

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

N577161183

<b>FACILITY:</b> GEORGE P JOHNSON		<b>SRN / ID:</b> N5771
<b>LOCATION:</b> 3600 GIDDINGS RD, AUBURN HILLS		<b>DISTRICT:</b> Warren
<b>CITY:</b> AUBURN HILLS		<b>COUNTY:</b> OAKLAND
<b>CONTACT:</b> Kevin Krauzowicz , Paint Shop Foreman		<b>ACTIVITY DATE:</b> 12/17/2021
<b>STAFF:</b> Sebastian Kallumkal	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> Scheduled inspection to verify compliance with AQD PTI No. 81-96D		
<b>RESOLVED COMPLAINTS:</b>		

On November 30, 2021, I, Michigan Department of Environment, Great Lakes & Energy – Air Quality Division (EGLE-AQD) staff, Sebastian Kallumkal, requested information and records pursuant to PTI No. 81-96D from George P Johnson Company (N5771) located at 3600 Giddings Road, Auburn Hills, Michigan. Due to the Covid 19 pandemic protocols, the records were requested prior to conducting inspections to limit the time spent at the site. The records were requested to be submitted by Friday, December 10<sup>th</sup>. Facility personnel submitted necessary information in a timely manner.

On December 17, 2021, I conducted a scheduled onsite inspection at George P Johnson Co. 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 and Permit to Install No.: 81-96D.

I arrived at the facility about 10:30 AM. I met Mr. Brett Jordan, Vice President of Operations (Brett.jordan@gpj.com; Office: 248 475 8846; Cell: 248 890 4543). I identified and introduced myself and stated the purpose of the visit. He accompanied and introduced me to Mr. Kevin Krauzowicz (Ph: 248-475-8880; Fax: 248-475-2325; Cell: 586-382-0152), Paint Shop Foreman.

During the pre-inspection meeting, Kevin 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. Varieties of paints are used: both water and solvent based. Recently, mostly water-based paints are used. The production processes include woodworking, coating operations, bonding, graphic arts, and welding. The production is accomplished using a carpenter shop and 5 paint spray booths. The parts are wipe cleaned using IPA alcohol prior to coating application, if needed. The Auburn Hills facility consists of 390,160 sq. ft. manufacturing area and 50,130 sq. ft. office space. G. P. Johnson has accounts for several automotive manufacturers such as Chrysler, Honda, Mazda, Toyota, etc.

The facility has about 80-100 employees; and operated 5 days per week and 8 hours per day.

Kevin further informed me that the business very slow due to the Covid 19 pandemic. Number of auto shows and trade shows are down. They basically use only two booths. Mostly 1 component paint application. No catalyst used.

He also informed me that George P Johnson is relocating to a smaller size building nearby located at 1914 Taylor, Auburn Hills. The building is being built. They intent to move into the building by May 2022. They would only have two paint coating booths in the new location.

They are evaluating whether they need to apply for a permit to install or use the exemption rule to install the booths.

I suggested that they evaluate the annual HAP potential to emit for the two booths and also the coating usage based on potential growth opportunities. I offered to review their exemption evaluation if they would send to me.

### Facility Description:

#### **Coating Operations:**

##### **EU-PROCESS101 (Booth No. 1) and EUPROCESS104 (Booth No. 4)**

Topcoat applications (water based and solvent based) are conducted within these two booths located in the main shop room. These booths are fully enclosed, down draft units with exhaust through side filters. Each 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 are replaced when necessary. The exhaust air is vented to the atmosphere through individual stacks.

The display units manufactured at the facility are primarily built in the modular form. As the modules are completed, they are moved into one of these two booths where various coatings (sealer and topcoat) are applied. The coatings are manually applied using High Volume Low Pressure (HVLP) spray applicators. After the coatings are applied, the temperature of the booth would sometimes be raised to approximately 120°F to facilitate the curing process.

EU-PROCESS102 (Booth No.2) which was a screen wash process was dismantled around 2008. The space is now used as storage

##### **Preparatory Operations – EU-PROCESS103 (Booth No.3)**

Wood panels and rough-constructed modules from the cutting room are prepared for finishing in this booth. Preparation activities primarily involve filling seams, and surface blemishes with wood fillers, sanding, and application of primer coating (water based and solvent 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.

##### **Zolatone Application Operations- EU-PROCESS105 (Booth No.5)**

Some of the display units are coated using a special coating known as Zolatone. This coating achieves special decorative appearance (texture look) for the finished products. Water based fire coating is also conducted in this booth. This is a large, three-sided booth with side draft. Zolatone applications are performed in the same manner as the standard coatings and is performed in a booth dedicated to this process. The particulate emissions from this process are controlled by filters and the exhaust air is vented to the atmosphere through a stack.

