

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
AIR QUALITY DIVISION**

August 2, 2023  
REVISED December 13, 2023

**PERMIT TO INSTALL**  
94-23

**ISSUED TO**  
Atlas Concrete, LLC

**LOCATED AT**  
14219 C-Drive North  
Marshall, Michigan 49068

**IN THE COUNTY OF**  
Calhoun

**STATE REGISTRATION NUMBER**  
P1414

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. 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:<br><b>July 24, 2023</b> |            |
| DATE PERMIT TO INSTALL APPROVED:<br><b>August 2, 2023</b>                        | SIGNATURE: |
| DATE PERMIT VOIDED:  | SIGNATURE: |
| DATE PERMIT REVOKED:   | SIGNATURE: |

**PERMIT TO INSTALL**

**Table of Contents**

COMMON ACRONYMS ..... 2  
POLLUTANT / MEASUREMENT ABBREVIATIONS..... 3  
GENERAL CONDITIONS ..... 4  
EMISSION UNIT SPECIAL CONDITIONS..... 6  
    EMISSION UNIT SUMMARY TABLE ..... 6  
FLEXIBLE GROUP SPECIAL CONDITIONS..... 7  
    FLEXIBLE GROUP SUMMARY TABLE ..... 7  
    FGPLANT ..... 8  
APPENDIX A ..... 12

### COMMON ACRONYMS

|                            |   |
|----------------------------|---|
| AQD                        | Air Quality Division  |
| BACT                       | Best Available Control Technology                           |
| CAA                        | Clean Air Act   |
| CAM                        | Compliance Assurance Monitoring                             |
| CEMS                       | Continuous Emission Monitoring System                       |
| CFR                        | Code of Federal Regulations                                 |
| COMS                       | Continuous Opacity Monitoring System                        |
| Department/department/EGLE | Michigan Department of Environment, Great Lakes, and Energy |
| EU                         | Emission Unit   |
| FG                         | Flexible Group  |
| GACS                       | Gallons of Applied Coating Solids                           |
| GC                         | General Condition   |
| GHGs                       | Greenhouse Gases  |
| HVLP                       | High Volume Low Pressure*                                   |
| ID                         | Identification  |
| IRSL                       | Initial Risk Screening Level                                |
| ITSL                       | Initial Threshold Screening Level                           |
| LAER                       | Lowest Achievable Emission Rate                             |
| MACT                       | Maximum Achievable Control Technology                       |
| MAERS                      | Michigan Air Emissions Reporting System                     |
| MAP                        | Malfunction Abatement Plan                                  |
| MSDS                       | Material Safety Data Sheet                                  |
| NA                         | Not Applicable  |
| NAAQS                      | National Ambient Air Quality Standards                      |
| NESHAP                     | National Emission Standard for Hazardous Air Pollutants     |
| NSPS                       | New Source Performance Standards                            |
| NSR                        | New Source Review   |
| PS                         | Performance Specification                                   |
| PSD                        | Prevention of Significant Deterioration                     |
| PTE                        | Permanent Total Enclosure                                   |
| PTI                        | Permit to Install   |
| RACT                       | Reasonable Available Control Technology                     |
| ROP                        | Renewable Operating Permit                                  |
| SC                         | Special Condition   |
| SCR                        | Selective Catalytic Reduction                               |
| SNCR                       | Selective Non-Catalytic Reduction                           |
| SRN                        | State Registration Number                                   |
| TBD                        | To Be Determined  |
| TEQ                        | Toxicity Equivalence Quotient                               |
| USEPA/EPA                  | United States Environmental Protection Agency               |
| VE                         | Visible Emissions   |

