

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Issue Date: March 3, 2025

Region: Winston-Salem Regional Office
County: Wilkes
NC Facility ID: 9700175
Inspector's Name: Robert Barker
Date of Last Inspection: 01/03/2024
Compliance Code: 3 / Compliance - inspection

Facility Data				Permit Applicability (this application only)			
Applicant (Facility's Name): JELD-WEN, Inc. - North Wilkesboro Facility Address: 205 Lanes Drive North Wilkesboro, NC 28659 SIC: 3083 / Laminated Plastics Plate And Sheet NAICS: 326130 / Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V				SIP: 02D .0515, .0516, .0521, .1111, .1806 NSPS: NA NESHAP: MACT WWWWW PSD: NA PSD Avoidance: NA NC Toxics: NA 112(r): NA Other: None			
Contact Data				Application Data			
Facility Contact		Authorized Contact		Technical Contact		Application Number: 9700175.24B, .24A Date Received: 09/05/2024, 08/23/2024 Application Type: Renewal, TV-502(b)(10) Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 10247/T08 Existing Permit Issue Date: 09/14/2022 Existing Permit Expiration Date: 02/28/2025	
Jamie Joines EHS Manager (336) 838-0292 205 Lanes Drive North Wilkesboro, NC 28659		Joel Scheffler Regional Operations Director (336) 838-0292 205 Lanes Drive North Wilkesboro, NC 28659		Aaron Brite Regional Environmental Manager (336) 479-1925 2645 Silver Crescent Drive Charlotte, NC 28273			
Total Actual emissions in TONS/YEAR:							
CY	SO ₂	NO _x	VOC	CO	PM ₁₀	Total HAP	Largest HAP
2023	---	---	13.98	---	0.0200	13.93	13.93 [Styrene]
2022	---	---	28.68	---	0.1200	28.57	28.56 [Styrene]
2021	---	---	30.09	---	0.1200	29.64	29.63 [Styrene]
2020	---	---	26.83	---	0.1100	26.84	26.84 [Styrene]
2019	---	---	21.21	---	0.0200	21.21	21.21 [Styrene]
Review Engineer: Chengqing Xiao Review Engineer's Signature: <i>Chengqing Xiao</i> Date: March 3, 2025				Comments / Recommendations: Issue 10247/T09 Permit Issue Date: March 3, 2025 Permit Expiration Date: February 28, 2030			

I. Introduction and Purpose of Application

This permitting action is a renewal of an existing Title V permit pursuant to 02Q .0513. JELD-WEN, Incorporated (JELD-WEN) owns and operates a door manufacturing facility in North Wilkesboro, NC. The facility manufactures fiberglass door skins and fiberglass foam filled exterior doors and operates under Title V permit No. 10247T08 issued on September 14, 2022 with an expiration date of February 28, 2025. The Title V renewal application (Application No. 9700175.24B) received on September 5,

2024 was submitted late, which was less than six months prior to the expiration date of the Title V permit, and so NC DAQ cannot provide the application shield. As a customer service, DAQ tried to process this application and got it renewed PRIOR to the original expiration date February 28, 2025. The application meets the requirements to be processed. The facility was last inspected on January 3, 2024 by Robert Barker and Deionta Sutton, both DAQ-WSRO Environmental Engineers, and was found to be in compliance. Hours of operation for this facility are 24 hours per day, 5 days per week, for 52 weeks per year.

Separately, a 502(b)(10) notification (9700175.24A), submitted by JELD-WEN Inc. - North Wilkesboro, was received by DAQ on August 23, 2024. The facility requested to install and operate a natural gas-fired infrared die oven to pre-heat dies prior of installation in the SMC presses. According to the cover letter of the 502(b)(10) notification, "This will replace an existing electric unit with an insignificant source of emissions. These additions will not allow the facility to exceed the current production limits nor existing emissions limits. Emissions calculations attached from the agency's Natural Gas Combustion Emissions Calculator Rev N. Startup is proposed for September 1, 2024." The natural gas-fired infrared oven die heater has maximum 1.5 mm BTU/hr. heat input at 600 F maximum temperature and 0.6 mm BTU/hr. heat input at recommended 350 F. The emissions were calculated with the conservative estimation with maximum 1.5 mm BTU/hr. heat input using NC DAQ's spreadsheets - Natural gas combustion emissions calculator revision N 01/06/2017.

