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

B762568616

FACILITY: LAFATA ENTERPRISES INC.		**SRN / ID:** B7625
LOCATION: 50905 HAYES RD., SHELBY TWP		**DISTRICT:** Warren
CITY: SHELBY TWP		**COUNTY:** MACOMB
CONTACT: James Jensen , Plant Manager		**ACTIVITY DATE:** 08/16/2023
STAFF: Sebastian Kallumkal	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled inspection to verify compliance with MI-ROP-B7625-2022 and 40 CFR 63, Subpart JJ		
RESOLVED COMPLAINTS:		

On Wednesday, August 16, 2023, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff Sebastian Kallumkal and Marie Reid conducted a scheduled inspection of LaFata Enterprises, Inc. ("LaFata") located at 50905 Hayes Rd, Shelby Charter Township, MI 48315. The purpose of this inspection was to determine the facility's compliance status with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division (EGLE-AQD) rules; 40 CFR Part 63 Subpart JJ – National Emissions Standard for Hazardous Air Pollutants for Wood Furniture Manufacturing (MACT JJ); and the conditions of Renewable Operating Permit (ROP) No. MI-ROP-B7625-2022.

LaFata is subject to the ROP program because the facility is considered a major source of both VOC and HAP emissions. ROP No. MI-ROP-B7625-2022 was issued on October 19, 2022. PTI No. 8-15 was issued in March 2015 for a replacement automated paint booth. PTI No. 8-15 was reissued three times as PTI No. 8-15A due to changes in materials used. This booth is included in the ROP as EU-AUTOLINE2 (although it is the only automated line).

LaFata is located in Macomb County. In respect to the National Ambient Air Quality Standards (NAAQS), Macomb County is currently designated in attainment status for all criteria pollutants (CO, Ozone, Pb, NOx, SOx, PM). The facility is located adjacent to a number of businesses including several restaurants, an engineering firm, and an insurance agency. The closest residential properties are located about 0.3 miles southeast of LaFata. Previous annual compliance inspection was conducted on June 28, 2022.

Mr. Jensen was unable to provide records timely because of personal matters initially and then due to power outage at the facility. The records were submitted on September 13, 2023, via emails. LaFata submitted SDS and EDS for coatings, stains, etc. and daily and monthly material usage and monthly emission calculations for Jan -July 2023 and 12-month rolling emission calculations for August 2022 through July 2023. Also, submitted training records, MACT compliance reports, Finishing Department Work Practice Implementation Plan, etc.

We arrived at the facility at around 10:00 AM. We met with Mr. James Jensen, Plant Manager. We identified ourselves and stated the purpose of the inspection. During the pre-inspection meeting, we discussed facility's operations.

LaFata had no change in its processes. It uses coatings are received except if the air temp is more than 90ºF, 2 oz catalyst per gallon of coating is added. No thinner is added since the beginning of 2023.

Jim informed us that LaFata plans to vent the solvent emissions from a cleaning process, for the triangular metal parts that collects spent cleaning solvent, in a drum kept near the coating mixing area for Autoline 2 booth. Usage of this cleaning solvent is included in the solvent usage (EU-CLEANUP). This change is to limit the VOC emissions inside the general in-plant area. He inquired if this needs a permit to install. I informed him that based on the information provided, this change seems to be a part of the coating process and does not need a permit to install (PTI). I informed him also that I will get back to him if this change needs a PTI.

LaFata uses conversion coating; the filters are changed once per day in the coating lines and twice per day Autoline 2. Visual leak checks are conducted monthly. The facility purchases about 40-60 gal coatings per month. They are currently using Thinner B wash as solvent. The facility had conducted VOC analyses of the manifested waste to accurately quantify the VOC emission credit. The analyses were conducted separately for the spent solvent bucket and the spent coatings. The facility also conducts US EPA Method 24 analyses for coatings used. There are no free formaldehyde or styrene in the coatings. Formaldehyde may be emitted during curing process; however, styrene is not emitted.

