

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

N620237224

FACILITY: ALEXIS MANUFACTURING		SRN / ID: N6202
LOCATION: 3188 WILSON, WALKER		DISTRICT: Grand Rapids
CITY: WALKER		COUNTY: KENT
CONTACT: Dave Chrusciel, Engineer		ACTIVITY DATE: 10/20/2016
STAFF: Adam Shaffer	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced, scheduled inspection		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff Adam Shaffer (AS) and April Lazzaro (AL) arrived at the facility at approximately 8:35 am on October 20, 2016 to conduct an unannounced inspection. The purpose of this inspection was to determine compliance with applicable air quality rules and regulations.

No odors or visible emissions were observed upon entering the site. AQD staff met with Mr. Dave Chrusciel, an Engineer for Alexis Manufacturing. AQD staff briefly discussed the purpose of this site inspection and a walk through of the plant was performed to observe on site operations.

Facility Description:

Alexis Manufacturing is a wood furniture manufacturing and supplier of wood components and seating company. The site had previously applied for a permit to install (PTI No. 21-97) in regards to the wood working equipment and associated baghouse on site. The gluing operations and baghouse identified; however, were considered exempt by Rule 287(c) and Rule 285(l)(vi)(C) respectively; therefore, they were told by AQD staff a permit was not needed and the application was voided.

Facility Inspection

A walk through of the facility was then conducted. Alexis Manufacturing is a wood furniture manufacturing and supplier of wood components and seating company with numerous equipment including sanders, c&c routers, axis routers and a sand c profiler on site. Various types of wood are utilized during on site operations including maple, mahogany and particle board. The floors of the facility were observed with varying amounts of wood waste particles. Hoods were observed over each respective piece of wood working equipment. All hoods are connected and eventually lead to the 75,000 CFM baghouse. A spark detection system was observed on the lines prior to entering the baghouse. Mr. Chrusciel stated that the alarm will occasionally go off, but only briefly. A GreCon system is attached to the lines and in the event of a fire will release water into the lines to remove the danger.

The 75,000 CFM baghouse was observed along the northern exterior wall of the facility structure. According to Rule 278, the previous exemption that was determined for the baghouse and wood working equipment under Rule 285(l)(vi)(C) does not apply due to the Potential to Emit (PTE) of Particulate Matter (PM) that was calculated for this specific size baghouse. The PTE calculated of total emissions for the year of PM for the baghouse is 147.8 tons/year which exceeds the significance levels of PM according to Rule 119(e)(iv) of 25 tons/year; therefore, a PTI is required for the baghouse. A step by step presentation of the calculations that were utilized to determine the PTE is shown below.

1. 75,000 cubic feet/minute X 60 minute/hour = 4,500,000 cubic feet of air/hour
 2. 4,500,000 cubic feet of air/hour X 0.075 lbs of air/standard cubic foot of air = 337,500 lbs of air/hour
 3. 337,500 lbs of air/hour X (0.10 lbs of PM/1,000 lbs of air)* = 33.75 lbs of PM/hour
- * = Value acquired from Rule 331 Table 31(J)
4. 33.75 lbs of PM/hour X 8,760 hours/year = 295,650 lbs of PM/year
 5. 295,650 lbs of PM/year X 1 ton/2,000 lbs = 147.8 tons of PM/year

This was discussed in further detail in the follow up meeting after the facility inspection. The baghouse layout is capable of directing the exhaust air from the baghouse back into the plant for heating purposes of the building.

Mr. Chrusciel stated that for the majority of the year, with the exception of warmer summer days, the exhaust air is redirected back into the plant. The baghouse pressure drop was observed at 2.2" of H₂O which falls within the operational levels of 1.0 – 4.0" of H₂O for that specific baghouse construction. It was stated by an Alexis Manufacturing representative that the baghouse bags are cleaned once approximately every five to six years and that Constructive Sheet Metal handles the inspection and maintenance of the baghouse. Quarterly inspections are conducted and the last inspection was this past September, 2016. PM captured by the baghouse is then stored in two sealed containers and all waste is collected by Logjam Forest Products. Mr. Chrusciel stated that each container is typically filled every two days of operation.

Water soluble glue is utilized and applied with rollers onto the appropriate wood products. Approximately 110 gallons of glue is utilized on a yearly basis. The glue is shipped on site via 55-gallon containers and placed in smaller containers prior to application. Based on the amount of glue utilized on a daily basis of <2.0 gallons, the gluing operations appear exempt per Rule 287(a).

A chemical storage container was observed on site that contained various amounts of associated thinners, stains and finishes. Mr. Chrusciel stated that all wood products that would require application of staining/solvents are out sourced.

A final discussion with Mr. Dave Chrusciel was completed following the facility inspection. AQD staff discussed with and will help Alexis Manufacturing through the appropriate steps to complete a PTI application for the baghouse.

AS and AL left the facility at approximately 10:00am. Based on the records reviewed and observations identified during the inspection, Alexis Manufacturing is in non-compliance; however, a violation notice will not be issued at this time.

NAME Alan E. Heffer

DATE 11/09/2016

SUPERVISOR [Signature]