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

B762547263

FACILITY: LAFATA ENTERPRISES INC.		**SRN / ID:** B7625
LOCATION: 50905 HAYES RD., SHELBY TWP		**DISTRICT:** Southeast Michigan
CITY: SHELBY TWP		**COUNTY:** MACOMB
CONTACT: James Jensen , Plant Manager		**ACTIVITY DATE:** 11/02/2018
STAFF: Adam Bognar	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On Thursday, November 2, 2018, Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) staff, I, Adam Bognar, conducted an unannounced 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 Environmental Quality, Air Quality Division (MDEQ-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.

I arrived at the facility at around 9:30 am. I met with Mr. James Jensen (Jim), Plant Manager. I identified myself, provided credentials, and stated the purpose of the inspection. Mr. Jensen escorted me upstairs to an office where we discussed the current state of operations at Lafata and reviewed records.

Lafata manufactures custom modular wooden cabinetry. The facility employs around 75 production workers 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.

I asked Mr. Jensen if there have been any recent changes in facility operations such as new coatings or process changes. Mr. Jensen stated that within the last year, Lafata has switched paint manufacturers from Valspar to Sherwin Williams. Valspar had trouble producing coatings that would both meet the ROP requirements for VOC content and produce quality finishes on their products. Sherwin Williams is now contracted to manufacture all primers, stains, and paints at the facility. There are several new coatings that began use in the last year. Attached are the environmental data sheets for the new coatings (Attachment 4).

The cleaning/purge solvent has changed as of December 2017. The new cleaning/purge solvent is called "BGL Lacquer Thinner LT-R" or simply "Thinner R". The SDS for this product is attached (Attachment 4). Thinner R contains approximately 15% HAPs (8% Methanol and 7% Toluene). Thinner R replaced the old cleaning/purge solvent which was a 50% acetone, 50% n-butyl acetate mixture.

Mr. Jensen informed me that he is thinking about switching cleaning/purge solvents again due to a scarcity of Thinner R. The mixture he is considering switching to is a reclaimed solvent known as "B-CLEAN-UP WASH SOLVENT". The SDS for this product is attached (Attachment 4). This solvent contains approximately 50% HAPs (30% methanol, 20% toluene, and other trace HAPs).

Both Thinner R and B-CLEAN-UP WASH SOLVENT appear to be compliant cleaning/wash off solvents regarding MACT JJ. Table 4 of MACT JJ is a list of pollutants excluded from use in cleaning and wash off solvents. Neither of these solvents contains compounds listed in Table 4 of MACT JJ.

There is a significant change in the way the cleaning/purge solvent, Thinner R, is reclaimed from both EU-

AUTOLINE2 and FG-FINISH. Within the last year, Lafata ceased using their 50-gallon distillation unit for solvent reclamation. The distillation unit could not function properly with the level of solids within the waste. This solvent/paint waste is now collected in 55-gallon drums and disposed on a bi-weekly basis. Mr. Jensen estimated that 6-8 drums (55-gallon) of combined paint/varnish/purge solvent waste are shipped out every two weeks.

At the time of inspection, the full weight of the 6-8 waste drums are subtracted from the reported emissions from FG-FINISH. This significantly reduces the reported emissions from FG-FINISH and causes the emissions from EU-CLEANUP to be negative. Keeping records in this way is not representative of actual emissions/usage. Most of the combined solvent waste comes from EU-AUTOLINE2.

Additionally, this waste is not comprised of 100% Thinner R, or even 100% VOC/acetone. There is some amount of paint solids in the waste. I informed Mr. Jensen that if Lafata wishes to subtract this combined solvent waste from the facility VOC emissions, then he must do one of two things: (1) perform an analysis of each batch of waste to determine VOC content or (2) come up with a logical estimate of total VOC content of the combined waste that errs on the side of higher reported emissions. I also informed Mr. Jensen that he needs to come up with a reasonable calculation or estimation of which booths the solvent waste is coming from.

MI-ROP-B7625-2017
The ROP conditions referenced under each sub-heading apply only to the emission unit or flexible group stated in the subheading.

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 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 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 (Attachment 1). The most recent 12-month rolling total ending in September 2018 was 21.58 tons. The attached 12-month rolling records do not include acetone emissions. I asked Mr. Jensen to revise the rolling 12-month rolling records to include acetone emissions.

Based on information provided to me in their daily record logs (Attachment 2), the annual acetone usage is around 10 tons. This would put the actual combined VOC and acetone 12-month rolling total at approximately 31.58 tons. In addition, since the waste cleaner/purge solvent is currently shipped out as unanalyzed combined waste, it may be useful to consider what the emissions from EU-AUTOLINE2 would be if all this waste was emitted from this process. Thinner R has a density of 6.84 lbs/gallon and total facility-wide usage is approximately 7,200 gallons per year. This equates to approximately 24.6 tons of potential emissions from Thinner R. In this case, emissions would be approximately 56.1 tons, which is still slightly below the limit of this condition. In actual operation, most of Thinner R is recovered and shipped off as waste.

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 (Attachment 3). 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 VOC. I requested that Mr. Jensen perform a Method 24 analysis of the catalyst mixture as applied.

