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

P029374309		
FACILITY: JVISFH, LLC		SRN / ID: P0293
LOCATION: 23944 FREEWAY PARK DRIVE, FARMINGTN HLS		DISTRICT: Warren
CITY: FARMINGTN HLS		COUNTY: OAKLAND
CONTACT: Francisco Delgado, General Manager		ACTIVITY DATE: 10/23/2024
STAFF: Marie Reid	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY25 Inspection.		
RESOLVED COMPLAINTS:		

On, October 23, 2024, I (Marie Reid), Michigan Department of Environment of Great Lakes, and Energy – Air Quality Division (EGLE – AQD), conducted a scheduled inspection of, JVIS FH, LLC (JVIS) (SRN: P0293) located at 23944 Freeway Park Drive, Farmington Hills, MI. The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); Michigan Administrative Rules; and Permit to Install (PTI) Nos. 9-12 and 90-14D.

I arrived at the facility at 10:30 am and met with Francisco Delgado, General Manager, Timothy Paton, Regional EHS Manager, and Rosa Mata, Production Control, from JVIS. Kira Fillar, Environmental Engineer and Jim Colmer, P.E, from BB&E, were also present during the inspection. I identified myself and stated the purpose of the inspection. We discussed the facility's operations, toured the facility. The facility provided records after the inspection. All records are stored in the following location: S:\Air Quality Division\STAFF\Marie Reid\Inspection Documents\FY25\JVISFH\Records FY25 Insp.

### Consent Order

The Stipulation for Entry of Final Order by Consent, AQD No. 13-2015 (CO-AQD No. 13-2015) was issued to the previous company, Eteron Incorporated, located at this site. AQD had determined that JVIS is a new company at this location, and it is not responsible for the contents of this consent order. The permittee was informed of this decision. As of September 16, 2021, this ACO has been administratively terminated based on the court order of the dissolution of Eteron Inc.

## Permit History

JVIS submitted a permit application in 2020. The application proposed to modify the projected volume of adhesives used in EU-COATINGLINE, and to modify the existing VOC and Glycol Ether DB annual emission limits in PTI No. 90-14D. This permit application was identified as No. 90-14E. JVIS requested to withdrawal this application, and application No. 90-14E was voided.

## Facility Description

JVIS currently sprays a nylon floc onto plastic automotive interior parts with a water-based adhesive to produce a soft touch plastic component. The hours of operation for the flocking process are an 8-hour shift, 5 days per week. This facility is a synthetic minor for VOCs and HAPs.

The process flow of EU-COATINGLINE is as follows: The raw plastic parts are loaded onto the conveyor. The conveyor moves the part to one of two adhesive spray booths (Spray Booth 1 and Spray Booth 2) where an operator uses an HVLP spray gun to apply a water-based adhesive coating to the plastic parts. The facility currently uses two different adhesives: 20F1680-B Black Flock Adhesive for poly propylene parts, and 20F1341 Black

Flock Adhesive for ABS Parts. I was told ABS is a more brittle plastic and poly propylene is a more flexible plastic. After the adhesive is applied, the conveyor moves the part to a flocking booth where powdered nylon floc is sprayed onto the part. The adhesive and flocking booths are equipped with dry filters.

Finally, the parts enter the 500,000 btu natural gas curing oven (Main Oven). The oven cure time is 20 minutes. Upon curing, the parts are lightly blown with compressed air and are inspected. If quality control requirements are met the parts are packaged and shipped. If rework is needed, the parts go through the FG-COATINGLINE conveyor again. Cleanup and purge activities are completed with water.

Spray Booth 2 was operating during the inspection. There were operators in three of the four spaces in this booth using a manual HVLP spray gun to spray raw the plastic parts. I observed two HVLP spray guns in each section of Spray Booth 2 (8 guns total), with each applicator labeled with the adhesive used in that gun. I was told that the operators were spraying ABS plastic parts with adhesive coating 20F1341.

I watched the conveyor carry the coated parts to the flocking booth where I observed two operates spraying flock onto the parts. The flock that does not stick to the plastic part falls into a hopper and recirculates through the system to be reused. The conveyor then carried the parts into the Main Oven to cure. After the parts exited the Main Oven, an operator placed the plastic part into a booth and used compressed air to remove excess flock. Finished parts were being inspected and placed into a shipping container.