The emissions calculations show that the potential emission rates (tons/year) of particulate (PM), sulfur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOC), and carbon monoxide (CO) before air pollution control devices are 0.00, 0.00, 0.64, 0.04, and 0.54, respectively, and the potential emissions of hazardous air pollutants before air pollution control devices, are each below 1000 pounds/year. Therefore, in accordance with 15A NCAC 02Q .0503(8) - "Insignificant activities because of size or production rate" means any activity whose emissions would not violate any applicable emissions standard and whose potential emission of particulate, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide before air pollution control devices, are each no more than five tons per year and whose potential emissions of hazardous air pollutants before air pollution control devices, are each below 1000 pounds per year.", the natural gas-fired infrared oven die heater (**Assigned Source ID No. I-DH1**) is classified as an insignificant activity and will be added to the insignificant activities list with this Title V permit renewal revision. Technically, this 502(b)(10) request has been consolidated into the Title V permit renewal application No, 9700175.24B, however, the 502(b)(10) modification analysis is not necessary, because the natural gas-fired infrared oven die heater (ID No. I-DH1) has been deemed an insignificant activity as above.

II. Chronology

History/Background

March 12, 2020 – Permit No. **10247/T06** issued as a Title V renewal.

November 20, 2020 – Robert Barker of the Winston-Salem Regional Office (WSRO) completed the annual compliance inspection of the facility.

December 08, 2021 – Robert Barker of the Winston-Salem Regional Office (WSRO) completed the annual compliance inspection of the facility.

August 9, 2022 – Permit No. **10247/T07** was issued as a Title V one-step Significant Modification for adding one more sheet molding compound (SMC) press bringing the total number of molding compound (SMC) press to eight.

September 24, 2022 – Permit No. **10247/T08** was issued as a Title V one-step Significant Modification for the addition of four new sheet molding compound (SMC) presses and four new associated door skin edge trimmers. The facility now has total twelve molding compound (SMC) presses.

December 1, 2022 – Robert Barker of the Winston-Salem Regional Office (WSRO) completed the annual compliance inspection of the facility.

January 12, 2024 – Robert Barker and Deionta Sutton of the Winston-Salem Regional Office (WSRO) completed the annual compliance inspection of the facility.

Application Chronology

August 21, 2024 – A 502(b)(10) notification (assigned Application No. 9700175.24A) submitted by JELD-WEN Inc. - North Wilkesboro was received by DAQ.

September 5, 2024 – DAQ received a Title V renewal application and assigned Application No. 9700175.24B. The application was submitted less than six months prior to the expiration date February 28, 2025 of the Title V permit 10247/T08.

September 6, 2024 – An acknowledgment letter was sent to JELD-WEN via email stating the application was complete as of September 5, 2024.

October 3, 2024 – An email of technical additional information request was sent to the facility, including (1) DAQ's PFAS screening questionnaire; (2) whether the facility uses/emits 1-bromopropane (CAS 106-94-5) which was added to the HAP list by EPA on January 5, 2022; (3) date of completeness for establishing "normal" for the permitted sources controlled by the fabric filters.

October 7, 2024 – Mr. Aaron Brite, Technical Contact, Regional Environmental Manager of JELD-WEN, Inc. - North Wilkesboro emailed back the DAQ's PFAS screening questionnaire. The facility answered "No" for all questions (See Attachment 2). The facility stated that "1-Bromopropane is not used itself or as a component of any material in our production process."

October 8, 2024 – A follow-up email was sent to Mr. Brite regarding the dates of "normal" establishment.

October 15 & 16, 2024 – Received emails from Mr. Brite stating that "normal" was established for all sources listed as controlled by the dust collector, BH-2 (Clark Pneufil) and the original dust collector's, BH-1 (Nederman).

December 12, 2024 – Emailed Mr. Brite to notify the facility that Special Orders by Consent (SOCs) is required to allow the facility to operate past the expiration date due to the late submission of the Title V permit renewal application 9700175.24B.

December 13, 2024 - DRAFT permit sent to Permittee, DAQ WSRO, and DAQ Technical Service Section for comment.

December 17, 2024 - Mr. Brite emailed the facility's permit review comments.

December 18, 2024 - Mr. Brite notified DAQ via email that Mr. Joel Scheffler, Regional Operations Director of JELD-WEN, Inc. replaced Mr. Martin Weed as the facility's Responsible Official/Authorized Contact; replied Mr. Brite's email requesting the facility to mail a notification letter to DAQ regarding the facility's Responsible Official change.