Primer uses conversion coatings. Enamels, a topcoat, are oil-based coatings and no catalyst is used during the application.

LaFata keeps Work Practice Implementation plan which includes leak inspection and maintenance plan, formulation assessment plan and training plan.

The filters for the manual booths are changed as required. The dust collector bags are checked for wear/tear. The facility keeps a training manual and employee training records pursuant to NESHAP JJ.

EU-AUTOLINE2, EU-BOOTH1, and EUBOOTH2 which are located in the North Building use solvent-based coatings while EU-BOOTH3 which is located in South Building uses water-based coatings. EU-AUTOLINE2, EU-BOOTH1, and EUBOOTH2 coat particle boards, but EU-BOOTH3 coats hard wood boards.

Small amount of glue is used in different processes. They also started using glazers for some parts. Uses about 35 gallons per year and has about 7 glazing stations. The process is similar to staining. I informed him to include this usage in the emissions calculations.

Booth1 – does stain and topcoat; Booth2-does stain only. Wiping stains are done on the table. Booth 3 uses water-based coatings, and no catalyst is used.

LaFata manufactures custom modular wooden cabinetry. The facility employs around 100 staff and operates Monday through Friday from 8am to 5pm and Saturday from 10am to 3pm. At LaFata, the cabinet-making process starts with raw lumber, particleboard, and sheet stock. These raw materials are machined into various cabinet pieces, coated with primer/stain/paint, and assembled into cabinetry. There is one automated coating booth, two solvent-based manual coating booths, and one water-based manual coating booth.

After the pre-inspection meeting, Jim accompanied us for an inspection of the facility. Initially, we observed the stain area (FG-FINISH) which is done in an open area, Booth 1 (manual coating) and Booth 2 where 3-dimensional parts are coated. The filters for the booths appear to be not overly soiled and in-place. They are also applying a clear coating (glaze) using rags.

Next, we inspected Autoline 2. The booth filters appeared to be clean and in-place. In this booth, coatings are applied twice, overspray is collected, and solvent is sprayed to clean the conveyor belt. The solvent is recirculated and transferred to a drum at the end of the day.

Next, we inspected the north baghouses for EU-WOODWORK-N. This Emission unit consists of cutting, sawing, sanding, and milling machines. The particulate emissions from the operations are controlled by two baghouses. The baghouses are located outside of the building and has a cyclone to remove the large parts followed by a baghouse to remove the fine dust. The filtered air is recirculated into the plant. The areas around both baghouses looked acceptably clean with no excessive wood dust on the ground. Jim told us that bags are inspected routinely and replaced once every 10 years or as necessary. If the bags are broken, they would know by the excessive dust in the building.

Next, we visited the South building. The woodworking processes in the South building use 2 baghouses and all are vented into the plant. The main baghouse (South Dust Collector) is located outside of the building and has a cyclone to remove the large parts followed by a baghouse to remove the fine dust. Another small dust collector with a series of bags, (Cefla Dust Collector) is located inside the building. The collected larger wood materials from the cyclone are hauled offsite to horse farmers. We also inspected Booth 3, located in this South Building. Booth 3 uses water-based coatings. The filters looked good with no tears and in place.

Jim told us that that line cleaning and gun cleaning waste solvents are collected in the same drum and is hauled offsite.

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EU-AUTOLINE2

EU-AUTOLINE2 is a dry filter coating booth with robotic spray applicators. A booth operator places wooden pieces onto the loading section of the booth. From there, a conveyor belt moves the pieces through the paint booth and into a natural gas fired drying oven.

