

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

B762531238

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: 07/30/2015
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection of a major source.		
RESOLVED COMPLAINTS:		

On Thursday, July 30, 2015, Michigan Department of Environmental Quality – Air Quality Division (MDEQ-AQD) Staff Erik Gurshaw and I conducted an unannounced, scheduled, level 2 inspection of Lafata Enterprises Inc. (Lafata), located at 50905 Hayes Road in Shelby Township, Michigan. The purpose of this inspection was to determine the facility's compliance with the federal Clean Air Act, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the conditions of Renewable Operating Permit (ROP) No. MI-ROP-B7625-2012, Permit to Install (PTI) No. 8-15A, and 40 CFR Parts 9 and 63 Subpart JJ – National Emissions Standard for Hazardous Air Pollutants for Wood Furniture Manufacturing (40 CFR Parts 9 and 63 Subpart JJ).

Mr. Gurshaw and I arrived on site around 1:00 PM. We met with Mr. James Jensen, Plant Manager. Mr. Jensen provided records, and he explained equipment and operations during a site walkthrough. I provided Mr. Jensen with my contact information and a copy of the pamphlet "DEQ Environmental Inspections: Rights and Responsibilities."

Opening Meeting

Lafata manufactures residential wooden cabinetry. The facility starts with raw lumber, particleboard, and sheet stock. They then perform woodworking and finally prime, stain, or paint the wood before assembling the final product. Plastic and metal parts arrive ready-made according to Mr. Jensen. The facility has approximately 75 employees in production. They operate from 8:00 AM to 4:30 PM Monday through Fridays and sometimes on Saturdays.

The facility received their newest PTI No. 8-15A on July 17, 2015, about two weeks prior to this inspection. PTI No. 8-15A was issued to permit a new primer at the facility. The original PTI No. 8-15 was issued for the reconstruction of Lafata's main coating line EU-AUTOLINE. The reconstructed EU-AUTOLINE is referred to as EU-AUTOLINE2. On May 26, 2015 MDEQ-AQD received notification that installation of the new equipment was complete.

Facility Walk-Through

FG-WOODWORK – MI-ROP-B7625-2012

FG-WOODWORK contains EU-WOODWORK-N in the north building and EU-WOODWORK-S in the south building. EU-WOODWORK-N consists of woodworking and machining equipment such as sanding and panel processing. Dust from these processes travels through one cyclone and through two baghouses. The exhaust appears to travel to the in-plant environment per Special Condition (S.C.) VIII.1. Extra bags are available on-site and are replaced as needed. Heavy dust collected by the cyclone collects in a covered dumpster and is disposed of by Sterling Sanitation approximately once a month according to Mr. Jensen. Lighter dust collected by the baghouses is collected in covered drums and is disposed of as needed. This equipment appears to operate properly per S.C. I.1 and III.1. No opacity was observed on site.

EU-WOODWORK-S consists of additional woodworking and machining equipment. Dust from these operations travels through one cyclone and one baghouse and appears to travel back into the in-plant environment per S.C. VIII.1. Bags are replaced as needed. According to Mr. Jensen, approximately 120 bags were replaced last year, and 160 are on order. Cyclone dust is collected by a farming facility for reuse. Equipment appears to operate in accordance with S.C. I.1 and III.1.

FG-FINISH – PTI No. 8-15A

FG-FINISH consists of EU-BOOTH1, EU-BOOTH2, EU-BOOTH3, EU-CLEANUP, and EU-ASSEMBLY. EU-AUTOLINE was removed from FG-FINISH in PTI No. 8-15. It is now permitted as a separate emission unit under EU-AUTOLINE2.

Coating and Waste Storage Area

New coatings (stains, varnishes, lacquers, and paints) and waste materials are stored separately in the same room. All containers appeared to be closed per S.C. III.1 and S.C. III.3, and smaller containers are organized on shelving units. Hazardous waste materials appear to be disposed of properly per S.C. III.1 according to a hazardous waste manifest provided by Mr. Jensen from June 2, 2015. No odors were observed in the area.

EU-BOOTH1 & EU-BOOTH2

Spray booths 1 and 2 are batch booths located on opposite walls of the same room in the north building. Each booth is divided into two sections to allow for more products to be coated. These booths use HVLP applicators and air-assisted airless spray applicators, which appear to be a comparable technology to HVLP applicators, per S.C. IV.2. Fiber mesh filters are located behind sheet filters that are replaced as necessary if there is overspray. Filters appear to be operating properly per S.C. IV.1. Stains are sometimes applied by wiping wood with rags that are dipped in a 1-gallon container of stain. Because transfer efficiency from rag application is effectively 100%, this process does not appear to have notable particulate emissions.

