

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

N577139087

FACILITY: GEORGE P JOHNSON		SRN / ID: N5771
LOCATION: 3600 GIDDINGS RD, AUBURN HILLS		DISTRICT: Southeast Michigan
CITY: AUBURN HILLS		COUNTY: OAKLAND
CONTACT: Gregory L. Skarritt, Manager, Project Management		ACTIVITY DATE: 03/28/2017
STAFF: Sebastian Kallumkal	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Onsite Inspection		
RESOLVED COMPLAINTS:		

On March 28, 2017, Michigan Department of Environmental Quality-Air Quality Division Staff Robert Joseph and Sebastian Kallumkal conducted an unannounced annual inspection at George P Johnson Company located at 3600 Giddings Road, Auburn Hills, Michigan. The purpose of the inspection was to verify facility's compliance with requirements of Article II, Air Pollution Control, Part 55 of Act 451 of 1994 and Permit to Install No.: 81-96D.

We arrived at the facility about 10:00 AM. We met with Mr. Gregory L. Skarritt, Manager, Project Management, Ms. Mary B. Manzella, Purchasing Agent, (Ph: 248-475-8834; Fax: 248-475-2325; E-mail: [marybeth.manzella@gpi.com](mailto:marybeth.manzella@gpi.com)), and Mr. Kevin Krauzowicz (Ph: 248-475-8880; Fax: 248-475-2325; Cell: 586-382-0152), Paint Shop Foreman. We introduced and identified ourselves and stated the purpose of the inspection.

During the pre-inspection meeting Mr. Skarritt explained to us 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.

#### 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 top coat) 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. 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, Greg and Kevin accompanied us for the inspection of the processes/equipment at the facility. First, we visited 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 Univar Corporation. The booth is also use for curing the parts after being coated.

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.

Next, we visited Booth #4 (EU-PROCESS104) which is used for top coating (solvent and water based coatings). The filters are replaced when needed. The filters were in place and did not appear to be dirty.

Next, we visited Booth #5 (EU-PROCESS105) which is a large booth. The parts get a textured finishing using Zolatone coating and fire resistant coating in this booth.

Next, we visited Booth #11 (EU-PROCESS111)- Cosmichrome which gives parts a chrome finishing is applied in this booth. The exhaust filters did not appear to be dirty.

We also visited the waste solvent storage area, paint and solvent storage area, and paint mixing area. The waste solvents are kept in closed containers and are hauled away by Univar Corporation. The coatings and solvents are stored 1 gallon containers or less. 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.

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. Facility provided preventive maintenance data and the engine specifications. The specification states that the engine is EPA certified. I requested them to provide EPA certificate of Conformity for this engine. 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 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/2017.

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.

I informed them that they need to keep Technical Data Sheets (TDS) and Method 24 analysis results for their coatings. They agreed to obtain these records from their supplier and keep in file. I requested them to submit TDS 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 2015 and 2016 are as follows:

2015

UNITS	ACETONE	VOC	VOC+ACETONE
EU-PROCESS101	1950	2260	4210
EUPROCESS-103	1296	2633	3929
EU-PROCESS104	249	305	554
EU-PROCESS105	603	1142	1745
EU-PROCESS 111	41	38	79
SUM	4139	6378	10517

2016

UNITS	ACETONE	VOC	VOC+ACETONE
EU-PROCESS101	1623	560	2183
EUPROCESS-103	1889	567	2456
EU-PROCESS104	232	113	345
EU-PROCESS105	900	229	1129
U-PROCESS111	114	45	159
SUM	4758	1514	6272

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 2015 and 2016, the facility appears to be in compliance with this emission limit. See attached sheet for results. 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. The 2015 and 2016 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 2015 and 2016 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. The December 2015 records show that the facility is in compliance with this emission limit.

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 SDS, it appears that the coatings 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 Univar Corporation. Facility appears to be in compliance with this condition.

SC III.2 requires the facility dispose of spent filters in a manner which minimizes te introduction of air contaminants to the outer air. Kevin told us that the spent filters are hauled

off site by Univar Corporation. 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.

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 MSDS 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 MSDS sheets, manufacturer's formulation date or both. The company showed AQD staff the MSDS 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, gallons minus water of each TAC reclaimed, 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 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 2015 (Total HAPs = 2073 pounds, Toluene = 584 pounds, Xylene = 663 pounds) and 2016 (Total HAPs = 681 pounds, Toluene = 98 pounds, Xylene = 239 pounds), the actual combined HAP emissions and individual HAP emissions is less 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 MSDS 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/2017. Example emissions records, material usage and manifests for the waste are attached.

NAME Sebastian Kallumkal

DATE 4/24/2017

SUPERVISOR

