

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

U78180916249651

FACILITY: Cargill Feed Mill		SRN / ID: P1073
LOCATION: 1510 Hathaway Drive, OWOSSO		DISTRICT: Lansing
CITY: OWOSSO		COUNTY: SHIAWASSEE
CONTACT: Ryan Osantoski , Plant Manager		ACTIVITY DATE: 06/06/2019
STAFF: Julie Brunner	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Compliance inspection of a new feed mill		
RESOLVED COMPLAINTS:		

On June 6, 2019, I conducted an unannounced, scheduled inspection of Cargill Feed Mill located at 1510 Hathaway Drive in Owosso. This is a new unregistered facility.

Contacts:

Mr. Ryan Osantoski, Plant Manager, Cargill Feed Mill, 989-472-8038, ryan_osantoski@cargill.com

Facility Description:

Cargill Feed Mill (CFM) is an animal nutrition business providing complete feed, premixes, base mixes, concentrates or additives for beef, swine, fish, dairy, and poultry. The 75,000 square foot manufacturing plant was expected to be operational by December of 2017, but started operating in March of 2018. Construction took longer than anticipated. CFM produces complete feed for dairy cattle. The facility does not meet the definition of a grain elevator and is not subject to 40 CFR 60, Subpart DD – Standards of Performance for Grain Elevators.

CFM is located off of M-21 just northwest of downtown Owosso. The facility has a public park located to the west, and residential and retirement living to the north and east. There are commercial establishments mixed into the east and south.

Commencement of Operations: March 2018

Facility Capacity: 25 tons/hr, maximum of 375 ton/day and last fiscal year produced 80,000 tons of feed

Staff #: 13 (9 production staff) Shifts/Day: 2 (6:00 am to 10:30 pm) Days of Operation/Week: 5

Process Boilers? No

There are natural gas-fired space heaters in the shop, office and control room which are exempt per Rule 282(2)(b)(i).

Emergency Generators? No

Cold Cleaners? No

Inspection:

Arrived: 1:20 pm

Departed: 3:56 pm

Weather: 65°F, wind ESE 5 mph, UV Index 2

No visible emissions were observed from any of the facility exhaust vents or doors upon arrival. No odors were identified surrounding the facility.

A pre-inspection meeting was conducted with Mr. Ryan Osantoski (Plant Manager) and Garrett (Production Supervisor). I gave a brief overview of the inspection process which was the purpose of my visit, and the facility operations were discussed.

The facility includes the following storage equipment:

Three (3) – Bins outside in the front of the building

- One (1) 485 ton bin for corn
- Two (2) 400 ton bins for soy hauls
- Three (3) 100 ton bins for corn gluten

Three (3) - Liquid Storage Tanks on the north end of the building (exempt per Rule 284(2)(i))

- One (1) 471 lb tank for feed additive, methionine hydroxy analogue (CAS No. 583-91-5)
- One (1) 52 ton tank for feed additive, animal fat
- One (1) 52 ton tank for feed additive, molasses

Inside Bays and Bins

- Twenty-four (24) 100 ton large ingredient bays
- Thirty (30) 500 lb micro bins for mineral additives
- Eight (8) super sack stations of raw ingredients

All mixing of materials to make feed is done inside the building. Front-end loaders and conveyors move materials for mixing to a scale for weighting which feeds a 10-ton blender. A hammermill grinding system is also used. The hammermill processes shell corn and pellets. It is located in a smaller room across from the blender. Inside the building where the materials are mixed was very hazy with particulate.

Materials used in the process are received via truck and rail, and product is shipped out in trucks. Receiving and loadout is done in covered bays.

The following is the list of equipment that has cartridge filter dust collectors:

Three (3) – legs for receiving loadout and storage

- R05C Receiving, 750 cfm Donaldson Torit, 2-cartridge filter unit, internal exhaust vent
- L01C Loadout, 750 cfm Donaldson Torit, 2-cartridge filter unit, internal exhaust vent
- S01C Storage, 750 cfm Donaldson Torit, 2-cartridge filter unit, internal exhaust vent

Two (2) - Receiving pits in covered bay

- R02C Rail receiving pit, 2,900 cfm Donaldson Torit, 8-cartridge filter unit, internal exhaust vent
- R03C Truck receiving pit, 2,900 cfm Donaldson Torit, 8-cartridge filter unit, internal exhaust vent

One (1) – Hammermill

- G05A Hammermill, 3,100 cfm Donaldson Torit, 8-cartridge filter unit, internal exhaust vent

One (1) – Scale

- M16C Scale hood, 16,400 cfm Donaldson Torit, vertical exhaust vent

New Dust Collector for receiving

- No ID Number yet, 1,450 cfm Donaldson Torit-Vortex, internal exhaust vent

The cartridge filters in the dust collectors are rated at 0.2 to 0.3 micron and all dust collectors have pressure drop gauges for performance indicators. The preventative maintenance system is electronic but still under development. The frequency of filter changes in the dust collectors is quarterly to monthly per manufacturer's recommendations.

Total volume of air that is processed by the dust collectors is 29,000 cfm. The performance of the dust collectors is expected to be no higher than the Rule 331 requirements for particulate matter (PM) emissions of 0.10 pounds per 1,000 pounds of exhaust gases or less. As a conservative estimate, the potential to emit (PTE) for fine particulate (<0.3 microns) emissions from the dust collectors is estimated to be less than 0.01 pounds per 1,000 pounds based on filter rating. The PTE is as follows:

$$(0.01 \text{ lb} / 1,000 \text{ lb}) \times (0.075 \text{ lb} / \text{ft}^3) \times (29,000 \text{ ft}^3 / \text{min}) \times (60 \text{ min} / \text{hr}) = 1.3 \text{ lb/hr}$$

$$\text{Maximum PTE for fine particulate} = (1.3 \text{ lb} / 1 \text{ hr}) \times (8760 \text{ hr} / 1 \text{ yr}) \times (1 \text{ ton} / 2000 \text{ lb}) = 5.7 \text{ tpy}$$

The PTE of fine particulate is estimated by AQD staff to be below the significant level of 10 tons per year (tpy) for fine particulate (PM_{2.5}) for the facility.

Since the new facility is not estimated to have emissions of a regulated pollutant that are great than significant (Rule 278), processes appear to be exempt per Rule 285(2)(dd) and other exemptions identified above.

Rule 285(2)(dd) - Equipment for handling, conveying, cleaning, milling, mixing, cooking, drying, coating, and packaging grain-based food products and ingredients which meet any of the following:

(i) Equipment is used on a nonproduction basis.

(ii) Equipment has emissions that are released only into the general in-plant environment.

(iii) Equipment has externally vented emissions controlled by baghouse, cyclone, rotoclone, or scrubber which is installed, maintained, and operated in accordance with the manufacturer's specifications or the owner or operator shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for

minimizing emissions. The air cleaning device shall be equipped with a device to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate.

Summary:

Cargill Feed Mill appeared to be a minor source of any regulated air pollutants with all exempt equipment, and in compliance with all applicable rules and regulations.

NAME Julie L. Bruner

DATE 8/6/19

SUPERVISOR J.R. [Signature]

