

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: On-site Inspection

P134566280

<b>FACILITY:</b> GEORGE P JOHNSON		<b>SRN / ID:</b> P1345
<b>LOCATION:</b> 1914 TAYLOR POINT, AUBURN HILLS		<b>DISTRICT:</b> Warren
<b>CITY:</b> AUBURN HILLS		<b>COUNTY:</b> OAKLAND
<b>CONTACT:</b> Brett Jordan , V. P. Operations		<b>ACTIVITY DATE:</b> 02/06/2023
<b>STAFF:</b> Sebastian Kallumkal	<b>COMPLIANCE STATUS:</b> Non Compliance	<b>SOURCE CLASS:</b> Minor
<b>SUBJECT:</b> Inspection to verify R201 Applicability		
<b>RESOLVED COMPLAINTS:</b>		

On Monday, February 6<sup>th</sup>, 2023, I, Michigan Department of Environment, Great Lakes & Energy – Air Quality Division (EGLE-AQD) staff, Sebastian Kallumkal conducted an unannounced onsite inspection at George P Johnson Co., (SRN P1345) owned by Project, located at 1914 Taylor Point, Auburn Hills, Michigan. 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); Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (MEGLE-AQD) Administrative Rules. This facility was relocated from 3600 Giddings Road, Auburn Hills. George P Johnson sold the building located at 3600 Gidding Road on December 31, 2020. The company continued to operate out of that building on a lease from December 31, 2020 through April 30, 2022.

I arrived at the facility about 11:05 AM. I met Mr. Brett Jordan, Vice President of Operations (Brett.jordan@gpj.com; Cell: 248 890 4543). I identified and introduced myself and stated the purpose of the visit.

During the pre-inspection meeting, Brett explained to me about the facility’s operations. G. P. Johnson fabricates and paints industrial display units for trade and auto show exhibitions. The display units are primarily made of wood (MDF) and some plastics and metals (Aluminum & Steel) and built-in modular form to facilitate shipping and assembly. Brent told me that they one paint spray booth, a large pre-booth, wood working area.

Next, he accompanied for an inspection of the facility. It has one main paint spray booth and located on the side of the main shop floor. They use water-based coatings currently. It is a fully enclosed, down draft unit with exhaust through side filters. Booth is equipped with a separate make up air and exhaust system. The particulates from the painting operations are controlled by two stage filters. The filters appear to be clean and in-place. The filters are replaced when necessary. The exhaust air is vented to the atmosphere through a stack.

We inspected the prep-booth where they sand the parts to remove coatings or seam fillers. Preparation activities primarily involve filling seams, and surface blemishes with wood fillers, sanding, and application of primer coating (water based). Sometimes large parts are top coated in this booth. The coatings are manually applied with HVLP applicators. This booth is fully enclosed, down draft unit and side exhaust through two stage filters. It is equipped with a separate make up air and exhaust system. The particulates from the painting operations are controlled by filters. The exhaust air is vented to the atmosphere through a stack. The filters appear to be clean and in-place.

Woodworking operations occur in the main floor. Exhaust from each process is connected to main exhaust line. The particulate emissions (dust) from the wood working operations are vented to dust collector baghouse located outside and the exhaust is vent back into the general in-plant area to save heat. Wood cutting processes that are controlled by an appropriately designed and operated fabric filter collector or equipment that has emissions

that released only to general in-plant area are exempt from permit to install pursuant to Rule 285(2)(l)(vi)(c).

During the inspection, I also observed a LASER cutting room where wood, acrylic and metal sheets are cut. The exhausts (from top and bottom of the cutting table) are vented outside to the atmosphere. I did not observe any dust collector to control particulate matter emissions.

During the post inspection meeting, I informed Brett if the coating usage for one spray booth is less than 200 gallons (less water) per month, the spray booth operations could be exempt from permit to install (R336.1201) requirements pursuant to R336.1287(2)(c). He told me that they had discussed the air permit requirements with their consultant and had advised them that none of their processes are subject to air quality permit requirements.

I informed Brett that because they have potentially two spray booths, depending on their coating usage, their facility's potential to emit for hazardous air pollutants could be more than major source threshold (10 TPY individual HAP/25 TPY aggregate HAPs). I requested him to submit the previous months' usage and the SDS for the coatings. He agreed to submit the requested information.

On February 23, 2023, the facility forwarded the monthly usage and SDS for the coatings. The total coatings used was about 88.25 gallons from July through December 2022. The highest amount usage, 28.25 gallons, was in October 2022.

Based on the information provided, the coating booths appear to be exempt from R336.1201-Permit to Install requirements pursuant to R336.1287(2)(c) which in part states:

R 336.1287 Permit to install exemptions; surface coating equipment.

(1) This rule does not apply if prohibited by R 336.1278 and unless the requirements of R 336.1278a have been met.

(2) The requirement of R 336.1201(1) to obtain a permit to install does not apply to any of the following:

(a) An adhesive coating line which has an application rate of less than 2 gallons per day and which has emissions that are released only into the general in-plant environment.

(b) A surface coating process that uses only hand-held aerosol spray cans, including the puncturing and disposing of the spray cans, or other coatings that are manually applied from containers not to exceed 8 ounces in size.

(c) A surface coating line if all of the following conditions are met:

(i) The coating use rate is not more than 200 gallons, as applied, minus water, per month.

(ii) Any exhaust system that serves only coating spray equipment is supplied with a dry filter control or water wash control which is installed, maintained, and operated in accordance with the manufacturer's specifications, or the owner or operator develops a plan which provides to the extent practicable for the maintenance and operation of the equipment in a manner consistent with good air pollution control practices for minimizing emissions.