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

### POLLUTANT / MEASUREMENT ABBREVIATIONS

|                   |  |
|-------------------|--|
| acfm              | Actual cubic feet per minute                                     |
| BTU               | British Thermal Unit   |
| °C                | Degrees Celsius  |
| CO                | Carbon Monoxide  |
| CO <sub>2</sub> e | Carbon Dioxide Equivalent  |
| dscf              | Dry standard cubic foot  |
| dscm              | Dry standard cubic meter   |
| °F                | Degrees Fahrenheit   |
| gr                | Grains   |
| HAP               | Hazardous Air Pollutant  |
| Hg                | Mercury  |
| hr                | Hour   |
| HP                | Horsepower   |
| H <sub>2</sub> S  | Hydrogen Sulfide   |
| kW                | Kilowatt   |
| lb                | Pound  |
| m                 | Meter  |
| mg                | Milligram  |
| mm                | Millimeter   |
| MM                | Million  |
| MW                | Megawatts  |
| NMOC              | Non-Methane Organic Compounds                                    |
| NO <sub>x</sub>   | Oxides of Nitrogen   |
| ng                | Nanogram   |
| PM                | Particulate Matter   |
| PM10              | Particulate Matter equal to or less than 10 microns in diameter  |
| PM2.5             | Particulate Matter equal to or less than 2.5 microns in diameter |
| pph               | Pounds per hour  |
| ppm               | Parts per million  |
| ppmv              | Parts per million by volume                                      |
| ppmw              | Parts per million by weight                                      |
| psia              | Pounds per square inch absolute                                  |
| psig              | Pounds per square inch gauge                                     |
| scf               | Standard cubic feet  |
| sec               | Seconds  |
| SO <sub>2</sub>   | Sulfur Dioxide   |
| TAC               | Toxic Air Contaminant  |
| Temp              | Temperature  |
| THC               | Total Hydrocarbons   |
| tpy               | Tons per year  |
| µg                | Microgram  |
| µm                | Micrometer or Micron   |
| VOC               | Volatile Organic Compounds                                       |
| yr                | Year   |

## 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 Environment, Great Lakes, and Energy, 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 Rule 210 (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 Rule 219 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 Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(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 condition 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 Rule 301, 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 Rule 303 (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 Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

## EMISSION UNIT SPECIAL CONDITIONS

### EMISSION UNIT SUMMARY TABLE

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

| <b>Emission Unit ID</b> | <b>Emission Unit Description<br/>(Including Process Equipment &amp; Control Device(s))</b>   | <b>Flexible Group ID</b> |
|-------------------------|--|--------------------------|
| EU-PROCESS              | Eight (8) pneumatically loaded silos for temporary storage of cement, slag, and fly ash with fabric filters for dust control, conveyors to load sand and aggregate into the mixer, and scales to weigh raw materials fed to the mixer. | FGPLANT                  |
| EU-YARD                 | Fugitive dust sources including: plant roadways, plant yard, material storage piles, and material handling operations.   | FGPLANT                  |

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

## FLEXIBLE GROUP SPECIAL CONDITIONS

### FLEXIBLE GROUP SUMMARY TABLE

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

| <b>Flexible Group ID</b> | <b>Flexible Group Description</b>   | <b>Associated Emission Unit IDs</b> |
|--------------------------|---|-------------------------------------|
| FGPLANT                  | A concrete batch plant with eight (8) pneumatically loaded silos with fabric filters, outside storage of aggregate and sand, conveyors for loading sand and aggregate, mixing operations, and scales for weighing raw materials fed into the mixer. | EU-PROCESS, EU-YARD                 |

## **FGPLANT FLEXIBLE GROUP CONDITIONS**

### **DESCRIPTION**

A concrete batch plant with eight (8) pneumatically loaded silos with fabric filters, outside storage of aggregate and sand, conveyors for loading sand and aggregate, mixing operations, and scales for weighing raw materials fed into the mixer.

**Emission Unit:** EU-PROCESS, EU-YARD

### **POLLUTION CONTROL EQUIPMENT**

The silos and mixer are equipped with fabric filters. Air discharged from the mixer are controlled by a dust collector before venting.

