

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

B860370253

<b>FACILITY:</b> JELD-WEN Interior Door - Grand Rapids	<b>SRN / ID:</b> B8603
<b>LOCATION:</b> 4200 ROGER B CHAFFEE MEMORIAL BLVD., GRAND RAPIDS	<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> GRAND RAPIDS	<b>COUNTY:</b> KENT
<b>CONTACT:</b> Dustin Brown , EHS Manager	<b>ACTIVITY DATE:</b> 12/05/2023
<b>STAFF:</b> April Lazzaro	<b>COMPLIANCE STATUS:</b> Compliance
<b>SUBJECT:</b> Unannounced, scheduled inspection.	<b>SOURCE CLASS:</b> SM OPT OUT
<b>RESOLVED COMPLAINTS:</b>	

Staff, April Lazzaro and Laura Martin arrived at the facility to conduct an unannounced, scheduled inspection and met with Dustin Brown, Environmental, Health and Safety Manager. As we arrived at the facility, no odors or visible emissions were observed.

#### FACILITY DESCRIPTION

JELD-WEN Interior Door- Grand Rapids is an interior door manufacturer for the residential housing market. A substrate like medium density fiberboard (MDF) or other engineered door core material is covered with an outer cover and finished edges. This facility is permitted by General Permit to Install (PTI) No. 116-11 for Coating Lines Emitting up to Ten Tons per Year (10 TPY) of Volatile Organic Compounds (VOCs). This permit limits VOC's from the coating lines at the facility and is therefore considered a synthetic minor for those lines.

The sawdust generated by multiple and various pieces of wood working equipment are controlled by one of three baghouses at the facility which are permitted by PTI No. 322-89. These baghouses were installed in the mid-1970's.

#### COMPLIANCE EVALUATION

Mr. Brown contacted Jason Jones, Corporate EHS on the phone, and we video conferenced him in to discuss the purpose of the inspection. While JELD-WEN was scheduled for a routine compliance inspection, the timing was such due to an observation the prior week of wood debris in the area of the baghouse collection systems. The condition of the system have been the cause of Violation Notices in the past.

Following the video conversation, we began our facility walk-through and inspection, which started with a discussion of what AQD had listed as existing equipment based on previous inspections. We also met with Harold Jewell, Maintenance Manager.

Currently the facility operates two spray booths, referred to Trim Saw 1 and 2. We observed booth #2 first, and it appeared in good shape with the filters in proper placement. The Graco airless spray guns are still in use, and it had been previously determined that they are considered comparable technology to HVLP guns. Booth #3 (Pre-finish) has been removed from the facility, and the stack removed and the roof capped.

As we walked through the facility there are various woodworking equipment that is sawing, planing, sanding etc. All of the woodworking equipment is ducted to one of the three baghouses on the north end of the building.

Four adhesive roll coaters which utilize a water based adhesive similar in nature to Elmer's glue are in use. These roll coaters are cleaned with water which is collected in a basin below and then transferred to a tote for separation of liquids and solids for proper disposal. These are also covered by the General PTI.

The General PTI No. 116-11 has limits on a per line basis of 2,000 lb/month and 10 tons per year for Volatile Organic Compounds (VOC). The emissions from all coating operations at the facility is limited to 30 tons per year of VOC. During the inspection, the emissions recordkeeping was observed while at the facility, the records were being maintained in a timely fashion. Emissions records for 2022 and 2023 through October were requested and received timely via email. Following a review of the

records, an information request was sent to the company for the records in Excel spreadsheet format. Also, I requested that JELD-WEN review the data since the usage and emissions for the two spray booths were identical and that was different than how the data looked in the past. Following an internal review, the company determined that an assumption had been made that the booths were operating on the same schedule and since they are identical, they were apportioned equal coating usage. The review found that usage is not identical, as more doors are processed in booth #1 (Trim Saw #1) than in booth #2 (Trim Saw #2). Following the review, an updated spreadsheet was submitted on January 8, 2024. The emissions from both sets of data indicate compliance with the permit limit.

## **FG-COATING**

Booth #1 (Trim Saw 1) reported 85.94 lbs VOC emissions for the month of August 2023, which was the highest of the year to date.

