

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

August 4, 2023

PERMIT TO INSTALL
98-23

ISSUED TO
Titan Concrete, LLC

LOCATED AT
6497 East Ten Mile Road
Centerline, Michigan 48015

IN THE COUNTY OF
Macomb

STATE REGISTRATION NUMBER
P1297

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: May 31, 2023	
DATE PERMIT TO INSTALL APPROVED: August 4, 2023	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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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 ₂ 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 ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	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 ₂	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 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 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)**

FGFACILITY CONDITIONS

DESCRIPTION:

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

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 PARAMETER(S)

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))

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ 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

Titan Concrete LLC is a Ready Mix Concrete Manufacturing Batch Plant facility located at 6910 West 10 Mile Warren, Michigan. The plant has an estimated production capacity of 100,000 cubic yards per year. 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 are 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 for AP-42 Section 13, 2006)

The best practices and operational controls are implemented at the facility to limit fugitive dust emissions from storage piles, lots, paved and unpaved roads, and material handling activities to no greater than 5 percent opacity. Emissions from any other source are limited to 20 percent opacity.

1.2 Project Personnel

Titan Concrete LLC shall 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.

A record of the date when the wind events occurred causing shutdown which will include the duration of shutdown, and any action taken during wind events shall be kept on file for a period of 5 years. These records may be maintained either electronically or by written logbooks and can be made available to the AQD upon request.

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 shall 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 shall 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.

A record of all weekly maintenance shall be kept on file for a period of 5 years. These records may be maintained either electronically or by written logbooks and can be made available to the AQD upon request.

2.1.5 Periodic Monthly Maintenance

The following maintenance shall 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 shall be corrected in compliance with the manufacturer's instruction.

A record of all monthly maintenance shall be kept on file for a period of 5 years. These records may be maintained either electronically or by written logbooks and can be made available to the AQD upon request.

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 shall 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 shall 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 shall 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 shall be corrected in compliance with the manufacturer's instruction.

2.2.4 Periodic Weekly Maintenance

The following processes shall 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.

A record of all weekly maintenance shall be kept on file for a period of 5 years. These records may be maintained either electronically or by written logbooks and can be made available to the AQD upon request.

2.2.5 Periodic Monthly Maintenance

The following maintenance shall 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.

A record of all monthly maintenance shall be kept on file for a period of 5 years. These records may be maintained either electronically or by written logbooks and can be made available to the AQD upon request.

2.2.6 Miscellaneous Maintenance

The following maintenance shall 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.

A record of all miscellaneous maintenance shall be kept on file for a period of 5 years. These records may be maintained either electronically or by written logbooks and can be made available to the AQD upon request.

2.2.7 Yearly Maintenance

The following maintenance shall occur on a yearly basis:

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

A record of all yearly maintenance shall be kept on file for a period of 5 years. These records may be maintained either electronically or by written logbooks and can be made available to the AQD upon request.

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 shall 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 shall 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 shall 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 shall 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 shall 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.