#### **I. EMISSION LIMIT(S)**

1. There shall be no visible emissions from the cement silos and the mixer dust collector. **(R 336.1301, 40 CFR 52.21(c) & (d))**
2. Visible emissions from the drop point and transfer point portions of FGPLANT shall not exceed a six-minute average of 20 percent opacity. **(R 336.1301, 40 CFR 52.21(c) & (d))**

#### **II. MATERIAL LIMIT(S)**

1. The permittee shall not produce more than 310,000 cubic yards of concrete per 12-month rolling time period as determined at the end of each calendar month in FGPLANT. **(R 336.1225(2), 40 CFR 52.21 (c) & (d))**

#### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate FGPLANT unless the nuisance minimization plan for fugitive dust for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **(R 336.1371)**
2. The permittee shall not operate FGPLANT unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the dust collector, has been submitted within 45 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall

implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate the silo portion of FGPLANT unless the silo fabric filters are installed, maintained, and operated in a satisfactory manner. **(R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall not operate the mixer and screen portion of FGPLANT unless the mixer dust collector is installed, maintained, and operated in a satisfactory manner. **(R 336.1910, 40 CFR 52.21(c) and (d))**

#### **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 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(40 CFR 52.21 (c) & (d))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the cubic yards of concrete produced in FGPLANT each month and 12-month rolling time period. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225(2), 40 CFR 52.21 (c) & (d))**
3. The permittee shall keep records of all fugitive dust control equipment inspections and all dust control activities on travel surfaces and other surfaces where fugitive dust emissions occur as required by Appendix A. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1371)**
4. The permittee shall verify compliance with the visible emission limit in SC I.1 and SC I.2 by taking six-minute visible emission readings from FGPLANT a minimum of once per calendar week during maximum routine operating conditions. A certified reader shall take each visible emission reading during maximum routine operating conditions. If the permittee observes any visible emissions above the permitted limits, the permittee shall immediately implement the following procedures:
  - a) The permittee shall perform the six-minute visible emission readings at least once every 30 minutes until emissions are no longer above the limit or until emissions above the limit have been observed for more than two hours. **(R 336.1301, R 336.1901)**
  - b) If visible emissions above the limit have been observed for more than two hours, a certified reader shall determine the opacity using Federal Reference Test Method 9 or other method as approved by the AQD District Supervisor. **(40 CFR Part 60, Appendix A).**
  - c) If the results of the Federal Reference Test Method 9 visible emission observation or other method as approved by the AQD District Supervisor indicate a violation of the opacity standard specified in SC I.1, the permittee shall immediately cease process operations, initiate corrective actions, and record the corrective actions taken.

The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1301, R 336.1303, R 336.1901)**

5. The permittee shall record the pressure drop across the baghouse once per calendar day during operation. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1331, R 336.1901, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

6. The permittee shall keep records of inspections, maintenance, repair, and malfunctions of the dust collector as required by the MAP. The permittee shall keep all records on file and make them available to the Department upon request. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

| <b>Stack &amp; Vent ID</b> | <b>Maximum Exhaust Diameter / Dimensions (inches)</b> | <b>Minimum Height Above Ground (feet)</b> | <b>Underlying Applicable Requirements</b> |
|----------------------------|---|---|---|
| 1. SV1 (Cement Silo)       | 12x16   | 64  | 40 CFR 52.21(c) & (d)                     |
| 2. SV2 (Slag Silo)         | 12x16   | 64  | 40 CFR 52.21(c) & (d)                     |
| 3. SV3 (Fly Ash Silo)      | 12x16   | 64  | 40 CFR 52.21(c) & (d)                     |
| 4. SV4 (Cement Silo)       | 12x16   | 64  | 40 CFR 52.21(c) & (d)                     |
| 5. SV5 (Slag Silo)         | 12x16   | 64  | 40 CFR 52.21(c) & (d)                     |
| 6. SV6 (Fly Ash Silo)      | 12x16   | 64  | 40 CFR 52.21(c) & (d)                     |
| 7. SV7 (Slag Silo)         | 12x16   | 64  | 40 CFR 52.21(c) & (d)                     |
| 8. SV8 (Fly Ash Silo)      | 12x16   | 64  | 40 CFR 52.21(c) & (d)                     |

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

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

## **APPENDIX A**

### **Nuisance Minimization Plan for Fugitive Dust**

#### **1.0 General Provisions**

##### **1.1 Introduction**

Atlas Concrete LLC is a ReadyMix Concrete Manufacturing Batch Plant facility located at 14219 C-Drive North, Marshall, Michigan. The plant has an estimated production capacity of 310,000 cy/yr. The purpose of this document is to provide a plan to assist in the control of significant dust/fugitive emissions from the plant operations.

