INGHAM B8863 M.

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

B886351245

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| **FACILITY:** ADM Grain Company - Webberville | | **SRN / ID:** B8863 |
| **LOCATION:** 2700 N. STOCKBRIDGE RD, WEBBERVILLE | | **DISTRICT:** Lansing |
| **CITY:** WEBBERVILLE | | **COUNTY:** INGHAM |
| **CONTACT:** Beth York , Area Environmental Manager | | **ACTIVITY DATE:** 11/05/2019 |
| **STAFF:** Michelle Luplow | **COMPLIANCE STATUS:** Compliance | **SOURCE CLASS:** MINOR |
| **SUBJECT:** Scheduled, unannounced inspection to determine compliance with PTI's 614-81, 766-83, and the NSPS Subpart DD. | | |
| **RESOLVED COMPLAINTS:** | | |

Inspected by: Michelle Luplow
Personnel Present: Jake Huber (j.huber@adm.com), Facility Superintendent
Tom Butcher (Thomas.butcher@adm.com), Manager

ADM Environmental Staff:
Beth York (beth.york@adm.com), Area Environmental Manager

**Purpose:**
The inspection entailed determining compliance with ADM Webberville's Permits to Install (PTI) No, 614-81 for various grain handling operations, including a grain dryer, and truck loadout; and PTI 766-83 for the installation of a new baghouse to control grain dust from truck unloading pits and the grain handling legs. Compliance with the NSPS Subpart A and Subpart DD, Standards of Performance for Grain Elevators, was also a priority. Special attention was paid to whether any NSPS Subpart DD "affected facilities" (as defined in 40 CFR 60 Subpart DD) were installed after 1983, at which time ADM had a total permanent storage capacity of 5.1 million bushels, exceeding the 2.5 million bushel threshold, and therefore making ADM a terminal grain elevator, as defined by NSPS Subpart DD.

Additionally, this inspection aimed to determine compliance during the busy season for ADM.

This facility was last inspected in March 2015.

**Facility Background/Regulatory Overview:**
ADM Webberville is an NSPS Subpart DD-subject grain terminal elevator located west of the town of Webberville on Stockbridge Rd./M-52. The elevator is just north of the I-96 interchange. The Andersons' fertilizer and warehouse supply shares the main drive. And the railroad running along the north side of the elevator is shared by both ADM and The Andersons. ADM ships and receives corn, soybeans and wheat via rail and truck. There are no fertilizers stored or created at this site. Jake Huber, Superintendent, said that the month of July is generally their busiest time for the wheat harvest and that late fall is the busiest time of the season for all other grains/commodities. This inspection was conducted

The elevator was built in 1981 and was called Grand River Grain Company. The original facility included the fertilizer and agriculture supply warehouse to the south. For a period of time the elevator was referred to as The Andersons. In 1989 The Andersons gave up the lease on the grain handling portion of the property and ADM Countrymark took over.

Permit to Install (PTI) #614-81 was issued for a grain dryer and grain receiving, cleaning, drying, storage, and handling. In 1983, PTI 766-83 was issued for changes made to the truck unloading station: a baghouse was added for dust control from the truck unloading areas and the grain legs. Because the original installation was not NSPS, and because the change did not satisfy the definition of modification, the truck unloading station was not determined to be NSPS DD subject.

The original elevator design was about 1.27 million bushels of permanent grain storage. The elevator never milled any grains, nor operated soybean oil extraction and therefore cannot be considered a "grain storage elevator". In 1983, buildings were constructed over two outside temporary storage piles. A 1983 permit identified 5.1 million bushels of permanent grain storage; redefining the elevator as a "terminal elevator" and subject to the NSPS Subpart DD. ADM's current total permanent storage capacity is 5.6 million bushels. T. Butcher said that ADM has an additional 7 acres they could build on.

**Inspection:**
At approximately 8:30 a.m. on November 5, 2019 I arrived at ADM and met with Jake Huber, Superintendent and Tom Butcher, Manager. We discussed the two active permits, the benefits of voiding PTI 614-81, and the intricacies of the NSPS Subpart DD and how it applies to ADM.

