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MANILA

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P118857945

FACILITY: Hercules Concrete, LLC		**SRN / ID:** P1188
LOCATION: 2791 West Jefferson Avenue, DETROIT		**DISTRICT:** Detroit
CITY: DETROIT		**COUNTY:** ~~WASHTENAW~~ WAYNE
CONTACT: Terry Tepfenhart , Area Manager		**ACTIVITY DATE:** 02/05/2021
STAFF: Jonathan Lamb	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: On-site inspection, FY 2021		
RESOLVED COMPLAINTS:		

INSPECTED BY: Jonathan Lamb, EGLE-AQD
PERSONNEL PRESENT: Terry Tepfenhart, Area Manager – Hercules Concrete, LLC; Mark Fletcher, Environmental Compliance Manager – Crown Enterprises, Inc.
CONTACT PHONE NUMBER: 734-301-6376 (Mr. Tepfenhart); 248-533-1506 (Mr. Fletcher)
FACILITY WEBSITE: www.herculesconcrete.com

FACILITY BACKGROUND

Hercules Concrete, LLC operates a portable central mix concrete batch plant located at 2791 West Jefferson Ave., Detroit. The facility is located within a 13.2-acre parcel of land along the Detroit River just north of the Ambassador Bridge. The facility started operations at this location in March 2020. The facility operates approximately 6:00 AM to 3:00 PM, Monday through Friday plus occasional Saturdays. There are around 30 employees working out of this site, including drivers.

COMPLAINT/COMPLIANCE HISTORY:

AQD has not received any complaints relating to this facility and no violations have been issued to the facility.

INSPECTION NARRATIVE/PROCESS DESCRIPTION:

At the start of the inspection, I met with Mr. Terry Tepfenhart, Area Manager for Hercules Concrete, and Mr. Mark Fletcher, Environmental Compliance Manager for Crown Enterprises, Inc., which owns the property. Mr. Tepfenhart and Mr. Fletcher described the operations to me and provided the required records for my review prior to taking me through the walk through of the storage and process areas. We also discussed the air Permit to Install application recently submitted by the facility and future plans for the site. Mr. Tepfenhart said the facility is likely to move to another location at some point, but he was unsure of when such a move may occur. Mr. Fletcher mentioned that Hercules Concrete may look to add additional concrete batch plants in other areas of Wayne County within the next year or so.

This facility operates a single central mix concrete batch plant, which means that the concrete is mixed in a drum on site and loaded into trucks ready for use (rather than mixing within the drums of the trucks themselves). Hercules Concrete produces concrete for MDOT and other general contractors in addition to use for in-house operations. The facility is considered a portable concrete batch plant but is currently operating at a fixed location for an indeterminate timeframe.

The facility uses various raw materials to produce concrete, including aggregates, cement, fly ash, and slag. Aggregates (sand and stone) are delivered in bulk by truck; the stone and gravel are stored in open piles while the sand is stored within three-sided bins. Cement, fly ash, and slag are also delivered in bulk by truck and pneumatically pumped from the trucks into silos for storage. All raw materials are delivered wet; aggregate storage piles are sprayed with water on a regular basis to maintain sufficient moisture content for production and dust control. During busy months, deliveries of raw materials are received almost every day.

To produce concrete, the raw materials are transported to enclosed weigh scales based on customer specifications and conveyed into the mixer. A front-end loader is used to move stone and sand from the storage piles into four outside hoppers, from which enclosed conveyors move the material to enclosed storage bins. Aggregate in the storage bins is then metered onto the weigh scales, wetted, and conveyed to the mixer. Cement from the cement silo is pumped through a tube into a horizontal storage cement silo, metered onto the weigh scale, and then screw conveyed into the mixer. Similarly, fly ash and slag are pumped from the silos through a tube to enclosed storage bins, metered onto the weigh scale, and then screw conveyed to the mixer. Within the mixer, the raw materials are mixed with heated water and chemical additives to produce concrete on a batch basis. Once the mixing is complete, trucks are loaded directly from the mixer with concrete ready for use in projects off site. The mixer is equipped with an external cartridge filter baghouse to control particulate during the mixing and loading process.

There are three vertical silos for storage of cement, fly ash, and slag. The cement silo is 60 tons while the fly ash and slag silos are 50 tons each. There is a fourth 55-ton horizontal silo for the storage of cement. Each silo is controlled with a cartridge dust collector located atop each silo.

