

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

N397550234

<b>FACILITY:</b> MICHIGAN AGRICULTURAL COMMODITIES INC-CAROLINE ST		<b>SRN / ID:</b> N3975
<b>LOCATION:</b> 306 N CAROLINE, MIDDLETON		<b>DISTRICT:</b> Lansing
<b>CITY:</b> MIDDLETON		<b>COUNTY:</b> GRATIOT
<b>CONTACT:</b> John Ezinga , Branch Manager		<b>ACTIVITY DATE:</b> 08/08/2019
<b>STAFF:</b> Michelle Luplow	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> Scheduled, unannounced inspection to determine compliance with NSPS Subpart DD		
<b>RESOLVED COMPLAINTS:</b>		

Inspected by: Michelle Luplow  
 Personnel Present: Chris Gable, Operations Supervisor (cgable@michag.com)  
 Personnel Not Present: John Ezinga, Branch Manager (jezinga@michag.com)

**Purpose:**

The purpose of this inspection was to conduct a scheduled, unannounced compliance inspection to determine compliance with the NSPS Subpart DD for Grain Elevators. Particular attention was paid to whether any “affected facilities” (as defined in 40 CFR 60 Subpart DD) were installed, modified, or reconstructed, after 2007 (the year in which Michigan Agricultural Commodities became a grain terminal elevator).

**Facility Background/Regulatory Overview:**

Michigan Agricultural Commodities (MAC) is a grain terminal elevator which receives and ships out grain via truck and rail. A grain terminal elevator is any elevator that meets or exceeds 2.5 million bushels of permanent storage capacity (according to 60.301(c)). Permanent storage capacity is currently at 5,500,000 bushels according to John Ezinga, Branch Manager.

MAC became a grain terminal elevator in 2007, thus any installations, modifications or reconstructions of any of the following facilities after 2007 would render the facilities “affected facilities” under the NSPS: each truck loading and unloading station; each railcar loading and unloading station; each grain dryer; and all grain handling operations which includes bucket elevators/legs, scale hoppers, surge bins, turn heads, scalpers, cleaners trippers and headhouses.

During the 2012 inspection it was determined that there were no NSPS Subpart DD affected facilities at that time.

MAC’s grain commodities include corn, soybeans, oats, and wheat.

There is no permitted equipment installed at this site. This facility does not house anhydrous ammonia. MAC Middleton was last inspected in November 2012.

**Inspection:**

At approximately 8:00 a.m. on August 8, 2019 I arrived at MAC Middleton and met with Chris Gable, Operations Supervisor. John Ezinga was not in the office, but he is the first to contact for future inspections.

I explained to C. Gable that I was there to conduct an inspection to determine compliance with the NSPS Subpart DD, which meant recording all equipment onsite and detailing their approximate installation dates. I provided C. Gable with a June 2019 Permit to Install exemptions handbook and pointed out the exemptions that applied to grain elevators.

During the inspection, there were no operations taking place, and therefore I saw no signs of opacity because the equipment was not operating. C. Gable explained that the wheat and oats harvest just got over 3 weeks prior (July) to the inspection and the next harvest (soybeans) won’t be until the end of September/early October.

**Table 1.** MAC equipment list\*\*

Equipment type	Equipment Description	Control Device	NSPS Subpart DD “affected facility?”	If NSPS, Install date:	Exemption/ Permit
GSI Column Grain Dryer	GSI column grain dryer located in Plant 3	Column plate perforations less than 0.094 inches	No	NA	Rule 285(2)(p)

