

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

N575424155

FACILITY: KARONA INC		SRN / ID: N5754
LOCATION: 4100 KARONA COURT, CALEDONIA		DISTRICT: Grand Rapids
CITY: CALEDONIA		COUNTY: KENT
CONTACT: Bob Grandmason , Plant Manager		ACTIVITY DATE: 01/23/2014
STAFF: Denise Plafcan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced scheduled inspection		
RESOLVED COMPLAINTS:		

Denise Plafcan (DP) conducted an unannounced scheduled inspection to determine compliance with state and federal Air Quality rules and regulations. DP drove around the area prior to entering the facility. There were no odors, fugitive emissions or opacity noted from the facility. DP met with, Bob Grandmason, Plant Manager, after a brief introduction and discussion, DP explained the purpose of the inspection and reviewed the Environmental Inspection brochure.

The facility manufacturers high end solid core doors for distributors. They have 100 employees working 1 full shift and about 1/8 of a second shift, five days a week. The plant was built in 1995 and they moved into the facility in 1996. According the AQD file, the company was issued Permit to Install (PTI) No. 526-95 and was subject to Rule 208(a). In 2004 PTI No. 526-95 was voided and the company became a true minor. This reduction in VOC emissions was attributed to a switch to water-based and ultraviolet (UV) coatings. The company currently uses exemptions and does not have any PTI's for their three main operations, wood machining, coating and assembly.

The doors are solid core medium density fiberboard with a veneer that is stained and in some cases painted. There are numerous wood machining operations used to manufacture the door parts, routing, sanding, sawing, etc. Some wood machining operations are also used in the assembly area. Wood machining equipment is exempt from Rule 201 Permit to Install (PTI) requirements under a Rule 285(l)(vi) exemption.

Gluing is used to apply the veneer and also to glue the parts of the door together. They use 3 types of glue, polyurethane, polyvinyl acetate (PVA) or traditional wood glue and hot melt. Hot melts are exempt from Rule 201 by use of a Rule 287(i) exemption. They use 50 gallons of the polyurethane glue so the use of a Rule 287(c)(i) exemption would seem appropriate.

One line or emission unit is used for the coating of the doors. It consists of two booths the stain portion and the topcoat. They use water-based stains and UV cured topcoats. Occasionally painted doors are also run on this same line. The coatings are baked or cured using either an oven, infrared lights or ultraviolet lights. The ovens/drying tunnels are heated by a 100 hp, natural gas fired boiler, located in a room off of the coating area.

The attached records demonstrate Rule 290 compliance with less than one ton (1800.9 pounds) for the entire 2012 calendar year for all coatings. They also divide up their production into quarters with 31% in the summer quarter or 558 pounds. Well below the 1000 pounds per month limit in Rule 290.

Even though the boiler was installed in 1995, based on size of 100 hp, NSPS Subpart Dc does not apply to this boiler.

There are a total of 4 baghouses or dust collectors on site. These units are recirculated back into the building during cooler months. In 2009 the company conducted a Rule 278 particulate matter (PM) determination to allow the use of exemptions at the facility and a former AQD inspector requested they maintain a yearly determination (see attached). Since the demonstration is based on a full 12-months being emitted externally the facility is running below thresholds and it is acceptable to use the Rule 201 exemptions. When the three large units were installed in 1995 they were included in PTI 526-95. The one unit on the west side of the building was installed independently of the other three and is used for coating line sanding operations and assembly area wood dust. Because the dust is much finer it is a lower cfm (45,000) than the other 3 units and with the smaller load it takes much

longer to fill and empty (1-2 months). Considering the independent installation and the size of this unit a Rule 285(l)(vi) exemption appears to be appropriate for the west dust collector. On the east side of the building the 3- Carter Day parallel units have the ability to run 85,000cfm and control a specific area of the manufacturing portion of the plant. All three units are collected into one of the two haul away bins which are emptied daily. According to Bob each of these units actually runs between 55,000 and 60,000 cfm. In 2004 an additional 10,000 cfm small fan was installed on the east side system to help balance the air flow for the return into the building. The highest monthly emissions of PM-10 in 2012 was September at 269 pounds and the total tons of PM-10 for all of 2012 was 0.8 tons. Fifteen tons of PM-10 is the threshold for compliance with Rule 278 to determine if a Rule 285(l)(vi) exemption may be used. At 0.8 tons they are well below the threshold and the use of a Rule 285 (l)(vi) exemption appears to be appropriate.

Based on the physical inspection, records provided and the amount and materials used the facility appears to be in compliance with state and federal Air Quality rules and regulations. This compliance determination is dependent on AQ staff confirming that the area around the east dust collectors and haul-away bins is being maintained.

2/5/2014

Bob sent the attached e-mail verifying the haul away bin had been replaced with one that did not have a broken seal. The duct work to the smaller fan cannot be repaired until the temperatures are above freezing so it may be another week or two.

NAME *Denise Dwyer*

DATE 2-7-14

SUPERVISOR *PAB*