

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

N398342250

FACILITY: SPECIAL-LITE		SRN / ID: N3983
LOCATION: 88448 CR 668, DECATUR		DISTRICT: Kalamazoo
CITY: DECATUR		COUNTY: VAN BUREN
CONTACT: Stacey Hollenbeck , EHS Manager		ACTIVITY DATE: 10/10/2017
STAFF: Amanda Chapel	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT:		
RESOLVED COMPLAINTS:		

On October 10, 2017, AQD's Amanda Chapel (staff) conducted an unannounced inspection of Special-Lite (facility) located in Decatur, Van Buren County. The purpose of this inspection was to determine compliance with Permit to Install 579-93 for the foam injection machine, 73-03 for the coating lines, and all applicable state and federal air regulations. The following will summarize facility operations and compliance status.

I arrived at the facility at 10:15am. There were no visible emissions or odors detectable from the road leading up to the facility. I parked and entered the main entrance. I introduced myself to the secretary at the front desk, presented my inspection credentials, informed her that we were there to complete an unannounced air quality inspection, and asked for Ms. Stacey Hollenbeck. Ms. Hollenbeck retrieved me from the waiting area and I followed her into a conference room. We sat down and I explained that I was there to conduct an air quality inspection and that I would like to take a tour of the facility and review the required records.

The last inspection of the facility was on March 6, 2013 and the facility was not in compliance. At the last inspection, there were incomplete records for VOC content of coatings, equipment installed without updating the permit, and the stack height did not meet the requirements in the PTI for the coating lines. The stack height and updated permit equipment issue was later resolved with the conclusion that this paint booth was installed under exemption 287(2)(c) and did not need to comply with the general permit conditions. The facility has about 135 staff that work mostly Monday to Thursday and work 10-hour shifts. During the summer, their busiest time, they work overtime Friday and Saturday. There are no boilers at the facility. There is one emergency generator which was viewed during the inspection, and one cold cleaner.

First, Ms. Hollenbeck took me into the new building. We viewed the logistics area. This is where the aluminum is shipped before it is crafted into doors. The maintenance area is also located on this side of the building. All the equipment vents inside except for one milling machine. It was not running at the time of the inspection. The milling is exempt under rule 285(2)(l)(vi). Welding is also done in this area and it also vents outside. This is exempt under rule 285(2)(i). The cold cleaner is located in this area. The lid was closed at the time of the inspection and there were parts draining inside. This is exempt under rule 281(2)(h). I gave Ms. Hollenbeck a cold cleaner sticker to put on the lid outlining the proper operational procedures.

Next, we walked over to the fire door making area. There are two booths that vent out. The doors are made from gypsum material. Two types of titebond quickset glues are used to glue the door covering to the inside of the door. The glues are Titebond Advanced Polymer Panel Adhesive which is 18 g/l VOC less water and exempt solvent per the MSDS. There were two orders of the Advanced Polymer Panel Adhesive. One order for 2 5-gallon pails in 2016 and one for 6 2-gallon pails in 2017. The other glue is Titebond Quickset 1000 DEV with no VOC content listed on the MSDS. There were two orders of Titebond Quickset 1000 in 2016. One order was for 30 5-gallon pails and one order was for 25 5-gallon pails. One order was placed in 2017 for 25 5-gallon pails. Assuming the facility uses all the glue before ordering more, the largest order would equal 150 pounds of glue. Since it would be impossible to use more than 200 gallons of glue, this meets the 287(2)(c) exemption. VOC emissions from glue usage should be included in future recordkeeping. The door is then set in a door press. The booths are used for sanding and drilling of holes in the doors. There were no gaps visible in the filters in this area. A glue thinner is also used in this area.

We then walked over to the paint booth and MEK wash area. This is an L shaped area where the parts are painted. First, MEK is used to wipe down the parts under a vent hood which is exhausted outside. The amount of MEK used is tracked monthly. The largest amount of MEK used in one month was 40 gallons used in June 2017. MEK has a density of 6.7 lb VOC/gallon. This is 268 lbs VOC which is below the Rule 290(2)(a)(i) limit of 1000 pounds uncontrolled VOC/month. This record keeping sheet should be updated with total lbs VOC emitted/month. MEK emissions should also be included in the 30 ton VOC limit for the facility under the general coating permit.

During the inspection, the booth operator was mixing paint in the dedicated paint mixing area. All painting is done in this booth in the facility. The booth was installed under and is currently operating under Rule 287(2)(c). Therefore, this booth does not need to comply with the requirements under the general coating permit issued to the facility. All VOC emissions from this booth do need to be included in the 30 ton VOC limit for the facility in the general coating permit. The facility uses HVLP guns at about 40 lbs of pressure. They do not regularly test the guns to make sure they are operating at HVLP. They paint a few hours a day on average. More during the summer. We looked into the paint booth and the filters appeared to be in good condition. No gaps were visible. The parts are then either air dried or dried in an electric oven. The temperature of the oven varies throughout the day depending on what is being dried. The guns are cleaned with a lacquer thinner. It was recommended that this be added to the VOC recordkeeping during the last inspection and this has been done. Records are being kept on gallons used and VOC content of paint, lacquer thinner, clearcoat, hardener, activator, and MEK used. The MEK is being kept in separate records.

Next, we entered the old building. It is heated by two natural gas fired Hastings furnaces each 5.62 MMBtu/hr. These were installed in either 1994 or 1995. These are exempt under Rule 282(2)(b)(i). Here, we observed the aluminum storage area. There is also an area with two saws which are both vented to an indoor dust collector. All the aluminum scraps are swept up at the end of the day and recycled. This is exempt under Rule 285(2)(l)(vi)(B).