Table 1 contains a list of all installed equipment that has the potential to be subject to the NSPS Subpart DD, and an evaluation NSPS Subpart DD applicability and testing.

**Table 1.** All equipment with associated installation dates, as provided by Beth York. NSPS DD applicability also is determined here*

| Equipment type | Equipment Description | Control Device | Install Date | NSPS Subpart DD "affected facility? | NSPS Subpart DD Testing Conducted? | Exemption/ Permit |
|---|---|---|---|---|---|---|
| Zimmerman Continuous Flow Grain Dryer Model APT-5000 | "West" Dryer, 5,000 bu/hr, natural gas-fired, located west of the other dryer | Column plate perforation <0.094" | 1981 | No | NA | 614-81 |
| Sukup "East" Tower Dryer | 8,000 bu/hr, natural gas-fired dryer, located to the east of the "west" dryer | Column plate perforation <0.094" | 2011 | Yes | Yes, 12/14/11 | Rule 285(2)(p) |
| 30,000 bu/hr Grain Cleaner | | None | 1981 | No | NA | 614-81 |
| Various Drags for bins, reclaim | See attached spreadsheet for details on number and type of belt/drag | Enclosed | 1981 | No | NA | 614-81 |
| North Flat Fill Belt | 5,000 bu/hr | None | 1981 | No | NA | 614-81 |
| 10 Gravity-fed Truck loadout spouts | Spouts connected to silos | None | 1981 | No | NA | 614-81 |
| 1 Rail Loadout Spout | Located on the north side of the silos where rail unloading is located | None | 1981 | No | NA | 614-81 |
| 1 unenclosed Rail unloading Pit | 50 bu/hr | None | 1981 | No | NA | 614-81 |
| 2 Truck Unloading pits | 1,000 bu/hr; Modified in 1983 w/ permit to incorporate baghouse control | Baghouse & enclosed on 2 sides | 1981 | No | NA | 766-83 |
| 3 East Flat Drags | Each rated at 5,000 bu/hr | Enclosed | 1983 | No | NA | Rule 285(2)(p) |
| Addition of permanent storage capacity | Resulted in an increase of 3.83 million bushels and the point at which ADM became a grain terminal elevator | NA | 1983 | NA | NA | Rule 285(2)(p) |
| Center, West, & East Reclaim | Each reclaim was installed in 1981, but modified in 1997; each increased from 15k bu capacity to 30k bu capacity. | Enclosed | Installed 1981; Modified 1997 | **TBD** | **TBD** | Rule 285(2)(p) |
| Shipping Leg | 30,000 bu/hr | Enclosed | 1997 | Yes | TBD | |

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| | | | | | | Rule 285(2)(p) |
| Upper Shipping Drag | 30,000 bu/hr | Enclosed | 1997 | Yes | TBD | Rule 285(2)(p) |
| West and East Receiving Cleaners | 15,000 bu/hr each | Enclosed | 1997 | Yes | TBD | Rule 285(2)(p) |
| 1st, 2nd and 3rd East Fill Belts | 15,000 bu/hr each; All 3 originally installed in 1981; Upgraded in 2008 and 2011 from open belts to enclosed hi-rollers – no capacity change and therefore not a modification | Enclosed | 1981/upgraded 2008 and 2011 | No | NA | Rule 285(2)(p) |
| West Fill Belt | 15,000 bu/hr; 2011 upgrade did not result in a capacity increase and therefore not a modification | Enclosed | 1981/upgraded 2011 | No | NA | Rule 285(2)(p) |
| Hi-Roller | 20,000 bu/hr | Enclosed | 2011 | Yes | Yes 12/14/11 | Rule 285(2)(p) |
| East Dryer Reclaim Drag | 10,000 bu/hr | Enclosed | 2011 | Yes | **TBD** | Rule 285(2)(p) |
| East Dryer Drag | 20,000 bu/hr | Enclosed | 2011 | Yes | Yes 12/14/11 | Rule 285(2)(p) |
| East Wet Leg | 10,000 bu/hr | Enclosed | 2011 | Yes | Yes 12/14/11 | Rule 285(2)(p) |
| East Dry Leg | 20,000 bu/hr | Enclosed | 2011 | Yes | Yes 12/14/11 | Rule 285(2)(p) |
| Bin A Dry Drag | 8,000 bu/hr | Enclosed | 2011 | Yes | Yes 12/14/11 | Rule 285(2)(p) |
| Hi Roller – Reclaim Conveyor | 30,000 bu/hr | Enclosed | 2011 | Yes | **TBD** | Rule 285(2)(p) |
| Hi Roller – Fill Conveyor | 25,000 bu/hr | Enclosed | 2011 | Yes | **TBD** | Rule 285(2)(p) |
| Tramco Drag | 10,000 bu/hr | Enclosed | 2017 | Yes | **No** | Rule 285(2)(p) |
| West Dryer Wet Leg | 10,000 bu/hr; Originally installed in 1981 at 6,000 bu/hr. Capacity is bottle-necked by the 5,000 bu/hr west dryer this leg services | Enclosed | 2017 | No | NA | Rule 285(2)(p) |
| West Dryer Dry Leg | 10,000 bu/hr; Originally installed in 1981 at 6,000 bu/hr. Capacity is bottle-necked by the 5,000 bu/hr west dryer this leg services | Enclosed | 2017 | No | NA | Rule 285(2)(p) |