### <u>90-14D</u>

I requested all records required by this permit from October 2020 – September 2024. Records were provided via email in a timely manner.

### **EU-COATINGLINE**

The emission unit consists of seven (7) spray booths (2 adhesive spray booths and 5 rework booths) equipped with exhaust filters to control particulate matter and two (2) ovens (main oven and small part oven). JVIS staff informed me that they no longer have the 5 rework booths or the small parts curing oven due to low demand. Any rework is done in the adhesive spray booths.

SC I.1 limits VOC emissions to 3.5 tpy per 12-month rolling time period. This emission limit is met based on the records I reviewed. The records provided by JVIS used the VOC content from Nyatex to calculate VOC emissions. The provided Method 24 results for the adhesives include VOC Content (less water), but not VOC content (w/ water). When using the Method 24 results to calculate VOC content (w/ water), the values differ from the Nyatex values. Since these values differ, the Method 24 VOC content (w/ water) were used to calculate VOC emissions were reported highest during the 12-month period ending in June 2021 at 2.32 tons.

SC I.2 limits Glycol Ether DB to 0.6 tpy per 12-month rolling time period. This emission limit is not met based on the records I reviewed. Glycol Ether DB emissions ranged from 0.66 tpy – 1.14 tpy from October 2020 – September 2024. Glycol Ether DB emissions were reported highest during the 12-month period ending in August 2024 at 1.14 tons. This emission limit exceedance will be cited in a violation notice.

SC II.1 limits the VOC content of coating for plastic parts to 1.5 lb/gal (minus water) as applied. This material limit is not met based on the Method 24 results I reviewed. Based on

the Method 24 results completed by RTI Laboratories, the VOC content (minus water) for 20F1680-B is 0.290 lb/gal and the VOC content (minus water) for 20F1341 is 1.65 lbs/gal.

According to the EPA, "The main problem people have with Method 24 is the water analysis for water-based coatings and inks. The higher the water content, the more problems people seem to have with getting good precision with the water analysis, which leads to imprecision in the VOC result." According to RTI Laboratories, "[Method 24] is known and documented to have large measurement errors especially with coating with VOCs below 50 g/L"(0.41 lb/gal). Manufacturer information state's that adhesive 20F1341's VOC content is 0.53 lb/gal (with water). Based on this information, enforcement discretion will be used for the material limit exceedance in adhesive 20F1341.

SC II.2 states that the facility shall only use water-based material in EU-COATINGLINE. Based on the records I reviewed, the adhesives used in EU-COATINGLINE are waterbased. Based on the provided records, % water content of adhesive 20F1341 is 56.1% and % water content of adhesive 20F1680-B is 48.6%.

SC III.1 states that the facility shall recover and reclaim, recycle, or dispose of all coatings, adhesives, etc. (material), in accordance with all applicable regulations. JVIS staff said that they do not reclaim/recycle any adhesives. Their process does not produce much adhesive waste, since the majority of the material is sprayed directly on the plastic part and overspray is collected on dry filters. The spray guns and area around the booths are cleaned with water.

SC III.2 states that the facility shall capture all waste coatings and shall store them in closed containers and dispose of them in an acceptable manner. I did not observe any open containers during this inspection.

SC III.3 states that the facility shall dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air. Spent filters are rolled up, wrapped, and discarded in the dumpster. I did not observe any spent filters during the inspection.

SC III.4 states that the facility shall handle all VOC and HAP containing materials in a manner to minimize the generation of fugitive emissions. I observed that the adhesives were stored in closed containers.

SC IV.1 states that the facility shall not operate EU-COATING unless all respective exhaust filters are installed, maintained, and operated in a satisfactory manner. I observe that dry filters were properly installed in both booths. I did not see any gaps in the filters that particulate could get through. JVIS staff stated that these filters are changed at the end of each day.

SC IV.2 states that the facility shall equip and maintain EU-COATINGLINE with HVLP applicators or comparable technology with equivalent transfer efficiency. JVIS staff informed me that all applicators were HVLP.