##### **1.1.2 Process Overview**

Concrete from this facility is composed of cement, cement supplement (fly ash and ash), fine aggregate (sand), and coarse aggregates (gravel and stone), which are delivered to the facility by truck. The cement and cement supplement is directly transferred to silos via pneumatic transfer. The aggregate materials are transferred to elevated storage bins via a conveyor belt system. The material is transferred from the stockpiles by a front-end loader.

Once the material is transferred to elevated bins, the constituents are fed by gravity to weigh hoppers, which combine the proper amounts of each material based on client specifications. The constituents are then transferred via conveyors into cement trucks and transported to various job sites.

##### **1.1.3 Emissions**

Particulate matter (PM), consisting primarily of cement and cement supplements dust but also including some aggregate and sand dust emissions is the primary concern (associated with PM emissions). With the exception of the transfer of cement material to silos, the remaining emission sources are primarily fugitive dust. "Fugitive sources include the transfer of sand and aggregate, truck loading, mixer loading, vehicle traffic, and wind erosion from sand and aggregate stockpiles. The amount of fugitive dust emissions generated during the transfer of an aggregate depends primarily on the surface moisture content of these materials." (Reference US EPA Emission Factor Documentation, 2006)

##### **1.2 Project Personnel**

Atlas Concrete LLC will be responsible for the implementation of the Fugitive Dust Plan.

The provisions and procedures of this plan are subject to adjustment by written notification from the AQD if, following an inspection, the AQD finds the fugitive dust requirements and/or permitted emission limits are not being met.

##### **1.2.1 Dust Control Manager**

The Dust Control Manager is ultimately responsible for the fugitive dust plan. The Dust Control Manager responsibilities include:

1. Ensuring and enforcing compliance with the fugitive dust plan.
2. Maintain record keeping from daily logs, trainings, etc.
3. Coordinate with field team members to ensure an understanding of the fugitive dust plan and obtain a signature from field team recognizing their understanding of the plan.
4. Ensuring the requirements of the fugitive dust plan are being met by team members.

The Dust Control Manager has overall responsibility for the development, implementation, compliance, and enforcement of the fugitive dust plan.

### **1.2.2 Field Team Members**

Field team members and subcontractors are given responsibilities from the Dust Control Manager for all onsite activities. The responsibilities for the field team members include:

1. Compliance with all aspects of the fugitive dust plan
2. Following instructions given by the Dust Control Manager
3. Notify the Dust Control Manager or immediate supervision of the site of any significant fugitive particulate emissions.

## **2.0 Fugitive Dust Control Measures**

### **2.1 Dust Control Measures**

The primary point source for PM emissions is associated with the pneumatic transfer of cement and cement supplement into silos. The silos are to be equipped with dust collectors.

#### **2.1.1 Wind Events**

All site transfer activities must cease during periods of sustained wind events. These wind events are defined as wind exceeding 20 miles per hour for a duration lasting more than 3 minutes in a 60 minute period. A sustained wind event will be measured by monitoring the closest National Weather Service Monitoring Station. In the event that operations are shut down as a control method during a high wind event, watering of the area will continue as needed to minimize fugitive dust from crossing the property line. Wind speeds will continue to be monitored and site activities will resume when wind speeds fall below the threshold and when visible emissions can be adequately controlled.

#### **2.1.2 Daily Inspection**

A daily log sheet will be filled out each day the plant is in operation. This daily log record shall be kept on file and be made available to the AQD upon request. The following will be addressed daily:

1. Checking the filter regulator unit that supplies air to the dust collectors to ensure automatic draining.
2. Checking the air pressure that supplies the dust collector is maintained at approximately 90 PSI.