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**NSPS Subpart DD Discussion**
Any installations or modifications to any of the facilities referenced in 40 CFR 60.300(a) after 1983 (when ADM became a grain terminal elevator at 5.1 million bushels of total permanent storage capacity) would render the facilities "affected facilities" under the NSPS Subpart DD, and therefore additional standards would apply. 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." The NSPS Subpart DD, however, states that the following modifications at an existing facility would not result in a facility becoming an "affected facility": (1) The addition of gravity loadout spouts to existing grain storage or grain transfer bins; (2) the installation of automatic grain weighing scales; (3) replacement of motor and drive units driving existing grain handling equipment; (4) the installation of permanent storage capacity with no increase in hourly grain handling capacity.

The Center, East and West Reclaim units were installed in 1981, but updated to increase their capacity in 1997. I am waiting on a response from Beth York on what reclaim is considered. It is to be determined based on the type of equipment it is, whether or not it was modified, non-exempt equipment under the NSPS Subpart DD, and thus whether opacity testing will be requirement.

The shipping leg; upper shipping drag; west and east receiving cleaners; east dryer reclaim drag; hi-roller reclaim conveyor, hi-roller fill conveyor, and Tramco Drag are considered "affected facilities" because they were installed after 1983. The Tramco Drag has been identified by Beth York as an affected facility that needs to be Method 9-tested. It is my professional judgment that the remaining affected facilities in this list also need to be Method 9-tested, unless ADM has documentation that this was done. I am currently working with the company to determine whether testing has been conducted and to schedule Method 9 testing for any equipment that was installed post-1983, but not tested.

**PTI 614-81 (Grain dryer and grain handling operations)**
PTI 614-81 covers the grain dryer and all grain handling operations (receiving, cleaning, drying, storing and handling) installed in 1981. ADM plans to request that PTI 614-81 be voided because all grain equipment permitted under this permit can be operated as exempt under Rule 285(2)(p).

The "west" Zimmerman grain dryer is the unit specifically covered under this permit and it was operating during the inspection. I saw no visible emissions from the dryer. The permit limits visible emissions to 5% opacity. Additionally, the column plate perforations on the dryer can be no more than 0.094 inches in diameter. Compliance was verified with this diameter during a past inspection.

While walking through the grain elevator I noted that there were some beeswings on the ground, but the facility was predominantly well-kept and clean. I noted that none of the beeswings appeared to be outside of the property line and therefore believe that best housekeeping practices have been achieved.

ADM is required to dispose of all collected air contaminants, including beeswings, in a manner that minimizes the introduction of the air contaminants to the outer air. T. Butcher said that the beeswings generated at the truck unloading pits are cleaned off the ground a minimum of once at the end of each day; but during this busier time of the year the beeswings are swept up as often as possible because of the increase in beeswing generation from unloading. I witnessed an ADM employee sweeping between each truck unloading activity. T. Butcher said a mop bucket sweeper is used regularly.

