

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

B198938506

FACILITY: Advanced Micronutrient Products, Inc		SRN / ID: B1989
LOCATION: 2405 W. Vassar Rd. (M-15), REESE		DISTRICT: Saginaw Bay
CITY: REESE		COUNTY: SAGINAW
CONTACT: Terry Hart , Operations Manager		ACTIVITY DATE: 02/02/2017
STAFF: Gina McCann	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Verify compliance with PTIs #19-15, 5-03, 390-95, 389-95, 769-91, 316-77A, and 119-68B.		
RESOLVED COMPLAINTS:		

I (glm) visited the Advanced Micronutrient Products, Inc. (AMP) facility to conduct an inspection and determine compliance with existing permits and other regulations. I met with Mr. Terry Hart, Plant Manager , for the facility inspection and records review. There are seven active permits for the facility issued between 1974 and 2015 and two grandfathered processes. The facility obtained an opt-out permit for the facility in 2015 when R208a was rescinded.

At the time of the inspection there was some question to whether all permits were still active. The facility thought the opt-out permit (#19-15) covered the entire facility. According to the permit evaluation, no emission units were included in PTI #19-15, the facility requested to take opt-out limits for HAPs along with PM, PM10 and PM2.5. The remaining 6 permits are for the individual emission units and will remain active unless requested to be subsumed into the opt-out permit.

Advanced Micronutrient Products is a micronutrient fertilizer manufacturing facility built and operating since 1951. The base product is an ammonium phosphate granular fertilizer that is formulated with various micronutrients including zinc, manganese, magnesium, boron, calcium, iron and copper. The plant can produce over 100 different products. The facility operates two 12 hour shifts, 24 hours/day, generally 4 days of each week, with approximately 30 people. A process diagram showing the production flow and associated control devices is attached.

The various raw materials are received at the site in several forms including rail, truck and totes. These materials are transferred into the appropriate storage stall within the building mostly using a front loader. The necessary components for the different batches are loaded into an elevator and transferred to the screens, hoppers and scales on the upper floors of the facility. The materials are then blended to the appropriate mixtures and feed to the granulator. In the granulator, the acid solutions (acids and scrubber liquids) and anhydrous ammonia are added to the mixture to generate a slurry. The granulator is a rotary drum style mixer and the emissions from the granulator are controlled by a baghouse and a wet scrubber.

The granulated ammonium phosphate is sent to the countercurrent rotary dryer. The material from the dryer is passed through the sizing screen to remove over-sized and under-sized materials. The dried material is then sent to the product cooler and then transferred to various locations for blending and loading. Final product is shipped by bulk truck and tote or in 50# sacks. Emissions from the drier are also controlled by a baghouse and wet scrubber. Emissions from the blenders, coolers, conveyors/elevators, and bagging/loadout operations are controlled by various baghouses. Collected air contaminants and spent scrubber water are reintroduced into the manufacturing process.

AMP currently monitors the operational parameters of the process and control equipment. This information is added into a spreadsheet for digital recordkeeping. The facility has SOPs for baghouse operations for both production and shipping activities. The SOPs describe inspection, maintenance, & record keeping frequency & procedures.

Not all emission units were operating at the time of the inspection. I did not view the anhydrous ammonia tank associated with PTI #5-03. No visible emissions from process stacks were present during the inspection.

PTI 119-68B: In Compliance

This PTI was issued for the continuous ammoniator/granulator operations. Emissions from these are currently controlled by a baghouse followed by a wet scrubber. The initial permit included a cyclone preceding the scrubber. The cyclone did not operate as expected and was converted to a baghouse. Operators monitor and record the dryer baghouse differential pressure and the scrubber liquid flow and pH.

Alarms and lockouts are incorporated in to the process flow so that production is stopped when the dryer baghouse is out of established operating parameters.

Based on the records provided and the facility inspection, Agrium was in compliance with the PTI.

316-77A: In Compliance

This PTI is associated with Bulk Loadout #4 and associated baghouse. The unit was not operating during the inspection. This operation is utilized to load bulk finished product directly to trucks. A dust collector is utilized to control particulate emissions from this process. The PTI contains requirements for PM emissions and VE limits. The emission limits are based on R331 and baghouse sizing. As a final step of the process, Agrium coats the product with a dust suppressant to minimize material loss and product integrity, which minimizes dust generated during transfer operations.

Agrium monitors and records, on an hourly basis, the pressure drop across the baghouse. As part of facility operations, the bags are typically changed out once per year. PM emissions for 2016 were 0.05 tpy. Based on the records provided and the facility inspection, Agrium was in compliance with the PTI.

769-91: In Compliance

This PTI is associated with #7 blender and loadout and associated baghouse. My understanding is that this unit is no longer on site. A request was sent to Lansing on February 23, 2017 to have this PTI voided.

389-95: In Compliance

This PTI is associated with a 6-ton orbital blender and truck loadout and associated baghouse. This operation is utilized to load bulk finished product directly to trucks. A dust collector is utilized to control particulate emissions from this process. The PTI contains requirements for VE limits.

Truck loadout hopper covers were in place. Based on the records provided and the facility inspection, Agrium was in compliance with the PTI.

390-95: In Compliance

This PTI is associated with the material cooler, sizing screens and associated elevators, and the associated baghouse. The product from the granulator is sent through the sizing screens and then to the dryer and the cooler. A group of three dust collectors control the combined particulate emissions. The PTI contains requirements for PM emissions and VE limits. The emission limits are based on R331 and baghouse sizing.

Agrium monitors and records, on an hourly basis, the pressure drop across the baghouse. The PTI limits PM from this emission unit to below 3.5 tpy. Emissions were 0.64 tpy. Based on the records provided and the facility inspection, Agrium was in compliance with the PTI.

5-03:

This is a General PTI associated with the anhydrous ammonia tank used in the process. The tank is rated at 18,000 gallons. I did not verify compliance with this PTI.

Grandfathered (Pre- August 15, 1967): The raw material handling portion of the process is grandfathered. Dry raw materials are transported by an elevator, screened and placed in hoppers prior to being weighed and having liquid raw materials added. Emissions from the raw material elevator & screen are collected and controlled by a baghouse.

The facility was in compliance with applicable regulations at the time of the inspection.

NAME

Shia L. W. [Signature]

DATE

2/23/17

SUPERVISOR

C. [Signature]