(iii) Monthly coating use records are maintained on file for the most recent 2- year period and are made available to the department upon request.

Below are the most used coatings at the facility during July-December 2022.

Based on the "Detailed+Deltron Package VOC" obtained from PPG Website,

Product Code	Name	VOC Actual (lb/gal)	VHAP (lb/gal)	VHAP emissions (lb) based on 200 gal/month/2 booths
DCU2002	High Solids Polyurethane Clear	4.04 (50.8%)	2.89	1,616
DCX3030	Undercoat Hardner	4.29 (52.8%)	2..36	1,716
DPS3055	Acrylic Urethane Primer (Gray)_	4.17 (33.6%)	1.47	1,668
NCX275	Corrosion Resistant Primer Catalyst	1.48 (33.4%) 15.9% (exempt)	0.7	592
DTV801	Fast Evaporating Thinner	1.14 (100%) 82.5% exempt	0.13	456
NCP271	Corrosion Resistant Primer (Gray)	3.41 (26.9%)	1.35	1,364
DP90LF	Non-Standing Epoxy Primer Black (Lead Free)	4.14 (36.6%)	1.49	1,656
00408371(from TDS by PPG)	Manor Hall Paint/Primer	<0.4		

According to the guidance document “Michigan EGLE-AQD, Potential to Emit workbook, A Practical Guide to Calculating and Evaluating Your Potential to Emit Air Contaminants- November 2005, potential to emit for VOC and HAP emissions from a coating booth exempt pursuant to R287(2)(c) coating booth is calculated as follows:

Coating usage is very low so the booth is exempt from the requirement to obtain a Permit to Install under R 336.1287(2)(c).

Rule 287(c) contains a restriction that only allows the emission unit to use 200 gallons coating per month.

Since several coatings are used at these booths, “worst-case” coating to calculate emissions need to be chosen. The worst-case coating should be the coating used with the highest VOC/HAP content.

The information for the worst-case coating used at these booths are provided in the table.

$$\begin{aligned}\text{PTE of VOC} &= (4.29 \text{ lbs VOC/gal coating}) \times (200 \text{ gal/month}) \\ &= 858 \text{ lbs VOC/month} \\ &= (858 \text{ lbs VOC/month}) \times (12 \text{ month/yr}) \times (1 \text{ ton}/2,000 \text{ lbs}) \\ &= 5.15 \text{ tons VOC/yr}\end{aligned}$$

The facility has two booths.

$$\begin{aligned}\text{Total VOC} &= 5.15 \text{ tons VOC/yr} \times 2 \\ &= 10.3 \text{ tons}\end{aligned}$$

#### PTE of HAPs

(Calculate the PTE of each HAP in the coating)

Highest HAPs (total) content is 2.89 lb/gal and considering this as a single HAP.

$$\begin{aligned}\text{Single HAP emissions} &= 2.89 \text{ lb HAP/gal} \times 200 \text{ gal/month} \times 12 \text{ months/yr} \times 2 \text{ booths} \\ &= 6.94 \text{ Tons per year.}\end{aligned}$$

One of the coatings with the highest HAP contents (2.36 lb/gal), Deltron Undercoat Hardener (DCX 3030), was used about 1.5 to 2 gallons per month.

Similarly, the usage for the other coating with 2.89 lb HAP/gal coating, DCU 2002-High Solids Polyurethane Clear, was 2 gallons which was used in October 2022.

The current combined usage for both booths is lower than 30 gallons per month based on the July through December 2022 usage. Brett told me that some of the coatings are water based.

Based on the current usages, the facility is a true minor for VOCs and an area source for HAPs. Should the coatings usage (amount or type), or the number of booths change, the facility should re-evaluate its potential to emit for VOCs and HAPs and compliance with R336.1201-Permit to Install Requirements.

If the facility-wide annual potential to emit for the HAP emissions are at or above the major source threshold (10 tons per year for single HAP; 25 tons per year for aggregate HAPs), the source could be subject to National Ambient Emissions Standards for Hazardous Air Pollutants (NESHAP) and Title V (Renewable Operating Permit) requirements.

The LASER cutting processes is not exempt from permit to install requirements because the exhaust is vented to the atmosphere and is not controlled by a dust collector.

R336.1285(2)

(l) 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.
- (iv) Atmosphere generators used in connection with metal heat treating processes.

(v) Equipment used exclusively for sintering of glass or metals, but not exempting equipment used for sintering metal-bearing ores, metal scale, clay, flyash, or metal compounds.

(vi) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, graphite, plastics, concrete, rubber, paper board, wood, wood products, stone, glass, fiberglass, or fabric which meets any of the following:

(A) Equipment used on a nonproduction basis.

(B) Equipment that has emissions that are released only into the general in-plant environment.

(C) Equipment that has externally vented emissions controlled by an appropriately designed and operated fabric filter collector that, for all specified operations with metal, is preceded by a mechanical precleaner.

On Friday, February 24, 2023, I discussed the LASER cutting process with Brett, and he was not aware any dust collector for this process. He agreed to investigate the process and the control equipment.

A Notice of Violation will be issued for this violation of R336.1201 (Permit to Install) requirements.

Conclusion: The LASER cutting process does not appear to be exempt from Permit to Install requirements, as discussed above. The facility installed the LASER Cutting process without obtaining permit to install. A Violation Notice (VN) seeking resolution of this violation will be issued.

NAME Sebastianykallemlal

DATE 04/04/2023

SUPERVISOR Joyce