce the fugitive dust emissions to the lowest level that a particular source is capable of achieving by the application of control technology that is reasonably available, considering technological and economic feasibility. The operating program shall be implemented with the approval of the department.

(5) The operating program required by subsection (4) is subject to review and approval or disapproval by the department and shall be considered approved if not acted on by the department within 90 days of submittal. All programs approved by the department shall become a part of a legally enforceable order or as part of an approved permit to install or operate. At a minimum, the operating program shall include all of the following:

(a) The name and address of the facility.

(b) The name and address of the owner or operator responsible for implementation of the operating program.

(c) A map or diagram of the facility showing all of the following:

(i) Approximate locations of storage piles.

(ii) Conveyor loading operations.

(iii) All traffic patterns within the facility.

(d) The location of unloading and transporting operations with pollution control equipment.

(e) A detailed description of the best management practices utilized to achieve compliance with this section, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals, and dust suppressants utilized, and equivalent methods utilized.

(f) A test procedure, including record keeping, for testing all waste or recycled oils used for fugitive dust control for toxic contaminants.

(g) The frequency of application, application rates, and dilution rates if applicable, of dust suppressants by location of materials.

(h) The frequency of cleaning paved traffic pattern roads and parking facilities.

(i) Other information as may be necessary to facilitate the department's review of the operating program.

(6) Except for fugitive dust sources operating programs approved by the department pursuant to R. 336.1373 of the Michigan administrative code between April 23, 1985 and May 12, 1987, the owner or operator of a source shall submit the operating program required by subsection (4) to the department by August 12, 1987.

(7) The operating program required by subsection (4) shall be amended by the owner or operator so that the operating program is current and reflects any significant change in the fugitive dust source or fugitive dust emissions. An amendment to an operating program shall be consistent with the requirements of this section and shall be submitted to the department for its review and approval or disapproval.

(8) Upon request by the owner or operator of a fugitive dust source, the department may establish alternate provisions to those specified in this section, if all of the following conditions are met:

(a) The fugitive dust emitting process, operation, or activity is subject to either of the following:

(i) The opacity limits of subsection (2).

(ii) The spray requirements of subsection (3)(a)(i) to (v).

(b) An alternate provision shall not be established by the department unless the department is reasonably convinced of all of the following:

(i) That a fugitive dust emitting process, operation, or activity subject to the alternate provisions is in compliance or on a legally enforceable schedule of compliance with the other rules of the department.

- (ii) That compliance with the provisions of this section is not technically or economically reasonable.
 - (iii) That reasonable measures to reduce fugitive emissions as required by this section have been implemented in accordance with or will be implemented in accordance with a schedule approved by the department.
 - (9) Any alternate provisions approved by the department pursuant to subsection (8) shall be submitted to the United States environmental protection agency as an amendment to the state implementation plan.
- History:** 1994, Act 451, Eff. Mar. 30, 1995.
Popular name: Act 451
Popular name: NREPA

Attachment 2

R 336.1371 Fugitive dust control programs other than areas listed in table 36.

Rule 371.