##### **Woodworking and Miscellaneous Finishes- EU-PROCESS11 (Booth No.11)**

Woodworking operations occur in a partitioned room adjacent to the preparation and painting area. Cosmichrome coating, using HVLP applicators, is also conducted in this booth. This coating gives product chrome finishing. The particulate emissions from this

process are controlled by filters and the exhaust air is vented to the atmosphere through a stack.

After the meeting, Kevin accompanied me for an inspection of the processes/equipment at the facility. First, we visited the paint/solvent/catalyst/reducer storage area. The coatings are received in 1-gallon containers, reducers/thinners/catalysts may be in quarter gallon containers, but some are received in 5 gallons containers. The area is kept very clean. The solvents, coatings and tints are mixed as required by the customer and these specifications are kept electronically in a database. The paint foreman keeps log of the paint and solvent usage. Facility uses catalyst/reducers (thinners) to the solvent-based coatings. The parts are either air dried or baked. Booths #1, #4 and #11 have baking capabilities.

Booth #1 (Process 101) top coating operation. The filters are replaced when needed. The filters were in place and did not appear to be dirty. The waste materials (filters, floor paper and liquid waste) are hauled away by US Waste Corporation. The booth is also use for curing the parts after being coated. The booth is being used, but not at the time of inspection. He told me that the filters were replaced 2 weeks ago. The ceiling air intake filter were replaced an year ago.

Next, we visited the location where Booth #2 (EU-PROCESS102) was located. This area is now a storage area.

Next, we visited Booth #3 (EU-PROCESS103). This booth has a part which is separated to perform primer coating. Mainly this booth is used wood preparation and sanding. The filters are replaced when needed. The filters were in place and did not appear to be dirty. The booth is being used, but not at the time of inspection. The filters were replaced three weeks ago. This is down draft with exhaust to the side.

Mostly Booths #1 and #3 are being used. They also use water-based coatings based and clear coats and low VOC urethane coatings.

Next, we visited Booth #4 (EU-PROCESS104) which was used for top coating (solvent and water-based coatings). The filter was replaced 6 months ago. The booth is currently used for storage. The filters were in place and did not appear to be dirty.

I observed two parts washers nearby Booth #4. He told me one of the parts washers, the smaller in size, probably 2 feet by 2 feet uses solvent based cleaner and other one (3'x3") uses water-based cleaners. These are used to clean the guns. The lids were closed at the time of the inspection. The spent solvents are hauled offsite by US Waste Co. The solvent cold cleaner is subject to Rule 707. Exempt pursuant from permit to install requirements pursuant to Rule 281(2)(h). Later, I emailed him the operating procedure to be posted as required by R 707(4) and requested it to be posted in an accessible, conspicuous location near the cold cleaner. I requested him to send the SDS for the cleaning solvents. The SDS for solvent borne cleaner and the waterborne cleaners were received, via email, on 12/22/2021.

Next, we visited Booth #5 (EU-PROCESS105) which is a large booth. This is booth was used for the application of Zolatone coating which gives a textured finishing and fire-resistant coating. Zolatone application has been ceased. Currently this booth used for storage and maintenance of vehicles.

Next, we visited Booth #11 (EU-PROCESS111)- This is prep booth. Cosmichrome which gives parts a chrome finishing is applied in this booth. The exhaust filters did not appear to be dirty. This booth is used sometimes but was not used at the time of inspection. The exhaust filters are located at the end of the booth.

He informed me that the filters are replaced based on the workload. They visually evaluate the filters and replace if necessary. The filters are replaced 3-4 times years. They have two stage exhaust filters. The air intake filters are replaced twice per year.

We also visited the waste solvent storage area. The waste solvents are kept in closed containers and are hauled away by US Waste.

Next, we visited the wood working area and inspected the dust collector located outside the building. The woodshop was not being operated at that time. The dust collector was not running. I observed that the hopper is connected to drum and exhaust can be either vented to the atmosphere or back into the building. Mike Vermeesch, General Foreman, informed me that they have about 20 cutting saws. The particulate emissions (dust) from the saw cutting operations are vented to dust collector baghouse and the exhaust is vent back into the plant 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).

Greg informed us that the facility has a natural gas fired (spark ignition) Caterpillar emergency generator for the computer room. The manufacturer provided following information regarding the generator.

