

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

U44150853530861

FACILITY: Homer Concrete Products		SRN / ID: U441508535
LOCATION: 7015 Enterprise Drive, Brown City		DISTRICT: Lansing
CITY: Brown City		COUNTY: LAPEER
CONTACT: Buck Maloney , Plant operator		ACTIVITY DATE: 08/28/2015
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Self-initiated inspection.		
RESOLVED COMPLAINTS:		

On 8/28/2015, the DEQ, AQD conducted a self-initiated inspection, to follow up on a complaint which had initially been investigated on 8/20.

Environmental contact:

Jeremy Homer, Owner; 888-558-3905; homerconcrete@aol.com

Buck Maloney, Plant Operator; 810-346-3571

Facility description:

This facility is a concrete batch plant.

Emission units:

Emission unit description	Exemption rule	Compliance status
Cement silo with enclosure, and baghouse	289(iii)	Compliance
Cement scale with enclosure, and baghouse	289(iii)	Compliance
Truck loadout area, with telescoping chute, and enclosure system/hood	289(ii)	Compliance
Plant yard and roadways	289(vii)	Compliance

Regulatory overview:

A concrete batch plant is typically considered to be a true *minor source*. A *major source* has the potential to emit (PTE) of 100 tons per year (TPY) or more, of one of the criteria pollutants. Criteria pollutants are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds, lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns. A concrete batch plant is typically considered a minor, or *area source*, for Hazardous Air Pollutants (HAPs), because it is not considered to have a PTE of 10 TPY or more for a single HAP, nor to have a PTE of 25 TPY or more for combined HAPs.

Rule 201 of the Michigan Air Pollution Control Rules requires a *permit to install* for any process which may be the source of an air contaminant. This facility does not have a permit to install, but there is an exemption, Rule 289, which allows concrete batch plants which meet certain criteria to be exempt from the need for a permit. This exemption shall be discussed later, in the text of this report.

Fee status:

This facility is not considered subject to air qemission fees, for the following reasons. Because it is not a major source for criteria pollutants, it is not classified as Category I. Additionally, because it is not a major source for Hazardous Air Pollutants (HAPs), and is not subject to federal New Source Performance Standards, it is not classified as Category II. Finally, because it is not subject to federal Maximum Achievable Control Technology standards, it is not classified as Category III. The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System

(MAERS).

Location:

This facility is located at the intersection of M-53 (Van Dyke Road), and Enterprise Drive. This is a rural area north, of Imlay City. Enterprise Drive leads east, into a small industrial park. There is a residence 200 to 300 feet to the west, along M-53. Otherwise, the surroundings are fields and woodlands.

Recent history:

On 8/20/2015, the AQD responded to an 8/12 complaint of dust allegedly observed on 8/8, by visiting the site. Mr. Jeremy Homer, Owner, was not onsite at the time, but Mr. Buck Maloney, Plant Operator, was onsite, and we discussed the recent dust complaint. Mr. Maloney asked if I could return at a later date, when Mr. Homer was available, and I agreed to this.

Arrival:

Today's date and a time of 2:00 PM was agreed upon, in advance. I arrived at 1:59 PM. Weather conditions were sunny, 73 degrees F, and humid, with winds out of the southwest at 5 miles per hour. I saw no visible emissions from the plant, as I approached from M-53. There was water visible on the unpaved plant roadway, from a recent application.

I learned that Mr. Homer was unable to attend today, and I therefore met with Mr. Maloney. I had provided my identification/credentials, a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*, and the Boiler MACT card, per AQD procedures, during my initial visit to the site on 8/20.

Inspection:

Within the enclosed tower of the batch plant is the batching equipment, where materials are weighed. We climbed up a flight of stairs, into the tower itself.

