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

M391225943

FACILITY: ADM Grain Company		**SRN / ID:** M3912
LOCATION: 16994 S WRIGHT RD, GRAND LEDGE		**DISTRICT:** Lansing
CITY: GRAND LEDGE		**COUNTY:** CLINTON
CONTACT: Chad Dunkel , Superintendent		**ACTIVITY DATE:** 06/26/2014
STAFF: Michelle Luplow	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Scheduled, unannounced compliance inspection.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present: Chad Dunkel, Superintendent (chad.dunkel@adm.com)

Other Relevant Personnel: Ben Henegar, Operations Manager (benjamin.henegar@adm.com); Miranda Gerard, Environmental Specialist (miranda.gerard@adm.com)

Purpose: Conduct an unannounced, scheduled compliance inspection of Archer Daniels Midland (ADM) Grand Ledge grain elevator by determining compliance with the New Source Performance Standards (NSPS) Subpart A and Subpart DD, Standards of Performance for Grain Elevators. Special attention was paid to whether any "affected facilities" (as defined in 40 CFR 60 Subpart DD) were installed, modified, or reconstructed since 2011, when ADM was last inspected.

Facility Background/Regulatory Overview: Archer Daniels Midland is a grain handling operation that receives grain via truck and ships out grain via rail and truck. Commodities include corn, soybeans, and wheat for animal consumption.

ADM is subject to NSPS Subpart DD for Grain Elevators because they are 1) a terminal grain elevator and 2) have constructed, modified, or reconstructed an "affected facility" after becoming a terminal grain elevator. ADM provided me with a spreadsheet containing all equipment, permanent storage, and temporary storage onsite with their associated installation/build dates (see attached). According to this spreadsheet ADM became a terminal grain elevator when they added Bin 10 in 1993-1994; at that time ADM went from 2,429,618 bushels to 2,546,454 bushels of permanent storage capacity. This is contradictory to ADM's notification letter to the AQD dated November 5, 2010 where they state that the 1,000,000 bushel capacity bin installed in 2010 is when they exceeded 2.5 million bushels of permanent storage capacity. With the additional installations of permanent storage capacity between 2010 and 2011 ADM is at a current total permanent storage capacity of 4,261,454 bushels.

Because ADM is subject to NSPS Subpart DD, they are also subject to NSPS Subpart A.

Inspection: This was an unannounced scheduled compliance inspection. At approximately 4:00 p.m. on June 26, 2014 I met with Chad Dunkel, site Superintendent. I explained to C. Dunkel the reason for the inspection and provided him with a DEQ "Environmental Inspections: Rights and Responsibilities" brochure to illustrate a typical inspection procedure. I also provided him with a Permit to Install Exemptions handbook, and indicated which exemptions apply to grain elevators. Ben Henegar said that the busiest months for both loadouts and receiving for ADM Grand Ledge are July, October and November.

Opacity & Stack Testing
C. Dunkel drove me through the site. There have been no new NSPS-subject installations since the last inspection in 2011. There were no trucks unloading during the inspection, nor were there any active load-outs of the grain into railcars or trucks. There were no signs of opacity during the inspection.

C. Dunkel said that calcium chloride is applied to the dirt roadways approximately once per month depending on how much rain there is for that time period. ADM staff said calcium chloride applications usually occur during the 4 months of summer.

On June 12, 2014 around 7:30 p.m. I noticed opacity originating from ADM. Although a Method 9 opacity reading wasn't conducted, the 6-minute average opacity would likely have exceeded the 20% opacity standard specified in Air Pollution Control Rule 301. I called ADM the following day, June 13, 2014 and spoke with Greg Thon, ADM Grand Ledge's Manager, and explained to him that opacity should not exceed 20% over a 6-minute average and that although there have been no complaints associated with ADM, it is strongly recommended that ADM control the dust as much as possible. G. Thon explained that ADM was loading a railcar with corn around the time of the opacity observations. He also explained that this is the first time in quite a while that ADM has used all 3 conveyor belts to load; they usually only use two of the conveyors. The rail load-out spouts ("topping 4 belt," "main reclaim belt" and "topping 3 belt") were installed in 1981 and have not been modified since ADM became a terminal grain elevator; therefore, the NSPS DD requirement to maintain railcar loading at or below 5% opacity does not apply. C. Dunkel said that the loadout spouts are capable of entering the railcars/trucks and that a wind tunnel is usually created where the loadout area is that can pull particulate from the back of the building to the front, where I observed the opacity.