- (1) Based on ambient air quality measurements or substantive complaints, the department may request that the person who is responsible for the operation of any facility which processes, uses, stores, transports, or conveys bulk materials, such as, but not limited to, coal, coke, metal ores, limestone, cement, sand, gravel, and material from air pollution control devices, or a facility which has activities specifically identified in R 336.1372 and which facility is in an area not listed in table 36, submit a fugitive dust control program. The department shall notify the person who is responsible for the operation of the facility of the provisions of R 336.1372 which apply to the facility and the reasons for the department's notification. Except as provided in subrule (3) of this rule, the control program shall be submitted to the department not later than 6 months after notification.
- (2) A fugitive dust control program which is required by subrule (1) of this rule shall be in writing and shall provide for all of the following:
 - (a) Using 1 or more combinations of available technologies, operating practices, or methods listed in R 336.1372 as are reasonably necessary to control fugitive dust emissions.
 - (b) Consideration of the quantity, moisture content, specific gravity, and the particle size distribution of the bulk materials. The more friable, drier, lighter, and finer the bulk material is, the more effective the fugitive dust control methods incorporated into the control program shall be.
 - (c) The keeping and maintenance of records consistent with the various activities to be implemented under the control program.
 - (d) Identification of the control technologies, methods, or control equipment, if any, to be implemented or installed and the schedule, including increments of progress, for implementation or installation.
- (3) Within 3 months following notification by the department that a fugitive dust control program is required, the person who is responsible for operating the facility has the opportunity to demonstrate, to the satisfaction of the department, that any part of the facility is not subject to the provisions of this rule.
- (4) If a control program is not submitted within 6 months after notification by the department, then the department may proceed, pursuant to the act, toward the entry of a final order which contains a control program that meets the requirements of subrule (2) of this rule.
- (5) The control program is subject to review and approval by the department. The department shall approve a control program only upon the entry of a legally enforceable order or as part of an approved permit to install or operate. If, in the opinion of the department, the program does not adequately meet the requirements set forth in subrule (2) of this rule, then the department may disapprove the program, state its reasons for disapproval, and require the preparation and submittal of an amended program within a specified time period. If, within the specified time period, an amended program is either not submitted or is submitted but, in the opinion of the department, fails to meet the requirements of subrule (2) of this rule, then the department may proceed, pursuant to the act, toward the entry of a final order which contains a control program that meets these requirements.
- (6) After approval by the department, the person who is responsible for the preparation of the control program shall begin implementation of the program pursuant to the schedule contained in the control program.
- (7) Either the person who is responsible for a facility or the department may request a revision to a department-approved control program to meet changing conditions. The department shall review the revision following the requirements of subrule (5) of this rule.

(8) Table 6 reads as follows:

TABLE 36

County	Area
Bay	T14N, R5E, Sections 14 to 16 and 21 to 23.
Calhoun	T2S, R4W, Section 34.
Delta	T39N, R22W, Sections 19, 30, south one-half of 17, and south one-half of 18.
Genesee	Starting on Industrial Avenue, north to Pierson Road, east to Dort Highway, south to Hitchcock Street, south to Olive Avenue (extended), south to Robert T. Longway Boulevard, west and southwest to Industrial Avenue.
Lapeer	7N, R12E, that portion of Section 17 which lies south of M-21 and east of Fairground Road. Macomb T4N, R14E, Sections 27, 28, 33, and 34.
Manistee	T21N, R16W, Sections 7, 18, and 19; T21N, R17W, Sections 12 and 13.
Midland	T14N, R2E, Sections 14 to 16, 21 to 23, 26 to 28, and 33 to 35.
Monroe	Starting where Sandy Creek empties into Lake Erie, northwest to Maple Avenue (extended north-northeast), southwest to Elm Avenue, west to Herr Road, south to Dunbar Road and east to Plum Creek (which empties into Lake Erie).
Muskegon	T9N, R16W, Sections 5 and 6; T10N, R16W, Sections 21, 22, and 27 to 34.
Saginaw	Northeast section: starting on Tittabawassee Road, east to I-75, south to Wadsworth Avenue, west to I-675, west and north to Tittabawassee Road. Southwest section: T12N, R4E, the eastern half of Section 34 (that which is east of Maple Street) and Section 35.
St. Clair	T6N, R17E, Sections 2 to 4, 9 to 11, 14 to 16, 21, 22, and 28.
Wayne	Area included within the following (counter clockwise): Lake St. Clair to Moross Road to Seven Mile Road to Vandyke Road to Eight Mile Road to Wyoming Road to Seven Mile Road to Schaeffer Road to Fenkell Road to Greenfield Avenue to Joy Road to Southfield Expressway to Ford Road to Telegraph Road to Cherry Hill Road to Beech-Daly Road (extended) to Michigan Avenue to Inkster Road to Carlisle Street to Middle Belt Road to Vanborn Road to Wayne Road to Pennsylvania Road to Middle Belt Road to Sibley Road to Telegraph Road to King Road to Grange Road to Sibley Road to Jefferson Avenue to Bridge Street (Grosse Ile) extended to Detroit River. Also included is that portion of the City of Riverview which is south of Sibley Road and the City of Trenton.

History: 1981 AACs; 1985 AACs; 2002 AACs.

R 336.1372 Fugitive dust control program; required activities; typical control methods.
Rule 372.