SC V.1 states that the facility shall determine the VOC content, water content and density of any coating, as applied and as received, using EPA Method 24. I was provided with analysis results that used EPA Method 24 to determine VOC content (less water), water content and density of the two adhesives.

SC VI.1-4 specifies recordkeeping requirements for EU-COATING. The facility must keep records of the chemical composition of each coating, the gallons of each material used,

VOC content of each material used, and the monthly/12-month rolling VOC emission rate. Additionally, the facility needs to keep records of the gallons of each Glycol Ether DB containing material used/reclaimed, the Glycol Ether DB content of each material used, and monthly/12-month rolling Glycol Ether DB emissions rate. I verified that these records are kept.

IX.1 states that the facility shall label each emission unit. I observed labels on each emission unit.

# **FGFACILITY**

The conditions of FGFACILITY apply to all process equipment source-wide including equipment covered by other permits, grandfather equipment, and exempt equipment.

SC I.1-2 limits individual HAP emissions to less than 8.9 tpy and aggregate HAP emissions to less than 22.4 tpy. The facility has not exceeded this emission limit based on the records I reviewed. Individual HAPs recorded include Glycol Ether DB, Xylene, and Ethylene Glycol. Individual HAP emissions were reported highest for Glycol Ether during the 12-month period ending in August 2024 at 1.14 tons. Aggregate HAP emissions were reported highest during the 12-month period ending the 12-month period ending in June 2021 at 1.89 tons.

SC V.1 requires the facility to determine the HAP content of materials using the manufacturer's formulation data. JVIS provided manufacturer's formulation data with the HAP content of the two adhesives.

SC VI.1-2 Specifies recordkeeping conditions for FGFACILITY. The facility must keep records of gallons of each HAP containing material used/reclaimed, the HAP content of each material used, and the monthly/12-month rolling individual and aggregate HAP emission rate. I verified that these records are kept.

## PTI No. 9-12

I requested all records required by this permit from October 2023 – October 2024. Records were provided via email in a timely manner.

This general permit includes EU-BURNOFF: one batch type natural gas-fired burnoff oven with a secondary chamber or afterburner, used to remove cured paints, oil or grease from metal parts by thermal decomposition in a primary chamber. This oven was not operating during the inspection.

SC I.1 states that there shall be no visible emissions from EU-BURNOFF. JVIS staff said they do not observe visible emissions while operating EU-BURNOFF.

SC II.1 states that EU-BURNOFF shall burn only natural gas. Third-party maintenance records confirmed that EU-BURNOFF only uses natural gas as fuel.

SC II.2 states that the facility shall not process any material in EU-BURNOFF other than cured paints, oil or grease on metal parts, racks and/or hangers. Only these materials are processed in EU-BURNOFF. JVIS staff said that they only process paint masks in the oven, which are used to cover the plastic parts during adhesive coating.

SC III.1 states that the facility shall not use EU-BURNOFF for the thermal destruction or removal of rubber, plastics, uncured paints, or any other materials containing sulfur or

halogens such as plastisol, PVC, or Teflon. JVIS staff confirmed that they do not process these restricted materials in EU-BURNOFF.

SC III.2 states that the facility shall not load any transformer cores, which may be contaminated with PCB-containing dielectric fluid, wire or parts coated with lead or rubber, or any waste materials such as paint sludge or waste powder coatings into EU-BURNOFF. JVIS staff confirmed that they do not process these restricted materials in EU-BURNOFF.

SC IV.1 states that the facility shall not operate EU-BURNOFF unless a secondary chamber or afterburner is operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum temperature of 1400°F and a minimum retention time of 0.5 seconds. The facility operated EU-BURNOFF in a satisfactory manner based on the records I reviewed. Based on the provided records, the secondary chamber maintained a minimum temperature of 1400°F. The temperature records are recorded in degrees Celsius. The Primary Chamber temperature is recorded under the column labeled "Channel A Value" and the secondary chamber temperature is under the column labeled "Channel B Value".

