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

B762559455

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:** 06/15/2021
STAFF: Adam Bognar	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On Tuesday, June 15, 2021, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) employee Adam Bognar 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-B7625-2017.

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-B7625-2017 was reissued in 2017 and now includes PTI No. 8-15A. PTI No. 8-15 was issued in March 2015 for a replacement automated paint booth. Since then 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 in non-attainment status for ozone and in attainment status for all other criteria pollutants (CO, 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.

Due to the on-going COVID-19 pandemic, a record review was conducted electronically rather than on-site. Mr. Jensen provided all of the requested records prior to this inspection.
I arrived at the facility at around 9 am. I met with Mr. James Jensen (Jim), Plant Manager. I identified myself and stated the purpose of the inspection. Mr. Jensen gave me a tour of the LaFata manufacturing facility.

LaFata manufactures custom modular wooden cabinetry. The facility employs around 80 people 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.

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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. There is a chrome roller at the outlet of the booth that removes this overspray from the belt on a continuous basis. The chrome roller spans the entire width of the conveyor belt. The roller receives a continuous coating of solvent (Thinner R) so that as it rolls over the belt the coating is picked up by the roller. The coating is continuously scraped off the roller into a 5-gallon bucket located beneath the booth. This 5-gallon bucket fills up

approximately 2-3 times per day. The bucket contents are emptied into closed 55-gallon drums and sent to a hazardous waste facility in accordance with Section III – S.C. 1.

Dry filters in EU-AUTOLINE2 are changed 2 to 3 times per day. It is in LaFata's best interest to maintain clean booth filters to maintain the quality of their finishes. 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 Section III – S.C. 2. Exhaust filters appeared to be installed, maintained, and operated in a satisfactory manner in accordance with Section IV – S.C. 1.

Section I – S.C. 1: 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 March 2021 showed VOC plus acetone emissions at 20.13 tons. Combined VOC and acetone emissions for 2019 and 2020 are reported at 26.91 tons and 19.44 tons, respectively. 12-month rolling emissions were highest during the 12-month period ending in December 2019 (26.91 tons).

Stemming from my previous inspection, there was a misunderstanding between LaFata and AQD regarding how the VOC content of recovered solvents is subtracted from VOC emissions. Mr. Jensen estimates that between six and eight 55-gallon drums of combined paint waste are disposed of every two weeks.
During my last inspection, LaFata had been subtracting the full weight of the combined coating waste as "Thinner R" at 100% VOC. I explained that this is not a valid approach because it does not account for the solid/non-VOC content in the thinner waste. LaFata needs to determine the VOC content of the waste being sent out if LaFata wishes to subtract these VOC's from their EU-AUTOLINE2 VOC emissions. I requested that LaFata perform a VOC content analysis of each batch of coating sent out; or, alternatively, come up with another approach that is satisfactory to the AQD District Supervisor.

After that inspection, LaFata did modify how they account for waste VOC. LaFata began counting all of the coating waste as "clear topcoat" as this is the material used in the highest quantity. "Clear topcoat" has the lowest VOC content relative to the other coatings sprayed EU-AUTOLINE2. LaFata explained that counting everything as a relatively low-VOC coating, they will likely understate the amount of VOC reclaimed.

The thinner tank waste is still counted as 100% Thinner R (100% VOC). This is not accurate because the Thinner R inevitably becomes contaminated with some amount of paint solids/solvents as it is used to continuously clean paint off the chrome roller section of the EU-AUTOLINE2 conveyor belt.
AQD did not accept or object to this method of reporting VOC. LaFata reported VOC using this method from November 2018 to the date of this inspection.

It may be true that this method under reports VOC; however, this is not an acceptable method for LaFata to account for reclaimed VOC. AQD cannot be certain that reclaimed VOCs are under reported. I explained to Mr. Jensen that LaFata needs to analyze each batch of waste sent out for VOC content if they wish to count that VOC as reclaimed. Mr. Jensen explained that these tests would be especially complicated and onerous for LaFata to perform. Mr. Jensen explained that these tests will cost LaFata approximately $1,800 dollars every two weeks.

I spoke with Warren District Supervisor Ms. Joyce Zhu about this issue. Ms. Zhu stated that LaFata may perform a quarterly analysis on the waste rather than analyze each batch. The results from each quarterly analysis shall be used to calculate VOC content for that quarter. If LaFata shows that VOC content does not change significantly for 4 consecutive quarters, then LaFata may reduce this requirement to a bi-annual waste analysis. If the bi-annual analysis does not change significantly for two consecutive years, then AQD will reduce this requirement to an annual analysis.

AQD should have advised LaFata to report VOCs in this manner long ago. Since the VOC content of reclaimed emissions is not known, VOC emissions from EU-AUTOLINE2 are not necessarily accurate. AQD will not issue a violation notice for this non-compliance. I should have better explained AQD's expectations regarding analysis of reclaimed VOC waste during my previous inspection. I informed Mr. Jensen that I need to see records of the first

quarterly analysis by November 2021 if LaFata wishes to continue subtracting reclaimed VOC from the VOC emissions in EU-AUTOLINE2. AQD will follow up with LaFata in November 2021 to ensure that this analysis is performed.