T. Butcher said the dry beeswings that are swept up are put back into the grain handling system, while the rotted/wet beeswings are disposed of in the garbage. Both methods appear to minimize the amount of beeswings getting into the air.

ADM is required to load trucks and railcars with the loading spout below the level of the top of the truck or railcar. I did not observe any truck or rail loading during the inspection, but J. Huber and T. Butcher stated that the loadout spouts for the trucks may or may not sit below the level of the top of the truck, depending on how high the trucks are. The rail loadout spout they said does not sit below the level of the top of the railcar. ADM plans to void PTI 614-81 and operate under exemption Rule 285(2)(p); therefore, the spout drop distance requirement will no longer apply.

The permit also requires that the outside grain storage conveyors not have a free fall distance greater than 2 feet. During the inspection I noted that all conveyors are enclosed, except for the conveyor that is located above the railcar loading/unloading area. The conveyors, except for the unenclosed conveyor, were operating during the inspection and I saw no signs of opacity from these pieces of equipment, regardless of drop height, largely due to the conveyors being enclosed. ADM plans to void PTI 614-81 and operate the conveyors under exemption Rule 285(2)(p); therefore, the free fall distance requirements will no longer apply.

Visible emissions from all grain handling and storage equipment, except for the grain dryer, is limited to 20% opacity. I did not see any signs of opacity from any equipment, except for the truck unloading pits. See discussion under PTI 766-83 for details.

**PTI 766-83 (Baghouse to control emissions from truck unloading pits and grain legs)**
This permit was issued for baghouse control on the 2 truck unloading pits (permitted under PTI 614-81), which also controls dust from the grain legs. The permit specifies that visible emissions should not exceed 20% opacity from the truck unloading pits.

During the inspection J. Huber, T. Butcher and I watched several trucks unload in both unloading pits. One or two trucks caused no dust with the grain being unloaded (it was explained to me that the quality of the grain has bearing on how much dust there will be), while the majority of the trucks created dust that escaped the truck unloading area at what appeared to be greater than 20% opacity. See attached photos. I brought this to J. Huber and T. Butcher's attention and explained that although I was not going to conduct an official Method 9 opacity testing on the truck unloading pits that day, based on my experience with Method 9 opacity readings in the past, the opacity appeared to be greater than 20%. I proposed a few options to J. Huber, T. Butcher and Beth York in order to address the opacity issue:

- Discuss and find solutions for the excessive fugitive dust from pits
  - Adjusting baghouse fan speed
  - Installing dampers into the pits to slow down falling grain
- Demonstrate via certified Method 9 readings, that the opacity is under 20%, but only if the Method 9 is conducted during a period of high truck unloading operations, similar to the conditions during the inspection

I have given ADM until November 29th to provide a response with regard to addressing the opacity from the truck unloading pits.

The baghouse is required to be operating properly in order to use the truck unloading pits. Proper operation ensures that there are no visible emissions from the stack of the baghouse. ADM has a stack that exhausts approximately 15-20' from ground level. The dust generated from truck unloading prevented a determination of stack exhaust, as the dust was billowing over the stack exhaust point. J. Huber said that the dust collector pipes are cleaned quarterly and baghouse sock checks are conducted annually. The dust collected in the baghouse is put back into the grain system.

Source Category/MAERS
ADM is required to report to MAERS because they are NSPS-subject.

**Compliance Statement:** ADM appears to be in compliance at this time. I will work with the company to ensure compliance with the NSPS Subpart DD and compliance with the 20% opacity standard for the truck unloading pits.

**Image 1(Truck Unloading #1) :** south truck receiving pit. Dust clouds noted

**Image 2(Truck Unloading #2) :** South dump pit, additional dust from another truck unloading

**Image 3(Truck load-out spout) :** Located on south side of silos. Note minimal beeswings near the silo bases.

**Image 4(Railcar unloading) :** unloading pit located underneath the plywood in the middle of the tracks

NAME Mcellen M Lyon DATE 11/5/19 SUPERVISOR B. M.