Mr. Maloney showed me the blower pipe which conveys cement from cement delivery trucks, up through the interior of the tower, into the cement storage silo. A large amount of black electrical tape had been used to seal over a perforation in the pipe. Buck explained this was the apparent source of the cement dust that subsequently exited the tower, and was visible to the complainant on 8/8. He told me that this morning, before my arrival, a second perforation appeared in the line, which he showed me had since been wrapped/sealed with black electrical tape. Based on two leaks appearing on this piping in a very short time period, he said they will totally replace this piping during their winter maintenance period. Dust collected from delivering cement into the cement storage silo is captured by a shared baghouse, which serves other parts of the plant as well.

At 2:28 PM, I observed a cement mixing truck get loaded with 6 yards of *shotcrete* in their loading bay. This product was a mix of water, 16,330 lbs of sand, and 4,000 lbs of cement, with no aggregate, Mr. Maloney explained.

The loading bay had two walls, a closed door on the south side, and an open door on the north side, to accommodate the length of the truck. A hood, shown in the first photograph, was lowered from the ceiling, to the top of the truck. Then, three side flaps lowered into place, as seen in the second photo, to enclose the emissions from the loading of the truck. There was a small amount of dust, ranging from 0-10% opacity (density), visible near the ceiling, for 15-20 seconds. intermittently. The dust does not appear to be visible in the third photo, which is of the truck loading process, taken from inside the control room. The dust is routed to the shared dust collector/, which is a fabric filter with a pulse jet cleaning mechanism, I was informed. Mr. Maloney indicated that the captured dust is recycled back into the process. The control system appeared to be working effectively, with no visible emissions from the dust collector itself. The visible emissions I briefly saw would have been well below the maximum 20%

opacity limit, averaged over 6 minutes, specified by Rule 310.

The tower, enclosing the silo, is the in fourth photo. No cement truck was unloading to the silo at this time, and no dust was visible.

The dust collector/baghouse has three ducts leading to it. It appeared to be working properly.

They are doing dust control activities like watering the plant yard and unpaved roadways, Mr. Maloney informed me. They are not yet keeping records of when they do these activities, so I encouraged writing down the date each time they do watering or other dust control on the yard/roadways.

Exemption status:

Rule 289 reads as follows:

Rule 289. The requirement of R 336.1201(1) to obtain a permit to install does not apply to any of the following:

- (a) A cold feed aggregate bin for asphalt and concrete production equipment.
- (b) A liquid asphalt storage tank that is controlled by an appropriately designed and operated vapor condensation and recovery system or an equivalent control system.
- (c) An asphalt concrete storage silo that has all its emissions vented back into the burning zone of the kiln or that has an equivalent control system.
- (d) A concrete batch plant that meets all of the following requirements:
 - (i) The plant shall produce not more than 200,000 cubic yards per year.
 - (ii) The plant shall use either a fabric filter dust collector, a slurry mixer system, a drop chute, a mixer flap gate, or an enclosure for truck loading operations.
 - (iii) All cement handling operations, such as silo loading and cement weighing hoppers, shall either be enclosed by a building or equipped with a fabric filter dust control.
 - (iv) The owner or operator shall keep monthly records of the cubic yards of concrete produced.
 - (v) Before commencing operations, the owner or operator shall notify the appropriate air quality division district supervisor of the location where the concrete batch plant will be operating under this exemption.
 - (vi) The concrete batch plant shall be located not less than 250 feet from any residential or commercial establishment or place of public assembly unless all of the cement handling operations, excluding the cement silo storage and loading operations, are enclosed within at least a 3-sided structure.
 - (vii) The owner or operator shall implement the following fugitive dust plan:
 - (A) The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve.
 - (B) On-site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing, or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within 6 inches of the top of any sideboard, side panel or tailgate. Otherwise, the truck shall be tarped.
 - (C) All of the following provisions apply for site roadways and the plant yard:
 - (1) The dust on the site roadways and the plant yard shall be controlled by applications of water, calcium chloride, or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet an opacity limit of 5%.
 - (2) All paved roadways and plant yards shall be swept as needed between applications.
 - (3) Any material spillage on roads shall be cleaned up immediately.
 - (4) A record of all applications of dust suppressants and roadway and plant yard sweepings shall be kept for the most recent 5-year period and be made available to the department upon request.
 - (D) All of the following provisions apply for storage piles:
 - (1) Stockpiling of all nonmetallic minerals shall be performed to minimize drop distance and control potential dust problems.
 - (2) Stockpiles shall be watered on an as needed basis in order to meet an opacity limit of 5%. Equipment to apply water or dust suppressant shall be available at the site or on call for use at the site within a given operating day.
 - (3) A record of all watering shall be kept on file for the most recent 5-year period and be made available to the department upon request.
 - (E) The provisions and procedures of this fugitive dust plan are subject to adjustment by written notification from the department if, following an inspection, the department determines the fugitive dust requirements or permitted opacity limits are not being met.