- (1) A fugitive dust control program which is required by R 336.1371 and which deals with 1 or more of the fugitive dust sources listed in this rule may include any of the typical control methods listed in this rule for that source.
- (2) The following provisions apply to the loading or unloading of open storage piles of bulk materials as a source of fugitive dust:
 - (a) Open storage piles of bulk materials, hereinafter referred to as "piles", which meet any of the following 3 conditions need not be included in a fugitive dust control program:
 - (i) All piles of the same material at a manufacturing or commercial location which have a total volume of less than 100 cubic meters (131 yards³).
 - (ii) Any piles at a manufacturing or commercial location if the total annual volumetric throughput of all the stored material at the site is less than 10,000 cubic meters (13,100 yards³).
 - (iii) Any single pile at a manufacturing or commercial location that has a volume of less than 42 cubic meters (55 yards³).
 - (b) Typical control methods for controlling fugitive emissions resulting from the loading or unloading of piles may include, but are not limited to, the following:
 - (i) Completely enclosing the pile within a building furnished with department approved air pollution control equipment.
 - (ii) Using pneumatic conveying or telescopic chutes.
 - (iii) Spraying the working surface of the pile with water or dust-suppressant compound.
 - (iv) Directing engine exhaust gases that are generated by the machine used on the piles for loading or unloading upwards.
 - (v) Minimizing the drop distance from which the material is discharged into the pile. The drop distance shall be specified in the control program.
 - (vi) Periodic removal of spilled material in areas within 100 meters (328 feet) from the pile. The frequency of removal shall be specified in the control program.
- (3) All of the following provisions apply to the transporting of bulk materials as a source of fugitive dust:
 - (a) Trucks which have less than a 2-ton capacity that are used to transport sand, gravel, stones, peat, and topsoil are exempt from the provisions of this subrule.
 - (b) Typical control methods for controlling fugitive emissions resulting from the transporting of bulk materials by truck may include, but are not limited to, the following:
 - (i) Completely covering open-bodied trucks.
 - (ii) Cleaning the wheels and the body of each truck to remove spilled materials after the truck has been loaded.
 - (iii) Use of completely enclosed trucks.
 - (iv) Tarping the truck when operating empty if residue has not been completely removed after emptying.
 - (v) Cleaning the residue from the inside of the truck after emptying.
 - (vi) Loading trucks so that no part of the load making contact with any sideboard, side panel, or rear part of the load enclosure comes within 6 inches of the top part of the enclosure.
 - (vii) Maintaining tight truck bodies so that leakages within the body will be eliminated and future leakages prevented.

- (viii) Spraying the material being transported in a vehicle with a dust suppressant. The frequency of spraying shall be specified in the control program.
 - (ix) Restricting the speed of the vehicle which transports the material. The speed of the vehicle shall be specified in the control program.
- (4) The following provision applies to outdoor conveying as a source of fugitive dust. Typical control methods for controlling fugitive emissions resulting from conveying bulk materials may include, but are not limited to, the following:
- (a) Completely enclosing all conveyor belts and equipping them with belt wipers and hoppers of proper size to prevent excessive spills.
 - (b) Enclosing transfer points and, if necessary, exhausting them to a baghouse or similar control device at all times when the conveyors are in operation.
 - (c) Equipping the conveyor belt with not less than 210-degree enclosures.
 - (d) Restricting the speed of conveyor belts. The belt speed shall be specified in the control program.
 - (e) Periodically cleaning the conveyor belt to remove the residual material. The frequency of cleaning shall be specified in the control program.
 - (f) Minimizing the distance between transfer points. The distance between transfer points shall be specified in the control program.
 - (g) Removing the spilled material from the ground under conveyors. The frequency of removal shall be specified in the control program.
- (5) The following provisions apply to roads and lots as sources of fugitive dust:
- (a) Roads and lots which are located within industrial, commercial, and government-owned facilities and which meet the following 2 conditions are not subject to the requirement of submitting a fugitive dust control program:
 - (i) The traffic volume is less than 10 vehicles per day on a monthly average.
 - (ii) The lots are less than 500 square meters (5,382 feet²) in area.
 - (b) Typical control methods for controlling fugitive emissions resulting from roads and lots located within industrial, commercial, and government-owned facilities may include, but are not limited to, the following:
 - (i) Paving roads and parking lots with a hard material, such as concrete, asphalt, or an equivalent which is approved by the department.
 - (ii) Mechanically cleaning paved surfaces by vacuum sweeping, wet sweeping, or flushing. The frequency of cleaning shall be specified in the control program.
 - (iii) Washing the wheels of every truck leaving the plant premises.
 - (iv) Treating the roads and lots with oil or a dust-suppressant compound which is approved by the department. The frequency of application shall be specified in the control program.
 - (v) Periodically maintaining off-road surfaces with gravel where trucks have frequent access. The frequency of maintenance shall be specified in the control program.
- (6) The following provisions apply to inactive storage piles as sources of fugitive dust:
- (a) Inactive storage piles that are less than or equal to 500 cubic meters (654 yards³) in volume are not subject to the requirement of submitting a fugitive dust control program.
 - (b) Typical control methods for controlling fugitive emissions resulting from inactive storage piles may include, but are not limited to, the following:
 - (i) Completely covering the pile with tarpaulin or other material approved by the department.
 - (ii) Completely enclosing the pile within a building.
 - (iii) Enclosing the pile with not less than 3 walls so that no portion of the stored material is higher than the walls.