The robotic spray applicators spray downwards causing the majority of overspray to be caught on the conveyor belt. The overspray from the conveyor belt is scrapped off continuously using a chrome roller which spans across the width of the conveyor belt. The scrapped off coating is collected in a 5-gallon bucket underneath the booth. This 5-gallon bucket fills up approximately 2-3 times per day. In between each spray job, the belt is sprayed with a solvent which also is scrapped off, goes to a V-shaped metal trip pan and is collected in one of the two solvent tanks. After the solvent cleaning, the belt is cleaned with a solvent covered cloth squeegee roller and the solvent is collected in a second solvent tank. The solvents in the tanks are recycled throughout the day, and finally emptied into a 55 gallon to be shipped out. The spent coating and spent solvents are emptied into the same closed 55-gallon drum and sent to a hazardous waste facility in accordance with SC III.1 and 3.

Dry filters in EU-AUTOLINE2 are changed 2 to 3 times per day. LaFata needs to keep a clean booth filter to maintain the quality of the finished products. If there is insufficient air flow through the booth filters, aerosolized overspray will accumulate in the small booth and eventually contaminate successive parts. Spent filters are placed into 55-gallon drums after removal from the booths and then thrown in the trash pursuant to SC III.2. Exhaust filters appeared to be installed, maintained, and operated in a satisfactory manner in accordance with SC IV.1.

Section 1, SC1: Limits VOC and acetone combined emissions from EU-AUTOLINE2 to 60.1 tons per rolling 12-month period. Based on the records I reviewed LaFata's emissions are below this limit. The most recently reported 12-month rolling total ending in July 2023 showed VOC plus acetone emissions at 21.62 tons.

Section II, SC 1 and 2: Limit the VOC content of sealers, primers, and pigmented/clear topcoats to 4.6 lb/gallon minus water as applied. Based on the records I reviewed LaFata appears to comply with these limits. The V66V21 Catalyst is received at a 4.65 lbs VOC/gallon without water. This is a catalyst and not subject to this limit.

Section III – S.C. 3: Requires LaFata to store VOC and/or HAP containing materials in a manner that minimizes fugitive emissions. Long term material storage containers were closed during my inspection. There is an open bucket underneath the EU-AUTOLINE2 booth that continuously collects overspray. Overspray from EU-AUTOLINE2 is continuously scraped into the bucket as parts move down the assembly line. The contents of this bucket are emptied into a sealed 55-gallon drum at least 3 times daily. I did not observe any spills. LaFata appears to comply with this condition.

Section IV – S.C. 2: Requires LaFata to equip and maintain EU-AUTOLINE2 with robotic air-assisted airless applicators or comparable technology regarding transfer efficiency. EU-AUTOLINE2 is equipped with air-assisted airless applicators. Mr. Jensen believes these applicators have the highest transfer efficiency of any applicator on the market.

Section V – S.C. 1: Requires coatings at LaFata to be tested for VOC content, water content, and density as applied and as received using federal Reference Test Method 24. Alternatively, the manufacturer's formulation data can be used in lieu of Method 24 to determine these factors if LaFata receives prior written approval from the AQD District supervisor.

LaFata currently uses Manufacturer's formulation data to determine VOC content. AQD received this request from LaFata on July 26, 2021. AQD approved this request under the condition that LaFata conducts Method 24 testing on at least one paint annually to verify formulation data. This paint should be selected based on highest usage or high relative VOC content. Each year, LaFata shall select a different coating for Method 24 analysis. For 2022, LaFata conducted Method 24 analysis (RTI Lab., Date Reported = 9/5/2023) for white Conversion Varnish H66PXW20316-4318 which is its highest use pigmented coating for the 2022. The submitted analysis shows that that VOC content is 4.19 lb/gal which is in compliance with the limit (4.6 lb/gal minus water, as applied) They are in the process of analyzing the 2023 coating.

Section VI – S.C. 1: States that the required calculations shall be submitted by the 15th day of the calendar month, for the previous calendar month. Based on my record review LaFata appears to submit the required calculations in a timely manner.

Section VI – S.C. 2: Requires LaFata to keep current information about the chemical composition of every material used at the facility. These records are maintained. Mr. Jensen provided environmental data sheets and/or safety data sheets for the coatings used at LaFata.