The old building is also where the old paint booth is located. This is now called the glue booth as only glue is used in it. There is only one adhesive used in this booth, a Hybond 12 Red Adhesive. This is purchased in 55-gallon drums. For the record keeping, all 53 of 55 gallons are applied to the month that the 55-gallon drum is changed out. This is to account for waste glue that is not used. This is about every 3 months on average. However, not all the glue is used during that month. This booth is subject to permit 73-03.

The foam injection machine is regulated under PTI 579-93. The facility is limited to under 267,000 pounds of part A per year. The foam injection machine has 3 presses. They use VORACOR CE 108 Isocyanate and DELTA-THERM AF 4517 Polyol. These are refilled 2-3 times a month on average. It was not running during the inspection. There were no visible emissions coming from the foam injection machine at the time of the inspection as it was not running.

The CNC router was in operation during the inspection as well. This is used to cut windows out of foam-filled doors. The doors are made from wood, polyurethane foam, and occasionally metal. The model is CR ONSRUD 122c18C. It was installed in 2011 and operates under Rule 290(2)(a)(iii). It vents to a Torit Baghouse which is vented outside. The emission rate (lbs/1,000 pounds air) is 0.01 and the exhaust flow rate is 11,000 cubic feet per minute. The facility keeps track of the number of doors processed per month and a calculation is done to determine particulate emissions. In the past 2 years, the highest number of doors cut per month was 27. This equated to 321 pounds of particulate. This appears to be in compliance with the Rule 290(2)(iii)(A) exemption.

Once the doors are constructed and cut, they go to the bench department or finishing area. From here they are sent to the shipping area where they are wrapped and packed. The framing department assembles the frames as much as possible before shipping to the consumer. They are also drilled in this area to allow for assembly.

There is one generator for the facility. It is a Cummins Onan Power Generation DGHD-5735045 with 50 Kva/40 Kw, 60 Hz. It was installed in 2005. It is diesel powered. This is exempt from permitting under Rule 282(2)(b)(i). It only runs in the event of a power outage. Ms. Hollenbeck said she did not recall it running last year and only occasionally the previous years. We walked around the perimeter of the building to observe the fire door vents and the paint booth stack. There were no VEs coming from the stack and the ground appeared to be clear.

Ms. Hollenbeck led me to a room where I could review the records kept at the facility. In order to ensure the paint booth's compliance with Rule 287(2)(c), gallon usage was reviewed. The records are kept for each material separately including paint, lacquer thinner, activator, hardener, and clearcoat. This is kept in gallons and VOC content. The records from 2017 are detailed below. The highest number of gallons used in 2016 was in June with 101.664 gallons used

Month	Total Tons VOC/Month	Total Gallons Used
January, 2017	0.117	50.868
February, 2017	0.081	45.078
March, 2017	0.181	76.031*
April, 2017	0.091	45.578
May, 2017	0.148	67.607
June, 2017	0.116	103.985*
July, 2017	0.136	60.438
August, 2017	0.243	103.199*
September, 2017	0.152	71.141

\* Indicates that 53 gallons of glue from the glue booth was included in this calculation

As mentioned above, the amount of MEK used is being kept in separate records. The highest number of gallons used in 2017 was in June and 40 gallons was used. In 2016, the highest usage month was August and 34 gallons was used. This The density of MEK is 6.7 lbs/gallon so the uncontrolled VOC emissions are below the 1000 lbs/month limit making the MEK usage exempt under Rule 290(2)(a)(i). The MEK VOC emissions do need to be added to the FG-SOURCE calculations for accurate record keeping.

Records show that the fire door booths are operating under Rule 290(2)(a)(ii). The facility's records show that there are four components which need to be considered. Calcium silicate and Poly/Fiberglass Mixture have an ITSL above 2 µg/m<sup>3</sup> and therefore have an emission limit of 1,000 lbs/month, total. The Crystalline Silica and Inert Ingredients each have an ITSL between 0.04 2 µg/m<sup>3</sup> and 2.0 2 µg/m<sup>3</sup> and have a total emission limit of 20 lbs/month. The records currently indicate that each of these toxic air contaminants have an emission limit of 20 lbs/month. The records need to be updated. Combining the emissions of the toxic air contaminants, the facility is still in compliance with this exemption. Additionally, the VOC emissions from the fire door glue used need to be included in the FG-SOURCE total.

The glue booth, subject to PTI 73-03, has VOC emissions of 267.12 pounds of VOC in March, June, and August of 2017. This is 0.133 tons of VOC emissions in those months. The glue booth is well below the 10 tons VOC/12-month per coating line limit. Total tons of VOC emitted for the facility from October 2016-September 2017 is 1.732 tons VOC/12-month rolling. This is well below the 30 tons VOC/12-month rolling limit in the general coating permit. The VOCs generated from the fire door glue usage and MEK usage need to be included in the record keeping as well. The VOC amount from these things will not cause the facility to be out of compliance with this permit condition. In conversations with the facility's consultant, these things will be added to the recordkeeping.

According to recordkeeping for the foam injection machine, the following amounts of Part A (VORACOR CE 108 Isocyanate) were used this year:

Month	Part A (VORACOR CE 108 Isocyanate) Used in Pounds
January, 2017	6,800
February, 2017	6,800
March, 2017	3,400
April, 2017	10,200
May, 2017	6,800
June, 2017	6,800
July, 2017	10,200
August, 2017	10,200
September, 2017	13,600

In 2016, the amount of Part A used was 187,900 lbs. This is below the limit of Part A allowed in permit 579-93. The facility appears to be in compliance with this permit.

Updated records to include exempt VOC emissions will be emailed to the department when they are completed. The facility appears to be in compliance with permit 73-03, 579-93, and the exemptions.

NAME Amur Chyfel

DATE 11/2/17

SUPERVISOR MA 11/2/2017