If a deficiency is noted, direct silo loading will pause until the deficiency can be corrected. The deficiency will be corrected in compliance with the manufacturer's instruction.

#### **2.1.3 Daily Use and Maintenance**

Observe the top of each silo during the loading and unloading process. If visible emissions are observed, the process will be pause until the deficiency can be corrected. This correction typically involves inspecting the dust collectors filter cartridge for weathering, and or inspecting the gaskets.

If a deficiency is noted, direct silo loading will pause until the deficiency can be corrected. The deficiency will be corrected in compliance with the manufacturer's instruction.

#### **2.1.4 Periodic Weekly Maintenance**

The following maintenance will occur on a weekly basis:

1. Draining of the air reservoir located on the dust collectors.
2. Inspection of the dust collectors clean air exhaust system for fugitive dust.
3. Ensure the cleaning cycle of the dust collector continues to clean after tankers have finished unloading.

If a deficiency is noted, direct silo loading will pause until the deficiency can be corrected. The deficiency will be corrected in compliance with the manufacturer's instruction.

### **2.1.5 Periodic Monthly Maintenance**

The following maintenance will occur on a monthly basis:

1. Checking the silo high light protection to ensure functionality.
2. Check the silo pressure relieve valve to ensure functionality.
3. Inspection of the clean air compartment for signs of fugitive dust. Significant fugitive emissions in the clean air compartment may be an indication that the cartridges are not functioning properly, or that the cartridges are not properly aligned.

If a deficiency is noted, direct silo loading will pause until the deficiency can be corrected. The deficiency will be corrected in compliance with the manufacturer's instruction.

### **2.2 Fugitive Emissions**

Visible fugitive emissions may occur from aggregate deliveries, transporting of materials, and residual particulates deposited onto the parking lot and nearby streets. The correct course of action outlined below will be taken to mitigate visible emissions from that process.

#### **2.2.1 Aggregate Deliveries**

Aggregate will be delivered to the facility wet. If fugitive visible emissions are observed during unloading of aggregates, the material will be sprayed during the remainder of the unloading process.

#### **2.2.2 Storage Areas**

The stockpiles will be covered to limit wind erosion and cover materials from direct sunlight. The stockpile moisture will be measured at a minimum of once per day by examination of material. The stockpiles will remain wet with either a sprinkler system or hose.

A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.

#### **2.2.3 Daily Inspection and Maintenance**

A daily log sheet will be completed each day the plant is in operation. This daily log record shall be kept on file and be made available to the AQD upon request. The following will be addressed daily:

1. Ensure the fan is functioning before plant operation begins for the day.
2. Observing the fan outlet for any visible emissions before plant operation begins for the day.
3. Ensure there is no noise coming from the fan.
4. Emptying of the hopper.
5. Tilt mixer slide shall be inspected and cleaned of any remaining material and dust.
6. A moisture check of the air regulators moisture trap.
7. Check drain valve of air compressor to ensure no moisture is present.
8. A trained staff member must do routine inspection on the vent for the fan outlet for the presence of visible emissions throughout the day. The inspection will include the filter bag connections, weathering of the bags, and or inspection of the gaskets.

If a deficiency is noted, direct silo loading will pause until the deficiency can be corrected. The deficiency will be corrected in compliance with the manufacturer's instruction.

#### **2.2.4 Periodic Weekly Maintenance**

The following processes will occur on a weekly basis:

1. Inspection of the blower to ensure proper tension and determine if there is excessive wear.
2. Inspection of solenoids to ensure proper pulsing.

