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

N175730661

FACILITY: Knoll Incorporated		**SRN / ID:** N1757
LOCATION: 2800 Estes St., NORTON SHORES		**DISTRICT:** Grand Rapids
CITY: NORTON SHORES		**COUNTY:** MUSKEGON
CONTACT: Deborah Bosma , Occupational Health Nurse		**ACTIVITY DATE:** 08/06/2015
STAFF: Kaitlyn DeVries	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: The purpose of this inspection was to determine the facility's compliance with all applicable Air Quality Rules and Regulations.		
RESOLVED COMPLAINTS:		

On August 6, 2015 AQD Staff Dave Morgan (DM) and Kaitlyn DeVries (KD) conducted an unannounced scheduled inspection of Knoll Incorporated (Knoll) located at 2800 Estes Street, Norton Shores, Michigan. The purpose of this inspection was to determine the facilities compliance with all applicable air quality rules and regulations. Staff arrived on site at approximately 1:30 pm. No visible emissions or odors were observed from the facility prior to entry. Staff met with Deborah Bosma, Occupational Health Nurse, and Martin Winicki, Facilities Manager. Ms. Bosma indicated the company was currently seeking an EHS Manager. The Environmental Rights and Responsibilities pamphlet was distributed and briefly discussed with Ms. Bosma. Knoll does not currently have any active permits. However, they have had several permits in the past, and were previously subject to the title V program.

Facility Description:

Knoll is a metal office furniture manufacturer that employs approximately 400 employees. The products consist primarily of filing and storage units. Knoll currently operates 2-3 shifts 5 days per week, with some variability depending on demand.

Compliance Evaluation:

Much of the facility is dedicated to machining and welding operations, which are exempt under Rule 285 (l)(vi) and Rule 285(i), respectively. All of the machining and welding operations are done on site, and then proceed down the line to an alkaline bath, where they are washed. The alkaline bath is exempt under Rule 281(e). After washing, the parts proceed to a dry-off oven before being coated.

Knoll operates two (2) powder coating lines, which are exempt under Rule 287 (d). Per Mr. Winicki, Knoll has removed all wet coating operations and now only uses powder coatings, except for small touch-ups done with aerosol cans. Two types of coatings are applied, flat and textured. The two coating lines consist of both robotic (1) and manual (2) application areas. Each line is equipped with one cyclone and two baghouses, which are internally vented. The fabric filters associated with the booths, appear to be properly installed and maintained. Per Mr. Winicki, the filters are changed on an as needed basis, since they are internally vented. After the parts are properly coated, they continue to the cure ovens. The cure ovens operate at approximately 380 – 400 °F and vent externally. Knoll does not reclaim any of its wasted paint, but rather disposes of the waste via landfill.

The parts then continue on to the assembly area or are touched up using aerosol spray cans, if needed. Aerosol paint records indicate less than 200 gallons per month is being used, thus exempt under Rule 287(c). Per Winicki, Knoll is no longer mixing the colorants of the spray cans either. Knoll does have two (2) Crystal Clean parts cleaners, which were closed and properly labeled. As such, they are exempt under Rule 281(h). The parts cleaner utilizes Super 16 Paint Gun Cleaner, and is serviced by Crystal Clean every 7- 8 weeks; the MSDS and aerosol paint records are attached.

Once the parts are taken off the racks for assembly, the racks move to the rack burn off area. The racks are cleaned via a gas fired sand fluidized bed to strip the paint from the powder coating racks. Dell Engineering, now ERM, conducted a review of the burn off oven in 1998. AQD records indicate the system is primarily composed of a tank containing a calibrated quartz sand bed, an under-bed air injection system, a natural gas-fired combustion system, and a post-combustion chamber (1450-1550 °F). The high temperature (±800 °F) results in "fluidized" sand, where the heat and friction of the sand removes the residual powder coating from the racks. At the time of the inspection, the bed temperature was 807 °F. The externally vented exhaust gasses

were being released at a temperature of 284 °F. Per Mr. Winicki, the cleaning cycles run for approximately 15 to 20 minutes. Based on the historical PTE information located in the file, a destruction efficiency of 99% was calculated. This makes the potential emissions below the allowable levels for Rule 290, however records are required stating this. The historic PTE calculations are from the manufacturers data, from 1991. However, per review of the manufacturer's website (Dinamec Systems), the new units appear to be operated the same way the old units were built. As such, the historic one time demonstration of compliance will be allowed. The top five (5) coatings in use MSDS's were requested and obtained. The top five (5) coating used MSDS's were requested and reviewed to verify no carcinogenic materials were present in the paint. Ms. Bosma submitted the required records for Rule 290 utilization; records indicate compliance with Rule 290.

Knoll has two (2) natural gas fire boilers. Mr. Winicki indicated, however, they only run one (1) of them. Mr. Winicki also indicated they are both 10.5 million BTU capacity. These boilers are exempt under Rule 282 (b)(i). Upon investigation of the boilers, AQD staff noted there was no initial notification for the boilers per 40 CFR Part 60, Subpart Dc. As such, KD requested this from Ms. Bosma. Ms. Bosma submitted the proper Initial notification forms, one was installed in 1991, and the other installed in 1994 (please see attached). Neither boiler has the capability of burning any secondary fuel. Pursuant to Subpart Dc, Knoll may now be required to submit emission data to MAERS.

Knoll also has a third, backup boiler used to heat the separate office building located on the property. This unit was installed in 1969, and is not subject to Subpart Dc.

Compliance Determination:

Based on the observations made at the time of the inspection and the review of the available records, Knoll Incorporated appears to be in compliance with all applicable Air Quality Rules and Regulations.

NAME Kimberly Davis DATE 8.25.15 SUPERVISOR PAB