On December 7, 2011 ADM submitted a notification letter to the AQD dated December 1, 2011 stating that opacity testing was to be conducted on 8 pieces of NSPS-subject equipment (conveyors, Pit C receiving pit doors, and the Sukup Dryer) on December 12th – 14th, as well as a stack test on the baghouse associated with receiving Pit C that was installed in October 2011. The

February 2012 test results, provided by Stack Test Group, Inc., showed 0% opacity from each piece of equipment. The NSPS DD requires that "affected facility" truck and railcar unloading must not produce greater than 5% opacity, any "affected facility" grain handling operations must not produce greater than 0% opacity any "affected facility" truck loading station should produce no more than 10% opacity, and any column dryer with perforations greater than 0.094 inches should produce no more than 0% opacity. The results show compliance with NSPS opacity standards.

The NSPS DD also requires that no process emissions exceed 0.01 grains/dscf. ADM tested the exhaust from receiving Pit C's baghouse and the results showed compliance with NSPS DD at 0.0005 grains/dscf. ADM is in compliance with the NSPS DD opacity and stack emissions requirements at this time.

C. Dunkel said that 3 days prior to the inspection ADM received approval to add dust control to the 2 older receiving pits (Pit #1 and Pit #2). These 2 pits are NSPS-subject because they were installed in 1999-2001 (ADM became a terminal grain elevator in 1993-1994). If the add-on controls are installed ADM may need to conduct stack tests to show that the emissions from the control device are less than 0.01 grains/dscf, as required in the NSPS DD. Visible emission readings should accompany the stack test.

Receiving Pit C, the newest pit, can be enclosed on all 4 sides, but C. Dunkel said that when trucks are unloading, the 2 doors on the pit are opened, leaving a 2-sided structure for unloading. The other 2 receiving pits are combined into one structure that is 2-sided for unloading.

Grain Dryers
There are 2 column grain dryers located onsite: a Zimmerman AP 5000 and a Sukup 4700 (the aforementioned dryer tested in December 2011). Brian Culham, during his 2011 inspection, verified that the perforations in the plates were 0.094" and the dryers are both therefore exempt from a permit to install per Rule 285(p).

Emergency Generator
Brian Culham mentioned in his 2011 activity report that there was an emergency generator located onsite. According to a document supplied by ADM (see attached), ADM has a diesel-fired compression ignition (CI) engine rated at 536 hp used for emergencies only, and C. Dunkel said that it is run once per week for 20 minutes for maintenance and also said that this unit is not portable, based on the definition of "portable" ("portable" means that equipment can be relocated by use of wheels, handles, dollies, or a platform). It was manufactured in February 1975 and installed at ADM in 2008. Using the EPA RICE MACT/NESHAP ZZZZ decision tree, ADM's engine is not subject to the RICE MACT ZZZZ. According to the EPA's NSPS IIII decision tree, the engine is not subject to IIII because it was manufactured before April 1, 2006.

Source Category/MAERS
ADM is determined to be a minor source of PM-10. Through the 2007-2013 MAERS submittals, the greatest throughput among these years via receiving was 437,936 bushels in 2013. According to the white paper "Calculating Potential to Emit (PTE) and Other Guidance for Grain Handling Facilities" dated 11/14/95 from John Seitz, Director of the Office of Air Quality Planning and Standards, truck or rail receiving/truck or rail shipping (which is used at ADM) has an associated PTE of 50 tons/year of PM-10 emissions for a throughput of 14 million bushels. Assuming a linear relationship between the number of bushels and PM-10 emissions, the PTE PM-10 emissions for ADM for approximately 0.5 million bushels would be approximately 1.6 tons/year; therefore, ADM has not reached the 100 ton/year PM-10 threshold to be considered a major source.
ADM is required to report to MAERS because they are NSPS-subject. PM-10 actual emissions of 15 tons/year is also a criterion for reporting to MAERS. According to source totals of PM-10 reported in the 2013 MAERS report, actual emissions were only 0.1 tons per year.
ADM is currently in compliance with all applicable state and federal regulations at this time.

NAME Michelle M Luplow DATE 7-15-14 SUPERVISOR