

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

N679143796

FACILITY: Grand Rapids Chair Company		SRN / ID: N6791
LOCATION: 1250 84 th St SW, BYRON CENTER		DISTRICT: Grand Rapids
CITY: BYRON CENTER		COUNTY: KENT
CONTACT:		ACTIVITY DATE: 02/02/2018
STAFF: Tyler Salamasick	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2018 Opt out source inspection.		
RESOLVED COMPLAINTS:		

Background

Grand Rapids Chair Company (Grand Rapids Chair) SRN: N6791 is a furniture manufacturing facility that specializes in manufacturing restaurant furniture. The production facility is located at 1250 84th Street, Byron Center, Michigan. Grand Rapids Chair is located in a primarily commercial area with the nearest residential structure approximately 450 feet south west of the facility. The facility was inspected on 2/2/2018 by Tyler Salamasick, Environmental Quality Analyst of the Michigan Department of Environmental Quality, Air Quality Division. The purpose of the inspection was to determine the facility's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; and PTI No. 112-13.

Inspection

Site arrival was at approximately 12:30 pm on February 2, 2018. Upon arrival I met with Human Resources Specialist Seth Teater, I presented my State of Michigan identification card, informed the facility representative of the intent of my inspection and was permitted onto the site.

Seth gave me a tour of the facility and explained the processes. The facility has three different production lines. The production lines include the wood chair line, wood table line and metal chair line. Each line functions relatively separately though some aspects of the wood chair line and the metal chair line can be shared. For instance, the metal chair production line might use a metal frame with a wood chair backing produced by the wood chair line. The associated coating operations are permitted by PTI No. 112-13.

The wood chair line starts at the shipping and receiving area. The facility receives partially completed wooden chairs. The chairs are brought to the work station where they are finished being built and sanded. The cutting and sanding all appeared to be exhausted internally. Once the wood working is complete, the chairs are loaded on racks and moved to the coating area.

The chair coating area consists of four booths. These include a stain booth, sealer, topcoat one and topcoat two. The area was not being used at the time of my inspection. I observed the coating containers and they all appeared to be properly sealed. The room was very clean, and I did not observe strong solvent odors. I visually inspected the booth filters and did not observe evidence of filter penetration or gaps. After the chairs are coated they pass through a curing oven and are staged at the end of the room. If the chair requires a seat cushion it is sent to the seating area. The seat cushion area includes a fabric cutting station and an assembly area. The fabric cutting equipment is vented internally.

The wood table line is similar in layout to the wood chair line. The rough materials come in from shipping area and are cut and sanded in the wood working area. Some of the tables are laminated and

others are not. The laminated tables receive a spray on adhesive. I observe the adhesive application area and inspected the booth filter system. The adhesive coating was a pinkish red color. I observed some over stray, but the filters looked to be in good condition. I requested a copy of the SDS for the adhesive.

Once the tables are finished at the woodworking station they are sent to the staining station. The staining area has one booth. I observed some solvent odors while at the staining area. I also observed some containers were left open. I informed Seth that the containers should be sealed to prevent fugitive emissions and that it is a requirement of the permit. The filters on the booth appeared to be in good condition.

The metal chair line includes metal working and powder coating. The metal is cut to size on site. Each piece of metal goes through various cutting, bending, drilling and welding stations until the desired shaped is accomplished. The facility processes steel, stainless steel and aluminium. The cutting, grinding and welding processes were vented internally through a large dust collector. Once completed the chairs are place on a rack and conveyed to the powder coating area. Workers spray the powder coating on and the coating is then cured in an oven. The powder application area is internally vented. Once coated, the chairs are then assembled. As mentioned previously, the metal chairs can have either a wooden seat or a metal seat added.

The facility currently has a permit (PTI No. 75-00) for a zinc plating line. I did not observe a zinc plating line during my inspection. It appears that the equipment was permitted prior to Grand Rapids Chair moving to the location and since has been removed.