SC IV.2-3 states that the permittee shall not operate EU-BURNOFF unless an automatic temperature control system for the primary and secondary chamber is operated in a satisfactory manner, and an interlock system shuts down the primary chamber burner when the secondary chamber is not operating properly. An operator joined us during the walkthrough to explain the burnoff oven to me. He said the interlock system starts the primary oven burner after the secondary burner reaches 1400°F.

The operating procedure of the oven includes:

- 1. Placing parts in the primary oven
- 2. Turn on the switch
- 3. Secondary oven reaches 1400°F
- 4. Primary oven turns on automatically.

SC IV.4 states that the facility shall operate a device to continuously monitor the temperature in the burnoff oven secondary chamber and record the temperature at least once every 15 minutes. JVIS staff stated that each cleaning cycle is 3 hours long and the burnoff oven is set to record the temperature in 5-minute intervals. Based on the provided records, a device is used to continuously record temperature in the secondary chamber. JVIS staff informed me that the data recorder broke on 10/16/24. JVIS said that an operator inserted the data recorder's SD card upside down in the slot, causing the SD card to become stuck. A technician from Jackson Oven Supply came out on 11/1/2024 to remove the SD card from the slot. While the data recorder was broken, JVIS operated the oven once on 10/17/24 and once on 10/22/24 and manually recorded the temperature on an hourly basis during these operations. JVIS staff informed me that once the data recorder was repaired, they put a piece of tape on the SD card that reads, "This Side Up" and they designated one employee to be in charge handling the burnoff oven temperature data/SD card to prevent this malfunction from occurring again in the future. I observed the tape on the SD card during the inspection.

Although the secondary chamber temperature was manually recorded every hour instead of every 15 minutes, I will use enforcement discretion and not issue a violation notice. The manual temperature records demonstrated that the secondary combustion temperature

remained above 1400°F in EU-BURNOFF while the data recorder was broken, as required in SC IV.1. Additionally, JVIS immediately implemented corrective actions, to prevent a reoccurrence of this malfunction.

SC VI.1&3 requires the facility to monitor and record the temperature in the burnoff oven secondary chamber every 15 minutes and keep the records on file. The burnoff oven data is stored on an SD card that is removed from the burnoff oven and downloaded onto a computer. I verified these records are kept. I also verified that the manual temperature records are kept from when the data recorder malfunctioned, as described in SC IV.4.

SC VI.2 requires the facility to calibrate the thermocouples associated with the primary and secondary chambers once per year. I observed a sticker on the burnoff oven that stated the last calibration was completed on 9/10/24 by Jackson Oven Supply.

SC VI.4 requires the facility to keep records of the date, duration, and description of any malfunction of the control equipment, any maintenance performed and any testing results for EU-BURNOFF. I was provided with this information for the data recorder device malfunction.

SC VI.5 requires the facility to maintain a current listing from the manufacturer of the chemical composition of each material (cured coating, oil or grease) processed in EU-BURNOFF, including the weight percent of each component. I was provided with the SDS that contain this information for the adhesives.

SC VI.6 requires the facility to maintain current information from the manufacturer that EU-BURNOFF is equipped with a secondary chamber or afterburner, an automatic temperature control system for the primary chamber and secondary chamber or afterburner, and an interlock system that shuts down the primary chamber burner when the secondary chamber or afterburner is not operating properly. I verified this information is kept.

IX.1 states that the facility shall not replace or modify any portion of EU-BURNOFF, including control equipment, unless the conditions in IX.1.a-c are met. JVIS staff stated that EU-BURNOFF was not modified since the last inspection, which was conducted on February 12, 2020.

### Conclusion

Records provided show the Glycol Ether DB emission limit in PTI 90-14D, FG-COATINGLINE SC I.2 was exceeded in the 12-month periods ending in October 2020 -September 2024. A violation notice will be issued for this non-compliance.

Based on my inspection and record review, the facility is in compliance with all other requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; and Michigan Department of Environment, Great Lakes, Energy-Air Quality Division (EGLE-AQD) rules; and Permit to Install (PTI) Nos. 9-12 and 90-14D.

NAME Maris Reid DATE 12/4/2024 SUPERVISOR K. Kelly