EU-BOOTH3 is a batch booth located in the south building. According to Mr. Jensen, only water-based paint is applied here. Paint is applied via an air-assisted airless spray applicator, which appears to be a comparable technology to HVLP applicators, per S.C. IV.2. Sheet filters are in place and fiber mesh filters are located behind them. No gaps appeared in the filter, and they are replaced as needed if there is overspray per S.C. IV.1. Extra filters are available for replacement.

EU-ASSEMBLY consists of adhesive operations related to final assembly. Three types of glue used in EU-ASSEMBLY are in material properties records provided by Lafata.

EU-AUTOLINE2 – PTI No. 8-15A

EU-AUTOLINE2 is a reconstructed version of the main coating line EU-AUTOLINE. Wood panels travel on a solid flat carbon fiber belt several feet wide, through a panel cleaner where dust is collected, past two horse brushes, and then to the spray area of the coating line. The new spray area consists of three circuits of four spray guns, for twelve spray guns total. These three circuits of spray guns reciprocate perpendicular to the belt. These spray guns are the same exact type manufactured by Kremlin as the previous guns, except previously there were eight applicators and they traveled in an elliptical shape. The spray guns are air-assisted airless applicators per S.C. IV.2. Filters are the same paper filter in front of a fiberglass mesh as seen on the three batch paint booths on site per S.C. IV.1. Filters appear to be operating properly; no opacity was observed.

The old autoline only applied clear coat. EU-AUTOLINE2 can apply primer, paint, and clear coating. A two-sided part may travel through the line four times from priming to clear coating.

A new drying oven is part of the new EU-AUTOLINE2. Parts travel up the first tower of the oven at about 61°C and down the second tower at about 78°C. The oven is powered by a heat exchanger connected to a natural-gas fired 750,000 BTU/hr hot water heater. The hot water heater appears to be exempt from 40 CFR Part 63 Subpart DDDDD – Industrial, Commercial, and Institutional Boilers and Process Heaters per §63.7491. A hot water heater has a threshold heat input of 1.6 MMBTU/hr and a 120 gallon tank capacity per §63.7575. The hot water heater on site is below this heat input threshold and is a tankless unit according to Mr. Jensen.

Overspray is no longer removed from this main coating line via a water wash system. Now overspray is scraped and cleaned off the belt with a roller and collected into a bucket. An issue with this system has been material thickening on the collection roller. The facility plans to fix this issue by implementing a new conversion varnish primer.

Collected overspray is distilled in a 50-gallon distillation unit. The distillation unit appears to be exempt from permitting requirements per R 285(u). The sludge is captured and disposed of as hazardous waste per S.C. III.1. The resulting solvent is reclaimed as additional washoff solvent to clean the main coating line.

Waste disposal appears to be performed properly in the coating and waste storage area mentioned above per S.C. III.1 and III.3.

Recordkeeping

EU-AUTOLINE2 – PTI No. 8-15A

Mr. Jensen provided a listing of the chemical composition of each material used on the main coating line for January of 2015 through June of 2015 per S.C. VI.2. PTI No. 8-15A limits the VOC content of all materials used on the line to 4.6 pounds (lbs) VOC per gallon minus water per S.C. II.1 and II.2. MDEQ-AQD cannot evaluate compliance with these permit conditions at this time because records for July are not required until August 15, 2015, and the inspection was conducted July 30, 2015. PTI No. 8-15A was issued July 17, 2015. Records provided by Lafata for January through June of 2015 show that materials are in compliance with MI-ROP-B7625-2012 and PTI No. 8-15, which both limited VOC content of coatings to 5.0 lbs VOC/gal minus water. The catalyst used in the Low VOC Varnish (Item Number 31-9031) has a VOC content of 5.00 lbs VOC per gallon minus water. Mr. Jensen provided formulation data for the new conversion varnish primer, which has a VOC content of 4.58 lbs VOC per gallon minus water.

Mr. Jensen provided the monthly coating and material usage for EU-AUTOLINE2, as well as VOC plus acetone combined emission calculations from January of 2015 through June of 2015 per S.C. VI.3. Since the new coating line has been operational, less than 12 months rolling, calculations show 4.33 tons of VOC plus acetone combined emissions, well below the limit of 60.1 tons per year per EU-AUTOLINE2 S.C. I.1. A full year of operation of EU-AUTOLINE2 is required to determine compliance with this 12-month rolling emission limit.

FG-CLEANUP – PTI No. 8-15A

Mr. Jensen provided a listing of the chemical composition of each material used in FG-FINISH for January of 2015 through June of 2015 per FG-FINISH S.C. VI.2. PTI No. 8-15A limits the VOC content of each coating to 6.7 lbs VOC per gallon minus water per S.C. II.1. Coatings used from January of 2015 through June of 2015 are in compliance with this limit.