		diameter (0.0625" per John Ezinga)			
<b>1 Zimmerman Column Grain Dryer</b>	Zimmerman GSI 4700 grain dryer located in Plant 4  5,000 bushel capacity	Column plate perforations less than 2.44 mm diameter (0.0625" per John Ezinga)	<b>Yes</b>  <i>See discussion within this report</i>	October 10, 2014	Rule 285(2)(p)
1 GSI Column Grain Dryer	5,000 bushel capacity, located in Plant 4	Column plate perforations less than 2.44 mm diameter (0.0625" per John Ezinga)	No	NA	Rule 285(2)(p)
2 Unenclosed Truck receiving (unloading) pits	Located in Plant 3 alley.  Pits are not enclosed (feed directly into ground without a building to house unloading operations)	None	No	NA	Rule 285(2)(p)
Enclosed Truck Receiving pit (Plant 3)	Located in Plant 3  Enclosed with 2 walls and 2 bay doors capable of closing	None	No	NA	Rule 285(2)(p)
<b>Enclosed Truck Receiving pit (Plant 4)</b>	Located in Plant 4  Enclosed with 2 walls and 2 bay doors capable of closing  Was modified to enlarge the pit in October 2014	Cyclone dust collector with associated baghouse	<b>Yes</b>  <i>See discussion within this report</i>	October 10, 2014	Rule 285(2)(p)
2 Rail loadout spouts	Located along south side of plant	None	No	NA	Rule 285(2)(p)
<b>1 Rail receiving pit</b>	Not enclosed.  Drag conveyor installed in 2015 (replacing belt conveyor) and has choke feed which prevents grain from free-falling into the pit (minimizes dust).	None	<b>No</b>  <i>See discussion within this report</i>	NA	Rule 285(2)(p)
<b>Leg</b>	A new wet grain leg to replace the existing wet leg that had worn out	Enclosed	<b>Yes</b>  <i>See discussion within this report</i>	October 10, 2014	Rule 285(2)(p)
2 Truck Loadouts (Plant 4)	Truck loadout (load trucks) via spouts	None	No	NA	Rule 285(2)(p)
1 Truck Loadout (Plant 3)	Truck loadout (load trucks) via spouts	None	No	NA	Rule 285(2)(p)
Four 875,000-bu silos	Grain storage	None	No	NA	Rule 285(2)(p)
Two 225,000-bu silos	Grain storage	None	No	NA	Rule 285(2)(p)
Three 100,000-bu silos  Two 675,000-bu silos	Grain storage in Plant 3	None	No	NA	Rule 285(2)(p)
One 5,000-bushel alley hopper	Used for truck loadout in Plant 3	None	No	NA	Rule 285(2)(p)

Two 9,000-bu and two 12,000-bu hoppers	Used for temporary wet storage (storage for grain prior to entering dryer)	None	No	NA	Rule 285(2)(p)
Three 2,000-bu silos	Used for temporary storage for truck loadout	None	No	NA	Rule 285(2)(p)
Three 212,000-bu concrete pads	All concrete pads filled with grain in fall (gets covered), then pushed back to grain bins or direct shipping in the spring  Concrete pads not being used during inspection  Considered non-permanent storage by NSPS Subpart DD	None	No	NA	Rule 285(2)(p)
One 420,000-bu concrete pad	Non-permanent storage per NSPS Subpart DD.	None	No	NA	Rule 285(2)(p)
1,000,000-gal nitrogen storage tank	Per SDS (attached) tank contains 39% ammonium nitrate (inorganic salt), 30% water, 30% urea  There are no storage container size restrictions for these types of chemical compounds	None	No	NA	Rule 284(2)(h)
Other fertilizer storage	Stored in "chemical shed" in containers a maximum of 6,000 gallons and includes insecticides, herbicides, fungicides and nitrogen/potassium, phosphorus fertilizers.  Consists of inorganic salts and bases	None	No	NA	Rule 284(2)(h)
Parts Washer	Located in maintenance shop.  <i>See discussion within this report</i>	NA	NA	NA	Rule 281(2)(h)

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NSPS Subpart DD Discussion

*Rail Receiving Pit*

MAC installed a new drag conveyor on the rail receiving pit to replace the old belt conveyor in 2015. With this new style of conveyor the fugitive emissions from unloading the railcar are reduced because of the choke feed, which causes the grain to unload without free-falling. This is not considered a modification under the NSPS because according to the NSPS Subpart A, a modification is defined as "a physical change in or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted." This does not therefore modify the railcar unloading station because there is no increase in the amount of particulate being emitted, but actually causes a reduction in fugitive dust.