The mixer, horizontal cement storage silo, storage bins, scales, truck load-out area, and associated conveyors are all contained within a semi-permanent framed and tarped enclosure. The vertical silos, hoppers, hopper conveyors, and mixer baghouse are located outside the enclosure.

Facility personnel check the site daily for fugitive dust issues, and the mixer baghouse and silo dust collectors are visually checked daily for leaks. Records of these daily inspections and associated maintenance and corrective actions are maintained in a binder and were reviewed on site during the inspection. According to these records, the mixer baghouse had all eight cartridge filters replaced on July 17, 2020, and the silo cartridge filters were replaced on all silos on September 11, 2020.

There is a 10,000-gallon, 2.3 MMBtu diesel-fired hot water heater used to heat the water going into the mixer. This hot water heater is exempt per Rule 282(2)(b)(ii).

There are four 500-gallon horizontal diesel tanks, which are used to fuel vehicles on site. These tanks are exempt per Rule 284(2)(g)(ii).

There are two horizontal propane tanks (1000 gallons and 500 gallons, respectively) used to fuel several torpedo space heaters on site. These tanks are exempt per Rule 284(2)(b).

There is no emergency generator on site.

REGULATORY REVIEW:

Hercules Concrete is currently operating as exempt from air permitting requirements under Rule 289 (2)(d); the company had submitted a Permit to Install air use application to AQD but withdrew the application. The facility is classified under NAICS code 327320: Ready-Mix Concrete; the corresponding SIC code is 3273: Ready-mixed concrete. Due to its operation (major SIC grouping 32) and its location (within the area delineated by AQD Rule 371), the facility is subject to Section 5524 of Act 451 of 1994, which provides for the regulation of fugitive dust sources at subject facilities. Section 5524, paragraphs (4) and (5) requires a subject facility to develop an operating plan for the control of fugitive dust and that operating plan is required to be incorporated into a legal order or approved permit to install.

Based on my inspection, the facility appears to meet the requirements of the Rule 289(2)(d) exemption, as discussed below:

Rule 289(2)(d)(i): Based on production records, the facility processed 113,206 cubic yards of concrete from the time of start up in March 2020 through January 2021, which is below the exemption limit of 200,000 cubic yards per year.

Rule 289(2)(d)(ii): The mixer uses a dust collector, drop chute, and enclosure for truck loading.

Rule 289(2)(d)(iii): Silos are equipped with cartridge dust collectors and the weigh scales are enclosed.

Rule 289(2)(d)(iv): Facility maintains records of concrete produced on a monthly basis. These records were provided to AQD staff during the inspection.

Rule 289(2)(d)(v): Facility notified the district office of the location of the concrete batch plant via an email to the Southeast Michigan District Office on February 7, 2020, which was forwarded to the Detroit Office on February 10, 2020.

Rule 289(2)(d)(vi): The concrete batch plant is located more than 250 feet from any residential or commercial establishment.

Rule 289(2)(d)(vii): A fugitive dust plan is implemented and maintained in accordance with the requirements of this exemption. This includes the following:
- Drop distance at each transfer point is minimized, including the delivery of aggregates, the loading of aggregates into the hoppers, and loading of cement trucks.
- On-site vehicles are loaded in a way to prevent fugitive dust emissions. Cement trucks are loaded under the mixer within an enclosure.
- Facility sprays calcium chloride in the yard as necessary to control fugitive dust and maintains records of these applications. According to records, calcium chloride was applied by Suburban Oil

on September 14, September 28, October 12, and October 26, 2020. The facility sweeps West Jefferson regularly to clean up track out.
- Aggregate is delivered wet and aggregate storage piles are watered as needed to control fugitive dust emissions below 5% opacity.

During my inspection, I did not observe any issues with fugitive dust from the lot, storage piles, or operations. A few inches of snow had fallen overnight so fugitive dust would not have been expected to be a problem from the lot or storage piles; however, I have driven by this facility numerous times since operations began and I have not observed any issues with track out onto West Jefferson during this time nor any visible emissions coming from the storage piles or operations on site. In addition, AQD has not received any complaints regarding fugitive dust relating to operations at this facility since operations started in March 2020.

FINAL COMPLIANCE DETERMINATION:

Based on my inspection, Hercules Concrete, LLC appears to be in substantial compliance with applicable air quality rules and regulations, including operating within the requirements of Rule 289 (2)(d).

NAME _____ DATE 6-10-21 SUPERVISOR JK