Mr. Jensen provided the monthly coating and material usage on FG-FINISH, as well as VOC combined emission calculations from January of 2015 through June of 2015 per S.C. VI.3. The facility has kept records in this fashion since March of 2015, when PTI No. 8-15 was issued. Previously FG-FINISH was composed of additional emission units and had different VOC emission limits. For the time since the new coating line has been operational, calculations show 2.03 tons of VOC emissions, below the limit of 29.2 tons per year per S.C. I.1. A full year of operation of the new coating line is required to determine compliance with this 12-month rolling emission limit.

FG-MACT – MI-ROP-B7625-2012

This flexible group was unchanged by PTI No. 8-15A. FG-MACT requires compliance with 40 CFR Parts 9 and 63 Subpart JJ. According to the facility's Formulation Assessment Plan, per S.C. VI.8(e), the only volatile hazardous air pollutant (VHAP) of concern is formaldehyde, and the facility keeps certified product data sheets on each finishing material per S.C. VI.3. The facility follows the "Averaging Approach" compliance method per S.C. VI.4. The semi-annual compliance report shows that for the reporting period of January 1, 2015 through June 30, 2015, the maximum facility emission limit (E) was calculated as 0.23 lbs of VHAP/lbs solids in June of 2015, below the limit of 1.0 lb VHAP/lb solids.

Mr. Jensen provided a monthly leak check spreadsheet per S.C. VI.8(b) for 2015. The chemical line was tightened on April 6th, 2015. No other leaks have occurred. According to Mr. Jensen, the facility cannot operate with active leaks because paint lines for air assisted airless spray technology require a fluid pressure of 300 to 700 pounds per square inch. Leaks are repaired immediately. I explained to Mr. Jensen that although leaks are repaired immediately, the federal standard requires a monthly leak check.

Regarding records associated with the cleaning accounting system per S.C. VI.8(c), according to Mr. Jensen, Lafata does not use a solvent to strip product per S.C. VI.8(c) and §63.803(d). If they need to strip a product they will remake the part or sand off the finish. However the facility does use solvent to remove coating materials from equipment used in wood furniture manufacturing operations. Solvent used for cleaning operations is accounted for in the daily solvent inventory records.

Cleaning and washoff solvent accounting records were provided for January of 2015 through June of 2015 showing the amount of Thinner R used daily, as well as a sample handwritten sheet to demonstrate how daily records are kept per S.C. VI.3(a). According to product data provided by Mr. Jensen, Thinner R does not have any pollutants listed in Table 4 of Subpart JJ per §63.806(b).

A complete Work Practice Implementation Plan (WPIP) provided by Lafata in 2012 is located in MDEQ-AQD records. According to Mr. Jensen, the facility is updating its operator training programs to reflect the new permit requirements and operation along the main coating line. He provided signed rosters showing that employees received training for 2015 on job duties per S.C. VI.8(a), as well as hazard communication training, formaldehyde emission training, spray booth cleaning training, chemical storage and labeling, and hazardous waste training. During the next facility inspection, when the facility has become familiar with its new main coating line, if there are outdated parts of the WPIP I will request that the facility provide an updated WPIP.

The facility does not appear to use conventional air spray guns per S.C. VI.8(c) and §63.803(h).

Method 24 Testing

Lafata received approval to use Formulation Data in lieu of Method 24 testing for determining VOC content on March 2, 2006 and on January 17, 2008. The facility appears to use the same coatings as were approved at that time per EU-AUTOLINE2 S.C. V.1 and FG-FINISH S.C. V.1. I informed Mr. Jensen that new coatings will require Method 24 testing or approval to use Formulation Data per EU-AUTOLINE2 S.C. V.1 and FG-FINISH S.C. V.1.

On-site I collected a sample of varnish Valspar AUF5503 as applied for Method 24 analysis. Laboratory results show a VOC content of 4.59 lbs VOC/gallon of coating minus water. This is below the limit of 4.60 lbs VOC/gallon of coating minus water per EU-AUTOLINE2 S.C. I.II. However, records from the facility provide a VOC content of 4.14 lbs VOC/gallon minus water. I requested that the facility use the VOC content determined via the MDEQ-AQD Method 24 analysis for varnish Valspar AUF5503.

Conclusion

Based on the MDEQ-AQD inspection and records review, it appears that Lafata is in compliance with the federal Clean Air Act, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the evaluated conditions of ROP No. MI-ROP-B7625-2012, PTI No. 8-15A, and 40 CFR Parts 9 and 63 Subpart JJ. Compliance with material limits and emission limits of PTI 8-15A will be determined during the next facility inspection when complete 12-month rolling records are available.

NAME  DATE 9/21/15 SUPERVISOR CTE