Additionally, the installation of the drag conveyor does not designate the conveyor as an "affected facility" because drag conveyors are not considered "grain handling operations" by the definition supplied in the NSPS Subpart DD.

*Grain Dryer, Truck Unloading Pit (Plant 4), and Leg*

On October 10, 2014 the installations of the Zimmerman grain dryer and a wet leg, as well as the expansion of the unloading pit took place. The unloading pit was modified to make the pit deeper and wider in order to handle more grain throughput.

Premodification capacity of the pit was approximately 300 bu while the new pit has a 1000 bu capacity. MAC failed to notify AQD of the installations, as required in the NSPS Subparts A and DD; a notification letter that these were installed was sent by MAC and received by AQD on May 19, 2017, quite some time after the NSPS testing had already occurred.

These 3 units were tested for compliance with NSPS Subpart DD opacity limits:

Grain dryer – 0% opacity

Wet leg (grain handling operation) – 0% opacity

Truck unloading station – 5% opacity

The opacity/Method 9 test report, submitted to AQD on December 8, 2015, showed that the grain dryer and the wet leg met the NSPS opacity limits, while the truck unloading station had 6-minute opacity averages ranging from 5 – 13% opacity, which was in noncompliance with the NSPS opacity limit for truck unloading stations. The AQD, however, did not recognize this pit as an NSPS-subject “affected facility” at the time the test report was received because they had not been notified that any affected facilities had been installed at the Middleton location prior to installation and testing.

The AQD required MAC to retest the unloading because of the failed test in the 2017 operating season, but the MAC personnel responsible for the retest, Josh Spegel, left his position before that time and the test was missed. Working with J. Ezinga, we determined that the unloading pit would continually fail the test unless loading control were placed on the system. A cyclone dust collector was installed to assist in controlling emissions from the unloading pit. On November 14, 2018, the unloading pit was retested by hired consultant, FTCH’s Marley McVey, and after review of test data it was found that the highest 6-minute average was 4.8, in compliance with the NSPS opacity limit of 5%. The remaining test for the cyclone emissions (NSPS limit is 0.023 g/dscm) is planned for testing in October 2019, which should bring MAC into compliance with all NSPS Subpart DD requirements.

#### Other Compliance

The parts washer is exempt per Rule 281(2)(h) because it has a surface area (air/vapor interface) less than 10 ft<sup>2</sup>. These units are required to be closed and during the inspection the lid was closed. I noted that there were no operating instructions for the unit so I provided C. Gable with the DEQ outreach cold cleaner operating instructions stickers for use with this unit in order to ensure compliance.

C. Gable said that the unit is used approximately 3 times per year and have not yet needed to service the unit with additional solvent. I asked him what MAC plans to do with the spent solvent, once it is time to service the unit. He had alluded to the possibility of delivering the spent solvent to an individual who burns recycled used oil (RUO) and allow that individual to burn the spent solvent with their RUO. I informed C. Gable, as well as John Ezinga (via email) that this practice is prohibited by state law. J. Ezinga replied, saying that they have not yet serviced the parts cleaner yet (it does not get much use), but will look into a servicing company when the time comes. Additionally, J. Ezinga admitted that MAC has been sending their used oil to a farmer, not realizing that the RUO must be generated at the site of combustion in order to be allowed by exemption Rule 282(2)(b)(iv). He stated that they will take the used oil to the City of Alma recycling center, located at 800 Washington Street when they need to dispose of used oil in the future.

#### Source Category/MAERS

MAC is required to report to MAERS because they are NSPS-subject.

**Compliance Statement:** MAC appears to be in compliance with the NSPS Subpart DD and exemption rules at this time.

NAME Miriam Lopez DATE 9/25/19 SUPERVISOR B.M.