If LaFata did not subtract the reclaimed coating waste from VOC emissions, LaFata would still be able to meet their VOC emission limits. Based on my review of the records and calculations, the highest reported amount of VOC reclaimed in a single month is approximately 1.7 tons. If this amount was actually emitted each month rather than reclaimed it would result in an increase in VOC emissions of 20.4 tons per year. Combined VOC and acetone emissions for 2019 and 2020 are reported at 26.91 tons and 19.44 tons, respectively. VOC and acetone combined are limited to 60.1 tons per year. Even if all of the reclaimed solvent were reported as being emitted, annual VOC emissions from LaFata would be 47.3 tons in 2019 and 39.84 tons in 2020.

Section II – S.C. 1, 2: Limits 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/gallon VOC, but it is applied as a mixture that is calculated to be approximately 4.2 lbs/gallon (minus water) VOC.

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. Mr. Jensen stated that, in the past, LaFata has submitted a request to the AQD District Supervisor to use formulation data in lieu of performing a Method 24 analysis. I could not locate this request in AQD files. I asked Mr. Jensen to re-submit this request. 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.

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. Complete records up to March 2021 were provided to me during my inspection.

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. Mr. Jensen provided me with monthly and 12-month rolling records beginning in December 2019 all the way through March 2021.

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 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.

Section III – S.C. 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. Since the baghouses are exhausted indoors and appear to be functioning properly, they should meet the emission limit of 0.010 lbs PM/1000 lbs exhaust gas in accordance with (Section I – S.C. 1).

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.

Section I – S.C. 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. Emissions were highest during the 12-month rolling period ending in October 2020 at 19.72 tons. 17.61 tons of VOC were emitted in all of 2019.

Emissions from FG-FINISH are likely slightly overstated. This is because a small amount of waste coatings/thinner is collected from the three booths in FG-FINISH. This waste is collected in 5-gallon pails and periodically transferred to the same 55-gallon drums as the EU-AUTOLINE2 waste. This causes the reported emissions of FG-FINISH to be slightly higher and the emissions of EU-AUTOLINE2 to be slightly lower. The vast majority of waste coatings/thinner comes from EU-AUTOLINE2. Only a small amount of waste coatings/thinner comes from FG-FINISH.

I explained to Mr. Jensen that LaFata needs to account for where the waste coatings come from. I explained that VOC reclaimed from EU-AUTOLINE2 must be subtracted from EU-AUTOLINE2 VOC emissions, and VOC reclaimed from FG-FINISH must be subtracted from FG-FINISH VOC emissions. I explained this to Mr. Jensen. I will ensure that future record submittals at Lafata report emissions in this manner.

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 6.61 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. I verified that test caps are available for pressure testing the 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.

LaFata currently uses Manufacturer's formulation data to determine VOC content. Mr. Jensen stated that, in the past, LaFata has submitted a request to the AQD District Supervisor to use formulation data in lieu of performing a Method 24 analysis. I could not locate this request in AQD files. I asked Mr. Jensen to re-submit this request. 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.

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. Mr. Jensen provided me with monthly and 12-month rolling records beginning in December 2019 and ending in March 2021.

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). The lb VHAP/lb solids is less than 1.0, as required, for all months I reviewed. In December 2020, the "E" value was 0.07 lb VHAP/lb solids. The highest reported E value during the period I reviewed is 0.08 lb VHAP/lb solids.

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 2021. 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. Lafata is required to perform Method 311 analysis to quantify any HAPs identified in formulation data. Additionally, Lafata is required to determine the solids content by weight using EPA Method 24. As an alternative, Lafata my request approval from the AQD district supervisor to use an alternative method for determining VHAP content of the coating. Lafata does not appear to be in compliance with this condition. No Method 311 testing is performed and Lafata has not received approval to use an alternative method to determine VHAP content.

I discussed this issue with AQD district supervisor Ms. Joyce Zhu. AQD will not issue a violation notice for this non-compliance. Based on the VHAP content outlined in the product data sheets, average VHAP content for the materials used at Lafata is always less than 0.1 lb VHAP/lb solids. This is significantly less than their limit of 1 lb VHAP/lb solids. AQD will evaluate potential compliance options over the coming weeks. It is possible that Method 311 testing will be required if an alternative method is not found to be acceptable.

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 (attachment). 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 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 1 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 1 in all months that I reviewed (July 2020 through December 2020). 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 2021.
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

LaFata does not account for their reclaimed VOC waste in a satisfactory manner. AQD will follow up with LaFata by November 2021 to assess the facilities progress towards this goal.

Lafata is not in compliance with the performance testing requirements of 40 CFR 63.805 as specified in FG-MACT Special Conditon V.1. AQD will evaluate potential compliance options and seek to bring Lafata into compliance with these requirements by November 2021. It is possible that Method 311 testing will be required if an alternative method is not found to be acceptable.

Lafata appears to be operating in compliance with all other 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 (EGLE-AQD) Administrative 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-B7625-2017.

NAME Adam Bogren DATE 9/24/2021 SUPERVISOR K. Kelly