The plant appears to satisfy the Rule 289 exemption criteria.

Rule 289(a) allows for cold feed aggregate bins for concrete production.

Rule 289(d)(i) specifies that the concrete batch plant shall not produce more than 200,000 cubic yards of concrete per year. Mr. Maloney told me that they average 20,000-30,000 cubic yards, in the course of a year.

Rule 289(d)(ii) specifies that the plant shall use either a fabric filter dust collector, a slurry mixer system, a drop chute, a mixer flap gate, or an enclosure for truck loading operations. The plant was using a fabric filter dust collector, an enclosed drop chute, and a building (enclosure) for truck loading operations.

Rule 289(d)(iii) specifies that all cement handling operations, such as cement silo loading and cement weighing operations, shall be either enclosed by a building or equipped with a fabric filter dust control. My understanding is that cement weighing takes place within the enclosure of the batch plant tower, and that it and cement silo loading are both exhausted to the shared dust collector.

Rule 289(d)(iv) specifies that the owner or operator shall keep monthly records of the cubic yards of concrete produced. Mr. Maloney showed me a log book for 2015, showing the cubic yards of concrete produced for each day of operations. These were totaled for each month, as follows:

Month	Cubic yards of concrete produced
January	248.5
February	161
March	260
April	874.5
May	2,142
June	2,489
July	2,813

Rule 289(v) states that before commencing operations, the owner or operator shall notify the appropriate AQD district office of the location. I had not found a record of a notification, but the company may have simply been unaware of the requirement. I do not consider this to be a compliance issue.

Rule 289(vi) requires that the plant shall be located not less than 250 feet away from any residential or commercial establishment or place of public assembly unless all of the cement handling operations, excluding the cement storage silo operations, are enclosed within at least a 3-sided structure. The cement handling operations appear to be enclosed within at least a 3-sided enclosure.

Rule 289(vii) requires the owner or operator to implement a specific fugitive dust plan. The company appeared to me to be following a comparable fugitive dust plan.

The facility appears to be meeting the intent of the criteria for the Rule 289 exemption, and my determination is that it is not required to obtain a permit to install.

Conclusion:

No instances of noncompliance were found, nor any areas of concern. I left the site at 2:59 PM.



Image 1(Photo 1) : Hood with two intake points to collect dust from truck loadout.