Section VI – S.C. 3: Requires the facility to keep records of the gallons and VOC content of each material used in FG-FINISH. Additionally, LaFata must maintain monthly and 12-month rolling records of combined VOC and acetone mass emissions. These records are maintained. LaFata submitted daily and monthly material usage and monthly emission calculations for Jan-July 2023 and 12-month rolling emission calculations for August 2022 through July 2023.

Section VIII – S.C. 1,2,3,4: There is a dedicated stack for the paint booth and three stacks attached to the curing/drying oven. Stacks appeared to be discharged vertically upwards to the ambient air. I did not verify stack parameters during this inspection.

FG-WOODWORK

FG-WOODWORK includes all woodworking equipment including cutting, sawing, sanding, and milling operations. The shape, finish, design, and other parameters of the end product dictate the type of woodworking utilized.

There are three separate baghouse dust collection systems located throughout the plant. All baghouse exhaust is recirculated into the general in-plant environment in accordance with Section VIII – S.C. 1. The south and north dust collection systems are also equipped with cyclones that capture most of the large wood shavings. These large wood shavings from the south dust collector are collected in a trailer and used as bedding at a horse farm. The shavings collection trailer is owned by a horse farmer who comes to collect the shavings periodically.

SC II. 1: States that LaFata shall not operate FG-WOODWORK unless the baghouse filters are installed and operating correctly. The baghouses appeared to be functioning correctly. Mr. Jensen stated that the bags are changed approximately every 10 years. The last change occurred in 2017. Because the baghouses are exhausted to the general in-plant area and maintained and functioning properly, they appear to meet the emission limit of 0.010 lbs PM/1000 lbs exhaust gas in SC III.1. LaFata submitted maintenance records for a few days for these dust collectors.

FG-FINISH

FG-Finish includes three dry filter spray coating booths used to apply stains, varnishes, lacquers, and paints to wood furniture using paint spray guns. Also included are associated purge and clean-up operations, and assembly of various wood furniture.

SC I.1: Limits VOC emissions from FG-FINISH to 29.2 tons per 12-month rolling period. Based on my inspection and record review, LaFata appears to be under

these limits. As of July 2023, VOC emissions based on a 12-month rolling period were 14.06 tons.

Section II – S.C. 1: Limits the VOC content of each coating to 6.7 lbs/gallon (minus water) as applied. Based on my record review the coatings used in FG-FINISH are all under this limit, as received. The highest VOC content coating, as applied, is "Spray Stain Mocha" at 6.63 lbs/gallon. Mr. Jensen explained that no reducer is used in any of the "stain" products.

Section III – S.C. 1: Requires LaFata to capture all waste solvents/materials and store them in closed containers. These conditions also require that waste materials are disposed of according to state rules and regulations. Purge/cleanup solvent is collected in five-gallon pails that remain closed except when in use. Purge solvent from line cleaning is sprayed directly into these pails. Work practices at LaFata appear to comply with this condition.

Section III – S.C. 2: Requires spent filters to be disposed of in a manner that minimizes the introduction of air contaminants to the outer air. Spent filters are removed from the booth and placed in closed 55-gallon drums before being thrown in the trash. This work practice appears to adequately satisfy this condition.

Section III – S.C. 3: States that the facility shall handle all VOC and/or HAP containing materials in a manner that minimizes the generation of fugitive emissions. Coatings and materials appeared to be stored in an organized manner. Lids are kept on coating containers, and I did not observe any spills or messes. Work practices at LaFata appear to be in compliance with this condition.

Section IV – S.C. 1: Requires coating booths 1,2, and 3 be equipped with dry exhaust filters that are maintained and operated in a satisfactory manner. All three of these booths had dry filters in place during my inspection. I did not observe any gaps in any of the booth filter systems.

Section IV – S.C. 2: Requires the spray guns used in booths 1,2, and 3 to be High Volume Low Pressure (HVLP) applicators or comparable technology. All three booths utilize these types of applicators.