Booth #2 (Trim Saw 2) reported 34.56 lbs VOC emissions for the month of August 2023, which was the highest of the year to date.

Booth #3 (Pre-Finish) has been removed.

Roll coater emissions are tracked under Adhesive use, and the highest month for emissions was in March 2023 at 200 lbs VOC.

Based on observations made during the inspection, all process/operational and design/equipment requirements of the permit are being met. All required records are being maintained.

## **FG-SOURCE**

The reported 12-month rolling average VOC emissions for the facility through the month of November 2022 was 1.31 tons VOC, which indicates compliance with the permit limit. Appropriate records to demonstrate compliance with the permit are being maintained. All emissions data is attached to this report.

We proceeded out to the external fenced in area where the baghouses are located, and the area had accumulation of wood on the ground. We learned that baghouse #1 had just the past weekend had the bags replaced, and that the debris was a result of that change out and it hadn't been cleaned up yet. The bags are replaced once every three years, annually on a rotating basis. These baghouses typically vent externally in the summer to exhaust plant heat and internally in the winter to conserve plant heat. The units are currently exhausting internally as there has been a drop in temperature. Each baghouse has a magnehelic gauge that is monitored for proper operation. The pressure drop for baghouse #1 was 0.1" H<sub>2</sub>O, baghouse #2 gauge was not working and baghouse #3 was 1.2" H<sub>2</sub>O. The value for baghouse #1 was low, but consistent with all new bags. I observed that there are structural issues with these baghouses, that causes sawdust to accumulate. During this inspection, I did not see the hoses that had been attached to a baghouse fan that can be used to clean up any sawdust that is accumulating. As stated in the previous inspection report, the units are aged and the solution would be to replace or fully repair the baghouses. The maintenance staff is using tape in various areas to seal leaks in the ductwork, which is not a permanent repair job.

A review of pressure drop records showed that during the previous weeks recording of data, baghouse #2 had a viable reading. The current week data collection had not yet occurred. This documentation indicates that the pressure drop gauge that was inoperable during the inspection had apparently broken within the last week. Additionally, a new gauge was ordered and replaced within two days of the inspection. As such, a Violation Notice was not issued, however JELD-WEN is aware that it is a citable offense in the event it is observed in the future. The pressure drop reading for baghouse #2 following the gauge replacement was 0.8" H<sub>2</sub>O.

During a 2019 inspection, a Violation Notice (VN) was issued that included three citations resulting from the facility's failure to maintain the baghouses properly. The response to the VN also required the submittal of a Malfunction Abatement Plan (MAP) to ensure the facility would correct the problem and continue to maintain the units going forward. The MAP was discussed with facility staff, since the pressure drop range identified for proper operation is 0-4" H<sub>2</sub>O. I informed JELD-WEN that a pressure drop of zero is not acceptable and that they should review and adjust the range to something

appropriate. We also discussed that it is expected that the pressure drop is low following a complete bag replacement, and that activity should continue to be documented.

Following this inspection, JELD-WEN had a representative from Donaldson (the baghouse manufacturer) come out to inspect and advise the facility on proper baghouse pressure drop ranges for their systems. They were told that their baghouses are "random fire" (RF) style which means there is a cleaning arm inside the clean air plenum that continually rotates and pulses every bag continuously. This means that their baghouses will have a lower-than-average pressure drop reading at all times. Donaldson told JELD-WEN that this increases the life of the filter bags, and that it was not uncommon to see a zero or very low reading on these systems. I informed JELD-WEN that a low pressure drop is explainable, but that zero would not be, as it would mean that there is no resistance of the air passing through the bag. They will take that into consideration when reestablishing an accurate pressure drop range for the baghouses and stated they will resubmit the MAP by the end of January 2024. They will also institute staff training to ensure accurate readings are taken and documented.

During the previous inspection, the room that houses the shell for the old wood waste burner was observed and the unit was found to be decommissioned and the space is being used for storage. There are no plans to recommission this unit.

### CONCLUSION

JELD-WEN Interior Door- Grand Rapids was in compliance at the time of the inspection.

NAME April Lazzaro

DATE 01/08/2024

SUPERVISOR HH