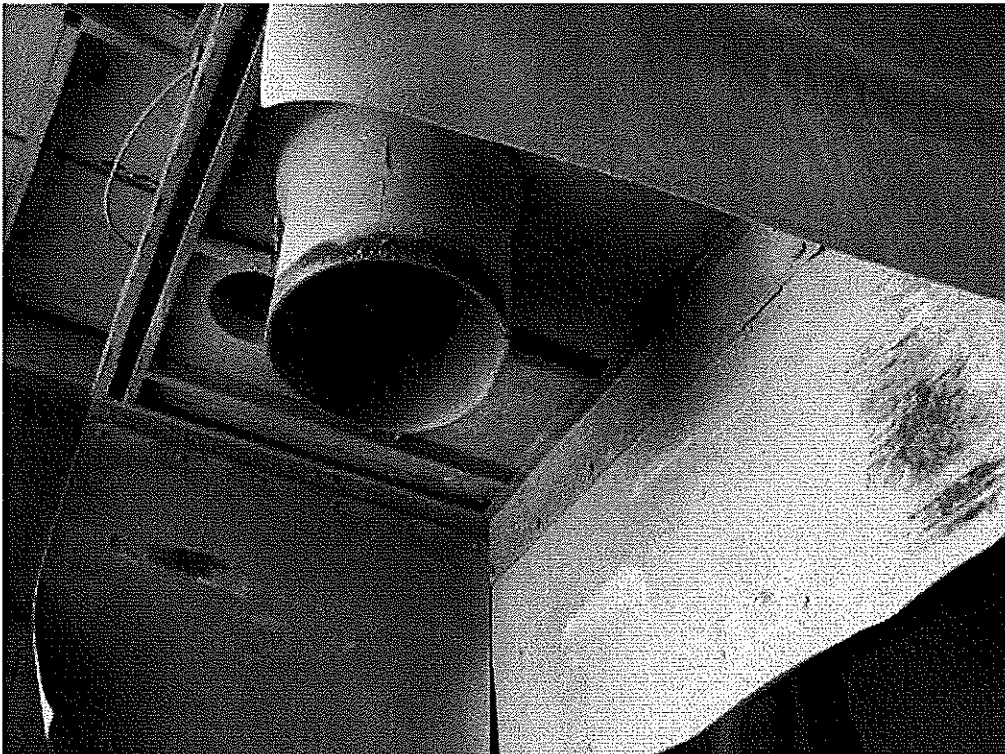


Image 2(Photo 2) : Hood with flaps lowered into place, to provide enclosure for loadout spout.

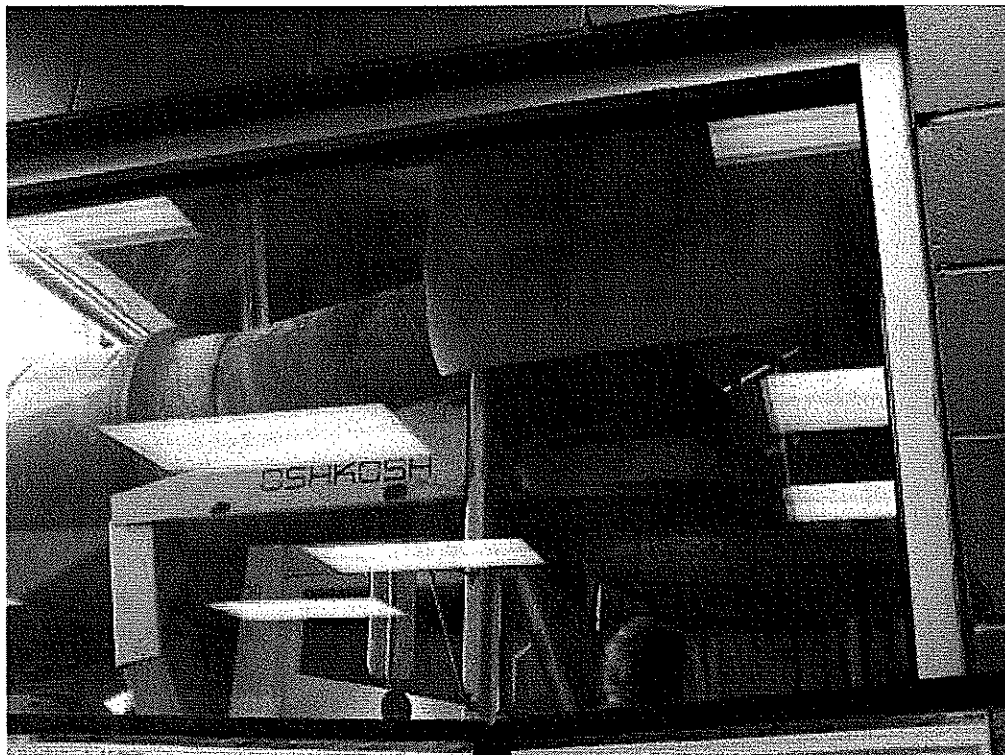


Image 3(Photo 3) : Loadout of cement mixing truck, in process.