Output power- 200 KW and 480 volts (displacement = 13.3 L)

Generator Model- Caterpillar GENERAC G200LG

Serial- GXF01994

Manufactured and ordered in 2012

Engine Model = SC13G304D

Serial No. = 69126003687

This engine is subject to 40 CFR 60, Subpart JJJJ-Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The engine is equipped with a non-resettable hourly meter. They had provided the EPA Certificate of Conformity during the previous inspection. The specification states that the engine is EPA certified. I reminded them to keep hours of operation of the engine. The engine is tested weekly for about 30 minutes. This engine is exempt from Permit to Install requirements pursuant to R336.1285(2)(g).

Compliance Evaluation:

Permit Number 81-96D

FG-DISPLAYCOAT includes EU-PROCESS101, EU-PROCESS102, EU-PROCESS103, EU-PROCESS104, EU-PROCESS105 and EU-PROCESS111.

The facility submitted its SDS and records electronically. These electronic data are too large to print, so these electronic data are Saved in

S//:Air Quality Division/STAFF/KALLUMKAL/ELECTRONIC DATA RECORDS/GEORGE P JOHNSON/2022.

Facility keeps records for each coating and material used daily, monthly and yearly along VOC content, number of hours used, material density, etc. It also keeps separate records for HAP, HAP contents, amount of HAP containing material used, manifests, etc.

They submitted safety data sheets (SDS) and Environmental Data Sheet (EDS) for the five most used coatings (water and solvent based).

SC I.1 limits the VOC and Acetone emission rate from FG-DISPLAYCOAT. The submitted records show that the emission rate for VOCs and Acetone from FGDISPLAYCOAT for January-December 2015 was 5.23 tons and 2016 was 3.13 tons. The permit limit is 30 TPY. The facility appears to be in compliance with this limit.

SC I.2 limits the VOC and Acetone emission rate from each emission unit (EU-PROCESS101, EU-PROCESS102, EU-PROCESS103, EU-PROCESS104, EU-PROCESS105 and EU-PROCESS111) in FGDISPLAYCOAT to 10 TPY. The submitted records show that the VOC and Acetone emissions from each booth for 2019, 2020 and 2021 are below the emission limits. Facility is keeping usage and emissions for each booth.

2019	Acetone (lb)	VOC (lb)	VOC + Acetone (lb)
Sum	2008.37	574.71	2583.08
2020	Acetone (lb)	VOC (lb)	VOC + Acetone (lb)
Sum	579.62	150.33	729.95
2021	Acetone (lb)	VOC (lb)	VOC + Acetone (lb)
Sum	574.02	209.65	783.66

The facility appears to be compliance with the permit limits for each booth.

SC I.3 limits the VOC and Acetone emission rate from each emission unit ((EU-PROCESS101, EU-PROCESS102, EU-PROCESS103, EU-PROCESS104, EU-PROCESS105 and EU-PROCESS111)) in FGDISPLAYCOAT to 2,000 pounds per month. From the submitted records for 2019, 2020 and 2021, the facility appears to be in compliance with this emission limit. These results are taken from the submitted records kept in the S: drive as described above.

SC I.4 limits the Dimethylethanol amine (CAS No. 108-01-0) emissions to 10 pounds per day based on a calendar day for FG-DISPLAYCOAT. Per the submitted EDS, only two coatings, T400 White (0.4% by wt.; density = 10.27 lb/gal), and T476 Coarse Lenticular Metallic (0.4% by wt.; density = 8.45 lb/gal) only contains this compound. The submitted records show that the facility is in compliance with this emission limit.

SC I.5 limits the Xylene (CAS No. 1330-20-7) emissions to 62.6 pounds per day based on a calendar day for FG-DISPLAYCOAT. The submitted records show that the facility is in compliance with this emission limit.

SC 1.6 condition limits the Parachlorobenzotrifluoride (CAS No. 98-56-6) emissions to 43.8 pounds per day based on a calendar day for FG-DISPLAYCOAT. Based on the submitted EDS, it appears that the coatings or other solvents used do not contain Parachlorobenzotrifluoride.

SC 1.7 limits the Methylene Chloride (CAS No. 75-09-2) emissions to 0.2 tons per year based on a 12-month rolling time period as determined at the end of each calendar month for FG-DISPLAYCOAT. Based on the submitted EDS, it appears that the coatings or other solvents used do not contain methylene chloride.

SC III.1 requires the facility to keep all waste coatings, reducers, clean-up solvents, etc. in closed containers and to dispose of in an acceptable manner. I observed that the waste

materials are kept in closed containers, and I was informed that these waste materials are hauled offsite by US Waste Co. Facility appears to be in compliance with this condition.

SC III.2 requires the facility dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air. Kevin told me that the spent filters are hauled off site by US Waste Co. Facility appears to be in compliance with this condition.