Permit conditions PTI No. 112-13

The permit combines the emission actives of the wood chair line and metal chair line as one emission unit referred to as EU-Chair. The permit refers to the emission activities of the table line as EU-Table. The emissions associated with EU-Chair as well as EU-Table are limited by the permit as one flexible group referred to as FG-Chair&Table. The flexible group establishes conditions for all three lines. The permit also limits emissions of hazardous air pollutants (HAPs) from the entire facility under the flexible group FG-Facility. FG-Facility includes all process equipment source-wide including any exempt equipment.

FG-Chair&Table

PTI 112-13 limits emissions of volatile organic compounds (VOCs), acetone, ethyl benzene and xylene from the FG-Chair&Table. The facility is limited to 32.2 tpy of VOCS per 13 four week rolling time period as determined at the end of each four-week period. Records were requested multiple times by the MDEQ AQD. The records provided did not clearly indicate the facility's emissions. Grand Rapids Chair staff provided me with various components of materials used on different lines. Staff also provide the AQD with some summary information that covered the months of 3/3/2017 through 2/1/2018. The MDEQ also has 2016 data that appears to show the facility may have exceeded the 8.0 tpy acetone restriction, though it is not evident how this value was calculated. The facility appears to be in violation of the record keeping requirements of PTI 112-13. The exact VOC, acetone, ethyl benzene and xylene emissions from the source since the last inspection cannot be confidently determined at this time.

The permit requires the facility to operate in a manner that prevents fugitive emissions. This includes capturing all waste topcoat, sealer, stain, purge and cleanup solvents (materials) and storing them in closed containers. I observed the work station and they appeared to be adequately covered and contained. The permit also required the permittee to handle the materials in a manner to minimize the generation of fugitive emissions. I did not observe strong solvent odors in the work area and it appeared that they were handling the materials appropriately.

The equipment associated with FG-Chair&Table is required to be equipped with exhaust filters that are installed, maintained and operated in a satisfactory manner. During my inspection I looked in the booths to see the filters. They were exceptionally clean and appeared to be in good condition. I did not observe areas of filter penetration.

The permittee is required to maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. Seth Teater provided AQD staff with some of the required information and Greg Bremer of Grand Rapids Chair later provide supplemental information. The facility's records are not clearly laid out and it is not evident that they contain all of the required information. The facility should take action to better organize their records as they are required to demonstrate compliance with the permit. As stated previously the facility will be cited in violation of the record keeping requirements as determined by the permit. The records must include the following information on a four-week basis for FG-Chair&Table:

- a) Gallons (with water) of each VOC containing material used.
- b) VOC content (minus water and with water) of each material as applied.
- c) VOC mass emission calculations determining the monthly emission rate in tons per four-week period.
- d) VOC mass emission calculations determining the annual emission rate in tons per 13 - four-week rolling time period as determined at the end of each four-week period.

The records are also required to be kept in a format acceptable to the AQD District Supervisor. The permittee is required to keep all records on file and make them available to the Department upon request. I experience some amount of difficulty in obtaining the coherent records in a timely manner.

The permit has a separate facility wide flexible group (FGFACILITY). This flexible group limits the emissions of hazardous air pollutants (HAPS) from all process at the facility. The facility is limited to less than 9.0 tons per year (tpy) of any individual HAP and 22.5 tpy aggregate HAPs. The 2016 records indicated that the facility emitted 121.85 lbs of HAPs for the entire year of 2016. This is well below the 9.0 tpy individual HAP limit as well as the 22.5 tpy aggregate HAP limit.

Conclusion

It appears that Grand Rapids Chair is not in compliance with the Federal Clean Air Act Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, Michigan's Air Pollution Control Rules and PTI No. 112-13. The facility will be issued a violation notice for failing to properly maintain and provide records upon request of the AQD. PTI 75-00 will be voided upon request of the facility.

NAME



DATE

3/26/18

SUPERVISOR