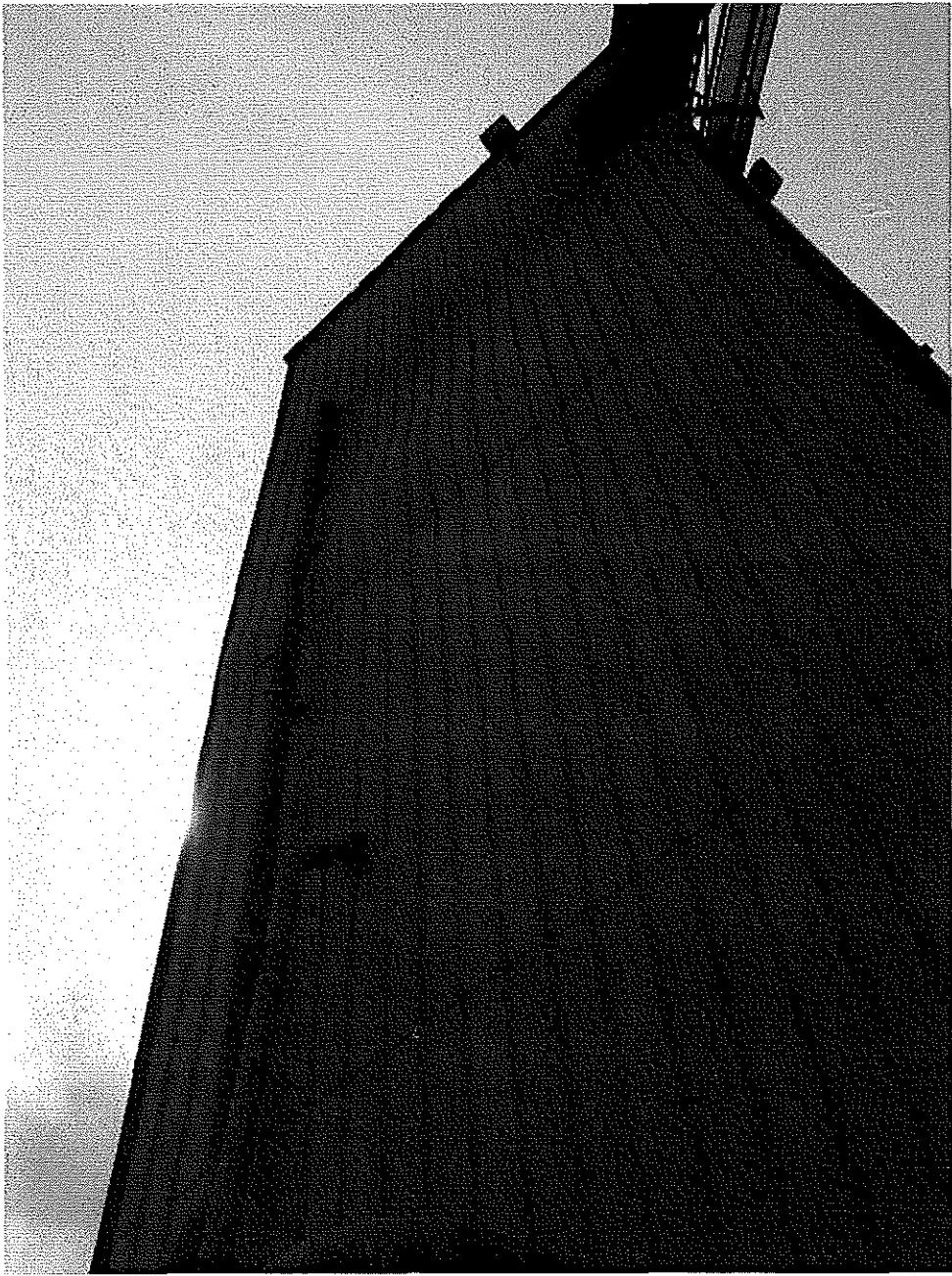


Image 4(Photo 4) : Tower, which encloses cement silo.

NAME *[Handwritten Signature]*

DATE 9/29/2015

SUPERVISOR *D.M.*