SC III.3 requires that the facility maintain an acceptable ambient air boundary which consists, at a minimum of a fence along south property line from the southwest corner of the property to the retention basin located south of the building to prevent public access to the property. They indicated that they have a fence for the property. I observed that the fence is still there.

SC IV.1 This condition requires that the permittee shall not operate the spray booth portions of FG-DISPLAYCOAT unless all respective exhaust filters are installed, maintained and operated in a satisfactory manner. I observed that the facility operates the paint spray booths with exhaust filters installed and maintained. The facility appears to be in compliance with this condition.

SC IV.2 requires that the permittee shall equip and maintain operate the spray booth portions of FG-DISPLAYCOAT with HVLP applicators or comparable technology with equivalent transfer efficiency. For HVLP applicators, the permittee shall keep test caps available for pressure testing. I was informed that the facility is using HVLP applicators for its spray booths. Facility appears to be in compliance with this condition.

SC V.1 requires the facility to determine VOC content of the coatings using Federal Reference Test Method 24, unless authorized by District Supervisor to other data such as manufacturer's formulation data. Facility is using data from SDS and environmental data sheet from the supplier to calculate the VOC content. I informed them to get the Method 24 analyses from the supplier for the coatings. They agreed to comply with my suggestion.

SC VI.1 requires the facility to have records and calculations for the previous month available by 15<sup>th</sup> of the following month. Based on the submitted records, the facility appears to be in compliance with this condition.

SC VI.2 requires the facility to maintain a current listing of the chemical composition of each coating, reducer, cleaning solvent, etc. The data may consist of SDS sheets, manufacturer's formulation date or both. The company showed AQD staff the SDS sheets for the coatings used at the facility.

SC VI.3 requires facility to keep records of Gallons of each coating, reducer, clean-up solvent, etc. used, VOC and acetone content of each coating, reducer, clean-up solvent, etc. as applied, VOC and acetone (combined) mass emission calculations determining the monthly emission rate in pounds and tons per calendar month for each emission unit and tons per calendar month, and VOC and acetone (combined) mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month for each emission unit and FG-DISPLAYCOAT. The facility is keeping these records.

SC VI.4 requires the facility to keep records, on a daily basis, for FG-DISPLAYCOAT gallons minus water of each TAC, TAC content (minus water) of each material used, daily emission rates of each TAC and methylene chloride emission calculations determining monthly emission rate in pounds/tons per month and 12-month rolling time period. The facility is not reclaiming any coatings. The facility appears to be keeping records as required.

SC VIII 1 through 5 specify stack dimensions. Facility appears to be in compliance with these conditions.

**FGFACILITY includes all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.**

**SC I.1 and 2 limit the individual and combined HAP emission rates from the facility to less than 9.0 TPY and 22.5 TPY based on a 12-month rolling period as determined at the end of each calendar month. Based on the submitted emissions calculation records for 2020 (Total HAPs = 45.58 pounds, EB=3.89 toluene = 22.01 pounds, Xylene = 663 pounds) and 2021 (Total HAPs = 78.54 pounds, EB=4.58 lbs, Toluene = 29.92 lbs, Xylene = 4.38 pounds). The actual combined HAP emissions and individual HAP emissions are far lower than the permit limits and the facility appears to be in compliance with these permit conditions.**

**SC V.1 requires the facility to determine the HAP content of any material as received and as applied, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311. The facility is using SDS to calculate HAP content of the materials.**

**SC VI.1 requires the facility to perform calculations by the 15<sup>th</sup> day of each calendar month, for the previous calendar month. The facility appears to be complying with this requirement.**

**SC VI.2 requires the facility to keep records, on a monthly basis, for FGFACILITY, of gallons or pounds of HAP containing material used and reclaimed, HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used, and monthly and 12-month rolling time period emission calculations for individual HAP and aggregate HAPs. The submitted records do not show the HAP content of each material; the facility is keeping Safety Data Sheets and Environmental Data Sheets for each coating. The facility appears to be in compliance with all other requirements.**

**Conclusion: Based on the inspection and records review, George P. Johnson Company appears to be in compliance with applicable air quality requirements. Summary of Monthly and annual VOC + Acetone emissions and HAP emissions are attached for review. These emissions are taken from the submitted records kept in the S: drive. The submitted electronic data is too large to print, so these electronic data is saved in**

**S//:Air Quality Division/STAFF/KALLUMKAL/ELECTRONIC DATA RECORDS/GEORGE P JOHNSON/2022.**

NAME Sebastianykallemkal

DATE 01/19/2022

SUPERVISOR Joyce