Section III – S.C. 3: Requires Lafata to store VOC and/or HAP containing materials in a manner that minimizes fugitive emissions. Material storage containers were closed during my inspection. 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 recently switched coating manufacturers from Valspar to Sherwin Williams. As a result of this switch, the formulation of every coating has changed slightly. Additionally, there are some new coatings. I informed Mr. Jensen that since all of his coatings have changed to some degree, he needs to submit a request, by December 21, 2018 to the MDEQ-AQD district supervisor to use manufacturers data in lieu of Method 24. Additionally, I requested that Lafata perform a Method 24 analysis of five coatings, as applied, that I chose based on either high usage or high relative VOC content. The five coatings I requested analysis of: "Catalyst mixture", "Kemvar Clear 35 Sheen", "Kemvar plus reducer", "primer/surfacer white", "paint white".

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 September 2018 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. Per my request, Mr. Jensen provided me with environmental data sheets for the new formulations that began use within the last year (Attachment 4).

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 (attachment 2). Mr. Jensen provided me with monthly and 12-month rolling records beginning in January 2018 and ending in September 2018 (attachment 1).

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 get out 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.

There is a tarp that encloses the space between the cyclone hopper and the collection trailer so that debris do not blow around. I noticed that on one of the collection trailers, the cover was not snug on the trailer which caused some wood shavings to become scattered around near the trailer. I asked Mr. Jensen to maintain a snug fit on the tarp enclosure and he agreed.

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 approximately 3 years ago. 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 (Attachment 1). The 12-month rolling totals emission totals for FG-FINISH are negative in some cases. This is because the full weight of the

combined coating/cleanup waste from all processes at the facility, including EU-AUTOLINE2, is subtracted from the FG-FINISH emissions. Specifically, the waste is subtracted from EU-CLEANUP. To find out what the actual emissions are, I added up the emissions from the FG-FINISH Daily Emission totals (Attachment 2). Emissions from FG-FINISH are approximately 2.9 tons per year.

I informed Mr. Jensen that he needs to revise the 12-month rolling emission records for FG-FINISH. I informed Mr. Jensen that he needs to either have the waste analyzed for VOC content or come up with a reasonable estimate of the VOC content of the combined waste. Any estimate of VOC content needs to err on the side of higher reported emissions. Additionally, solvent waste subtracted from FG-FINISH must be generated from FG-FINISH. EU-AUTOLINE2 combined waste VOC cannot be subtracted from FG-FINISH emissions.

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 (Attachment 3).

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. 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 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. 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 recently switched coating manufacturers from Valspar to Sherwin Williams. As a result of this switch, the formulation of every coating has changed slightly. Additionally, there are some new coatings. As discussed above in EU-AUTOLINE Section V – S.C. 1, I asked Mr. Jensen to submit a request to use manufacturers data in lieu of Method 24. I did not request a Method 24 analysis of any of the coatings in FG-FINISH because their usage is much less than the coatings in EU-AUTOLINE2.

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. Per my request, Mr. Jensen provided me with environmental data sheets for the new (within the last year) formulations (Attachment 4).

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 January 2018 and ending in September 2018 (Attachment 1).

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.

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. Mr. Jensen provided me with the training manual. A mandatory refresher class is given to all employees annually. Based on my inspection, record review, and review of 40 CFR 63.803, Lafata appears to be in compliance with applicable work practice standards.

Section V – S.C. 1: Requires Lafata to comply with the performance test requirements outlined in 40 CFR 63.805. Lafata will need to perform EPA Method 24 analyses of some of the coatings to address this requirement. This requirement was addressed above in EU-AUTOLINE2 Section V – S.C. 1 and FG-FINISH Section V – S.C. 1.

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 may need to perform a Method 311 analysis on some of the coatings to address this requirement.

Section VI – S.C. 1, 2: Requires Lafata to maintain records in accordance with 40 CFR 63.806 (MACT JJ recordkeeping requirements). 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 (Attachments 4 & 5). 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 (Attachment 5). 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 (January 2018 through June 2018). The highest reported E value is 0.11.

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 (Attachment 6).

Reporting: Lafata appears to be in compliance with their reporting requirements. The most recent semiannual report of monitoring and deviations was received by the MDEQ-AQD on September 19, 2018. The most recent annual certification of compliance was received by the MDEQ-AQD on March 8, 2018. The reporting requirements of 40 CFR Part 63.807 (MACT JJ) appear to be met.

Hot Melt Adhesive Station: There is one hot melt adhesive station used to glue wood pieces together as part of the cabinet assembly. Mr. Jensen stated that the adhesive used is 100% solids. The adhesive application process is exhausted indoors. I requested that Mr. Jensen provide me an EDS for the hot melt adhesive.

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.

Compliance Determination

This facility appears to be in 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 Environmental Quality-Air Quality Division (MDEQ-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.

I requested that Mr. Jensen take the actions I requested and make the revisions to records I requested by December 23, 2018. These changes include:

- Adding Thinner R emissions to the 12-month rolling totals of both EU-AUTOLINE2 and FG-FINISH.
- Adding acetone emissions to the 12-month rolling totals in EU-AUTOLINE2
- Coming up with a justified estimate of VOC content of the combined solvent waste. (if he wishes to subtract this VOC from emission totals.)

- Coming up with a justified estimate of how much of the Thinner R is used in EU-AUTOLINE2 versus FG-FINISH.
- Sending a request to the MDEQ-AQD district supervisor requesting to use manufacturers data to determine VOC content, water content, and density of coatings, in lieu of Method 24.
- Perform a Method 24 analysis of the five coatings I requested.
- Provide an EDS for the hot melt adhesive used.

If Lafata does not take these actions by December 23, 2018, the AQD may issue a violation notice to Lafata for one or more of these issues.

NAME Adam Bogner DATE 1/14/2019 SUPERVISOR SK