Section V – S.C. 1: Requires coatings to be tested for VOC content, water content, and density as applied and as received using federal Reference Test Method 24. Alternatively, the manufacturer's formulation data can be used to determine these factors if LaFata receives prior written approval from the AQD District supervisor.

AQD received this request from LaFata on July 26, 2021. AQD approved this request under the condition that LaFata conducts Method 24 testing on at least one paint annually to verify formulation data. This paint should be selected based on highest usage or high relative VOC content. Each year, LaFata shall select a different coating for Method 24 analysis. For 2022, LaFata conducted Method 24 analysis (RTI Lab., Date Reported = 9/5/2023) for white Conversion Varnish H66PXW20316-4318 which is its highest use pigmented coating for the 2022. The submitted analysis shows that VOC content is 4.19 lb/gal which is in compliance with the limit (6.7 lb/gal minus water, as applied) They are in the process of analyzing the 2023 coating.

Section VI – S.C. 1: States that LaFata shall complete all required calculations in an acceptable format. Calculations appear to be in an acceptable format.

Section VI – S.C. 2: Requires LaFata to keep current information about the chemical composition of every material used at the facility. These records are maintained.

Section VI – S.C. 3: Requires the facility to keep records of the gallons and VOC content of each material used in FG-FINISH. Additionally, LaFata must maintain monthly and 12-month rolling records of VOC mass emissions. These records are maintained. LaFata submitted daily and monthly material usage and monthly emission calculations for Jan-July 2023 and 12-month rolling emission calculations for August 2022 through July 2023.

Section VIII – S.C. 1,2,3: There is a dedicated stack for each of the three booths. Stacks appeared to be discharged vertically upwards to the ambient air. I did not verify stack parameters during this inspection.

FG-MACT

This flexible group consists of all process equipment at LaFata that meet the requirements of Part 63, Subpart JJ, 40 CFR 63.800 – National Emissions Standard for Hazardous Air Pollutants for Wood Furniture Manufacturing. This includes the automated coating line, manual paint booths 1 through 3, cleanup operations, and final furniture assembly.

Section I – S.C. 1: Requires LaFata to comply with the limits established in 40 CFR 63.802. Based on my inspection, record review, and review of these rules, LaFata Appears to comply with these limits. LaFata complies with 40 CFR 63.802 by maintaining a weighted average VHAP content across all coatings, as applied, at the facility. LaFata calculates the weighted average VHAP content on a monthly basis according to the equation in 40 CFR 63.804 (a).

40 CFR 63, Subpart JJ standards were first proposed and signed by EPA Administrator in the Federal Register on December 6, 1994. (59 FR 62652). According to 40 CFR Part 63, Subpart A, *New source* means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part (40 CFR Part 63) establishing an emission standard applicable to such source.

EU-AUTOLINE2, EU-BOOTH1, EU-BOOTH2, EUBOOTH3 were installed after December 6, 1994. Therefore, this facility is considered "New Source" for 40 CFR 63, Subpart JJ applicability.

The E value (lb VHAP/lb solids limit) for a new source is 0.8 lb VHAP/lb solids. LaFata submitted MACT JJ compliance calculations since January 2022 through Jully 2023. For all months, I reviewed, the lb VHAP/lb solids appears to be between 0.02 to 0.08. The highest reported E values, 0.08 lb VHAP/lb solids were in January and February 2022.

Section III – S.C. 1: Requires LaFata to comply with the work practice standards established in 40 CFR 63.803 (MACT JJ work practice standards). A work practice implementation plan is maintained by LaFata. A mandatory refresher class is given to all employees annually. Mr. Jensen provided me with the training manual that details these work practice standards. Each staff member signed a sheet certifying that they have taken this class in 2023. Mr. Jensen also provided me with a "monthly chemical line leak inspection" sheet indicating that chemical (paint) lines are visually

checked each month for leaks. Based on my inspection, record review, and review of 40 CFR 63.803, LaFata appears to be in compliance with the applicable work practice standards of MACT JJ.