- (iv) Periodically spraying the piles with water or other dust-suppressant compound approved by the department. The frequency of application shall be specified in the control program.
 - (v) Growing vegetation on and around the pile.
- (7) The following provisions apply to building ventilation as a source of fugitive dust:
- (a) This subrule is applicable to all of the following:
 - (i) Ferrous and nonferrous foundries.
 - (ii) Electric arc furnaces, blast furnace casthouses, sinter plants, and basic oxygen processes at iron and steel production facilities.
 - (iii) Metal heat treating.
 - (iv) Metal forging.
 - (v) Bulk material handling, storage, drying, screening, and crushing.
 - (vi) Metal fabricating and welding.
 - (vii) Briquetting, sintering, and pelletizing operations.
 - (viii) Machining and pressing of metal.
 - (ix) Stone, clay, and glass production.
 - (x) Lime, cement, and gypsum production.
 - (xi) Chemical and allied product production.
 - (xii) Asphalt and concrete mixing operations.
 - (b) Typical control methods for controlling fugitive emissions resulting from building openings, such as roof monitors, powered and unpowered ventilators, doors, windows, and holes in the building structure integrity, may include, but are not limited to, the following:
 - (i) Exhausting the entire building to a dust collection system which is acceptable to the department.
 - (ii) Using local hoods connected to a dust collection system to capture emissions within the building.
 - (iii) Establishing and maintaining operating procedures and internal housekeeping practices (specify details).
 - (iv) Installing removable filter media across the vent openings.
- (8) The following provisions apply to fugitive dust emissions from construction, renovation, or demolition activities located in priority I areas:
- (a) This subrule is applicable to the owner or prime contractor, except for those owners or prime contractors who construct, renovate, or demolish less than 12 single family dwelling units per year.
 - (b) Typical control methods for controlling fugitive dust emissions from construction, renovation, or demolition activities may include, but are not limited to, the following:
 - (i) Spraying of all work areas with water or other dust-suppressant compound which is approved by the department.
 - (ii) Completely covering the debris, excavated earth, or other airborne materials with tarpaulin or any other material which is approved by the department.
 - (iii) Any other method acceptable to the department.

History: 1981 AACS; 2002 AACS.

Attachment 3

**WATERFRONT INTERMODAL LLC
 DAILY FUGITIVE DUST SUPPRESSANT LOG SHEET**

Area (i.e., Roadway, Storage Pile, Open Area/Lot) Dust Control Application Summary

DATE: _____

WEATHER CONDITIONS

Material Onsite: _____

Precipitation: Yes___ No___

Amount: _____

Temperature: _____

Activities Planned: _____

Wind Direction and Velocity: _____

AREA IDs	Water Applied*	Dust Suppressant Applied*	Comments

* Use NA if water and/or dust suppression is not necessary. List why (i.e. precipitation occurring; area has adequate moisture present; freezing conditions; etc.)

List any extreme weather conditions that occurred (i.e. freezing temperatures with low pre-existing product moisture; prolonged dry, windy conditions; sustained winds exceeding 20 mph. Use NA if not applicable.