3. Open top of unit to ensure no fugitive emissions are escaping from the filtration media.
4. Opening the hopper door to ensure material being collected is being properly discharged.
5. Ensure the air pressure of the bags are in the range of 90 to 100 PSI.
6. Pressure drops across the bags must be checked utilizing a magnetic or photophilic gauge to indicate condition of the bags. Typical operating pressure across bags is 3" to 8" of static pressure. A higher reading indicates excessive buildup within the bag, or the filter media is nearing end of service life.
7. If the shroud has a mechanical lifting device, such as lifting frame, tops should be checked for cleanliness and to ensure there is no air leaking from the cylinders. All cables, clamps, and pulleys must be carefully inspected.
8. Proper lubrication of the blower.
9. Ensure water from injection hose is not leaking or spraying onto underside of shroud.

### **2.2.5 Periodic Monthly Maintenance**

The following maintenance will occur on a monthly basis under the assumption of an operating schedule of 10 hours per day. The processes include:

1. Lubrication of fan bearings.
2. Ensuring belts have proper tensions and water, along with belt alignment. Adjust or replace as necessary.
3. Ensure guard on fan is installed prior to operation.
4. Inspect filter media for weathering and ensure the filtration media is properly sealed.

### **2.2.6 Miscellaneous Maintenance**

The following maintenance will occur on an as needed basis:

1. Tilt mixer slide shall be inspected and cleaned of any heavy deposits of cement and or dust daily.
2. Inspect the integrity of the air flow system. This includes the hood, ductwork, baghouse, the hopper and hopper discharge.
3. Inspect fasteners to ensure they are properly secured.

If a deficiency is noted, loading will pause until the deficiency can be corrected. The deficiency will be corrected in compliance with the manufacturer's instruction.

### **2.2.7 Yearly Maintenance**

The following maintenance will occur on a yearly basis:

1. Duct work will be inspected once a year to ensure there is no buildup of dust.

## **2.3 Residual Fugitive Dust**

Residual Fugitive Dust occurs from loading and unloading of materials, which is anticipated to settle in adjoining streets, main parking lot of the site, and general areas of operation. The correct course of action outlined below will be taken to mitigate residual fugitive dust from these areas.

### **2.3.1 Onsite Parking Lot**

The following processes will occur on an as needed basis determined by the Dust Control Manager:

1. Residual dust within parking lots will be swept either manually or the use of a mechanical sweeper.
2. The parking lot will be periodically wetted to obtain no visible emissions.

### **2.3.2 Streets Utilized by Truck Traffic**

A mechanical sweeper will be utilized on an as needed basis to sweep portions of streets that directly border the facility. The sweeper operator will maintain a log. This log will include duration of sweeping, as well as the streets swept. This daily log record shall be kept on file and be made available to the AQD upon request.

The following processes will occur on an as needed basis:

1. Fugitive dust on site roadways and plant yard will be controlled by the application of water, calcium chloride, or other acceptable control compounds approved by the AQD. These dust suppressants will be applied as needed to maintain 5 percent opacity.
2. During freezing weather conditions, calcium chloride will be applied.
3. All paved roadways and plant yards will be swept by a wet sweeper between applications of fugitive dust suppressants.
4. Any material spillage will be cleaned up immediately.
5. Access of unpaved areas by truck traffic will be monitored and are protected by the use of barricades, fenced areas, and closed gates.

A record of all applications of fugitive dust suppressants shall be kept on file for a period of five years.

### **2.3.3 Truck Traffic**

On site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing, or escaping. This will be accomplished by trucks not being loaded greater than 6 inches from the top of any sideboard, side panel, or tailgate, otherwise the truck will be tarped. To reduce fugitive emissions on and off site, each concrete truck will be washed after loading is complete.

## **3.0 Training**

### **3.1 Training Overview**

An initial briefing for all existing and new employees will be provided regarding the specifics outlined in this fugitive dust plan. The briefing will include recordkeeping procedures, best practices during operation, and be made aware of who to report excess visible emissions to during operation.

If the employee is included in daily inspections outlined above, training will be provided that includes the operation, inspection, and maintenance of applicable equipment.

### **3.2 Maintenance Personnel**

Manufacturers recommended training for specific equipment shall be provided to employees designated to maintenance operations of fugitive dust control equipment such as dust collectors and cartridges. Additional training for equipment specific maintenance will be provided on an as needed basis.