Section V – S.C. 1: Requires LaFata to comply with the performance test requirements outlined in 40 CFR 63.805 which requires the use of EPA Method 311 of appendix A of part 63 in conjunction with formulation data to determine the VHAP content of the liquid coating. Formulation data shall be used to identify VHAP present in the coating. The EPA Method 311 shall then be used to quantify those VHAP identified through formulation data. The EPA Method 311 shall not be used to quantify HAP such as styrene and formaldehyde that are emitted during the cure. The EPA Method 24 (40 CFR part 60, appendix A) shall be used to determine the solids content by weight and the density of coatings. As an alternative, Lafata may request approval from the AQD district supervisor to use an alternative method for determining VHAP content of the coating.

Based on the 41 certified product data sheets reviewed, VHAP content outlined in these Certified Product Data Sheets (CPDS) which are prepared under the criteria specified in 40 CFR 63.805(a), the VHAP content for the materials used at Lafata range between 0.00 to 0.03 with one varnish at 0.21 lb VHAP/lb solids and a catalyst at 0.05 lb VHAP/lb solids. This is significantly less than their limit of 0.8 lb VHAP/lb solids. Therefore, Method 311 analysis for each coating is not requested at this time.

Section V – S.C. 2: Requires performance tests for VHAPs to be used as provided in the Certified Product Data Sheets (CDPS). VHAP content is listed for each coating used at LaFata. LaFata obtains this information from the CDPS of each respective coating.

Section VI – S.C. 1, 2: Requires LaFata to maintain records in accordance with 40 CFR 63.806 (MACT JJ recordkeeping requirements). LaFata maintains records of certified product data sheets which show the VHAP, VOC, and formaldehyde content of all coating products. LaFata maintains records of the monthly "E" value calculation (Equation 1) to show compliance with lb VHAP/lb solids requirements. LaFata also maintains records indicating that all staff have taken a class on the work practice standards of Subpart JJ. LaFata appears to meet these recordkeeping requirements.

Section VI – S.C. 3: Requires LaFata to maintain product data sheets for each material, the VHAP content of each material, and the VOC content of any strippable booth coating. LaFata maintains these records. No strippable booth coatings are used because no stripping is done at LaFata. Coatings are manually sanded off rather than chemically stripped.

Section VI – S.C. 4: LaFata shows compliance with 40 CFR 63.804 (a) of MACT JJ by calculating "E" using Equation 1. The E value is based on the usage and VHAP content of materials and must be less than 0.8 to show compliance. Mr. Jenson provided me with a spreadsheet that calculates the value of E each month. I reviewed this spreadsheet and verified that the E value is calculated correctly based on the data entered. The calculated E values are less than 0.8 in all months that I reviewed (January 2022 through July 2023). The highest reported E value is 0.08.

Section VI - S.C. 5, 6, & 7: Not applicable because Lafata does not utilize these compliance methods. Lafata shows compliance with VHAP limits by calculating an "E" value using equation 1 according to 40CFR 63.804 (a) of MACT JJ.

Section VI – S.C. 8: Requires LaFata to maintain the work practice implementation plan and all records associated with fulfilling the requirements of that plan. Mr. LaFata provided me with a copy of the operator training program that is in place. LaFata performs leak checks on a monthly basis in accordance with the required inspection and maintenance plan.

Reporting: LaFata appears to be in compliance with their reporting requirements. MACT JJ reporting, ROP Annual report, MAERS report, and ROP Semi-annual report were all submitted in March 2023 and September 2023.

There are no cold cleaners at the facility. If paint guns need cleaning, a small squirt bottle of acetone is used to wash the guns out. Mr. Jensen stated that there are no boilers or emergency generators at the facility.

Compliance Determination

Based on the records review, and the onsite inspection, Lafata appears to be operating in compliance with all applicable air quality requirements.

NAME Sebastian Kallemkal DATE 10/03/2023 SUPERVISOR Joyce