

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

N336241161

FACILITY: BIG RAPIDS PRODUCTS INC		SRN / ID: N3362
LOCATION: 1313 MAPLE STREET, BIG RAPIDS		DISTRICT: Grand Rapids
CITY: BIG RAPIDS		COUNTY: MECOSTA
CONTACT: Shana Larsen , Safety and Training Manager		ACTIVITY DATE: 08/11/2017
STAFF: Tyler Salamasick	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Minor source inspection FY 2017		
RESOLVED COMPLAINTS:		

Background

Big Rapids Products (BRP) SRN: N3362 is a metal forming facility that specializes in exterior automotive trim, and automotive exhaust system components. The production facility is located at 1313 Maple Street, Big Rapids, Michigan 49307. BRP's facility is located in a mixed residential and industrial area with the nearest residential structure approximately 150 feet south of the facility. The facility was inspected on 8/11/2017 by Tyler Salamasick, Environmental Quality Analyst of the Michigan Department of Environmental Quality, Air Quality Division. The intent of the inspection was to determine the facility's 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 and Michigan's Air Pollution Control Rules. Big Rapids Products does not have any permits with the MDEQ Air Quality Division. BRP previously had the permit to install (PTI) No. 303-92 for welding exhaust. This permit was voided in 2006. Big Rapids Products is a minor source for all criteria pollutants.

Inspection

Site arrival was at 8:30 am on 8/11/17. Upon meeting, I presented my State of Michigan identification card, informed the facility representative of the intent of my inspection and was permitted onto the site. Safety and Training Manager, Shana Larsen showed me the facility. Big Rapids Products is an automotive stamping facility that employs approximately 415 people. The plant runs two shifts Monday through Friday from 5 am to 2 am. The plant does operate on Saturdays, as needed. The facility has five main bays A, B, C, D and F. The bays consist of multiple presses that vary in size. These presses are capable of stamping either exhaust parts or exterior automotive trim. Each of the processes vary slightly. Shana showed me the facility and each of the processes. I inspected the lines from the beginning, where the metal rolls are received, through to the packaging of the finished product. There did not appear to be any significant emissions during my inspection of the shipping and receiving area.

Process - Automotive exhaust stamping

BRP utilizes their F bay and A bay for stamping automotive exhaust components. F bay has 6 large presses that vary in size from 300 to 800 tons. A bay has 4 large presses which vary between 400 and 600 tons. At a single press, the steel is fed along a series of belts. These belts guide and straighten the sheet prior to stamping. The parts are stamped in succession at a single press. This type of die appeared to be a progressive die, meaning the part is shaped by a series of dies located on the same press. After each die strike, the sheet shifts forward and is struck again at the next die. These presses were equipped with misters at each die. This allows for the facility to spray the part with stamping lubricants, as needed, depending on customer requirements. Shana indicated that the stamping lubricant was not required for every product. The press operators also further clarified that the solution consisted of 4-parts water to 1-part Sur Draw 429ss (lubricant). Shana provided me with an MSDS for the Sur Draw. The MSDS indicated that the lubricant is a water based surfactant with a 10% volatile content in the form of water. Shana informed me that the facility's purchase record showed that A and

F bay used approximately 400 gallons of Sur Draw per week. If all of the mist were emitted externally this would equate to approximately 94 tons of particulate per year, but BRP does not directly externally vent air during the misting process. It appeared that the majority of the mist was deposited on the part, or emitted internally so the facility's actual emissions were significantly lower. Due to the nature of the material and its application it appears that the process does not have a significant impact on the outdoor ambient air.

After the parts are misted and stamped they may be washed. A few of the presses had an attached washing unit. The attached wash units appeared to use a water based solution. These units were externally vented but Shana indicated that the stacks were for water vapor. This area appeared to have the potential to emit some lubricant in the form of contaminated water vapor. Also, I did observe one stacks that had what appeared to be wash water and oil dripping down the side at the stack connection points. This does not appear to be a significant violation of MDEQ rules and regulations, but BRP should address the issue with better housekeeping practices and/or, some kind of control device. This process appears to meet the permit exemption R 336.1285(2)(I) which in part states...

(I) The following equipment and any exhaust system or collector exclusively serving the equipment: (i) Equipment used exclusively for bending, forming, expanding, rolling, forging, pressing, drawing, stamping, spinning, or extruding either hot or cold metals. (ii) Die casting machines. (iii) Equipment for surface preparation of metals by use of aqueous solutions, except for acid solutions.

Process- Exterior Trim

BRP uses the B, C and D bays for exterior trim stamping. Combined the B, C and D bays have a total of 39 smaller presses. These presses vary in size from 75 to 250 tons. The presses are used primarily for slight bending and shaping of decorative parts. BRP's work stations were set up with multiple presses as one unit, with various work tasks. The parts enter the work station as a set of pre-stamped blanks. An individual blank is loaded into the press and cleaned with compressed air. After blowing off any potential contaminants like dust or hair, the part is wiped clean with either isopropyl alcohol, or deep blue. BRP's customers specify the frequency at which the parts are cleaned, meaning that the press may run multiple parts before being cleaned again. Shana provided me with the SDS for both the isopropyl alcohol (IPA) and the deep blue. Shana also informed me that the facility's records indicated they used approximately 400 gallons of IPA per year. The facility's IPA usage equates to approximately 1.3 tons of volatile organic compound (VOC) emissions per year. Although the VOC emissions are not directly vented, it is reasonable to expect that they leave the in-plant environment through the buildings general ventilation. The deep blue material consisted primarily of water and less than 5% (each) of the following: 2-Butoxyethanol, Ammonium Hydroxide, Sodium Lauryl Sulfate, Tetrasodium Salt of ethylenediaminetetraacetic acid, dye, nonionic surfactant and anionic surfactant. None of the listed components of deep blue are regulated hazardous air pollutants (HAPs). The deep blue was not directly vented to the outdoor ambient air. Both the stamping and the cleaning of the parts appear to meet the exemption R 336.1285(2)(I). The emissions from the process do not appear to exclude the presses from meeting R 336.1285(2)(I) as defined by R 336.1278.

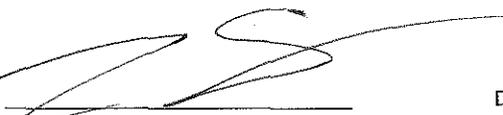
Process- Maintenance

In addition to the press bays, BRP also had multiple maintenance/tool areas. These maintenance areas consisted primarily of welding, grinding and cutting activities. BRP also had three aqueous based parts washers, serviced by crystal clean. The maintenance activities appear to meet exemption R 336.1285(2)(I)(vi)(A) which in parts states...

...(vi) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding... metals... which meets any of the following: (A) Equipment used on a nonproduction basis. ...

Conclusion

It appears that Big Rapids Products is 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, and Michigan's Air Pollution Control Rules. BRP should clean the stacks associated with the large press wash stations, and ensure the proper housekeeping and control is in place to prevent fugitive emissions to the ambient outdoor air.

NAME  DATE 8/21/17 SUPERVISOR 