December 20, 2024 – Sent an email to Mr. Brite requesting technical additional information (1) regarding whether MACT WWW applies to the three door assembly and foam fill lines or not; (2) resubmit Forms A and E5 to reflect the Responsible Official change; Mr. Brite provided the technical information via email that the door assembly and foam fill lines are specifically excluded from any requirements of MACT WWW.

December 23 2024 – Per DAQ's request, Mr. Joel Scheffler, the new facility's Responsible Official acknowledged the technical information via email that the door assembly and foam fill lines are specifically excluded from any requirements of MACT WWW.

December 27 2024 – Ms. Adriana De Oleo of WSRO provided the permit draft review comments.

December 31 2024 – The notification letter of the facility's Responsible Official Change and resigned application Forms A and E were received by DAQ.

January 3, 2025 – Sent an additional technical information request to Mr. Brite via email requesting potential emission estimations for VOC and MDI from the three door assembly and foam fill lines.

January 6, 2025 – Mr. Brite emailed the potential emission estimates for VOC and MDI from the three door assembly and foam fill lines.

January 10, 2025 – Draft permit and review sent to 30-day public comment and 45-day EPA review periods.

January 13, 2025 – Mark Cuilla/Connie Horne (DAQ) verified TVEE.

February 13, 2025 - 30-day public comment period ended; no comments received.

February 28, 2025 – 45-day EPA Review period ended; no comments received.

March 3, 2025 – Air Permit No. 10247/T09 issued as a Title V permit.

III. Permit Modifications/Changes and TVEE Discussion

The following table provides a summary of the changes to the current permit as part of the renewal process. This summary is not meant to be an exact accounting of each change but a summary of those changes.

Page No.	Section	Description of Changes
NA	Cover letter	<ul style="list-style-type: none"> Updated cover letter to current shell standards
Global	Global	<ul style="list-style-type: none"> Updated the application number and complete date Updated permit revision number to T09 Updated the issuance/effective dates to permit
4	Section 1 Table	<ul style="list-style-type: none"> Removed MACT WWW under Emission Source ID Nos. ES-DAS-1 through ES-DAS-3 Moved three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3) to Insignificant Activities
5	Section 2.1 A Section 2.1 A.1.a Section 2.1 A.1.d.ii	<ul style="list-style-type: none"> Removed “Three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3)” Removed “and three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3)” Removed “and three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3)”
6	Section 2.1 A.1.i.ii	<ul style="list-style-type: none"> Added electronic reporting provisions
8	Section 2.1 B.2.c	<ul style="list-style-type: none"> Removed “The Permittee shall establish “normal” for these sources (ID Nos. ES-ET-1 through ES-ET-8, ES-DT-1, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following initial operation of the fabric filter (ID No. CD-BH-2) after the issuance of Permit No. 10247T07. The Permittee shall establish “normal” for these sources (ID Nos. ES-ET-9 through ES-ET-12, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following the initial operation of any these sources (ID Nos. ES-ET-9 through ES-ET-12) after the issuance of Permit No. 10247T08.” Removed “if “normal” is not established for these sources (ID Nos. ES-ET-1 through ES-ET-8, ES-DT-1, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following initial operation of the fabric filter (ID No. CD-BH-2) after the issuance of Permit No. 10247T07; or if “normal” is not established for these sources (ID Nos. ES-ET-9 through ES-ET-12, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following the initial operation of any these sources (ID Nos. ES-ET-9 through ES-ET-12) after the issuance of Permit No. 10247T08.”
10	Section 3 Insignificant Activities	<ul style="list-style-type: none"> Add Insignificant Source (ID No. I-DH1) - One natural gas-fired infrared oven die heater (1.5 Million Btu per hour maximum heat input). Added three door assembly and foam fill lines (ID Nos. I-ES-DAS-1 through I-ES-DAS-3)

11-18	Section 4 General Conditions	<ul style="list-style-type: none"> • General Conditions as Section 4 of the Title V Permit • Updated General Conditions (version 8.0, 07/10/2024)
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IV. Regulatory Review

The facility is currently subject to the following regulations:

- 15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes
- 15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources
- 15A NCAC 02D .0521, Control of Visible Emissions
- 15A NCAC 02D .1111, Maximum Achievable Control Technology (40 CFR 63, Subpart WWWW)
- 15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions (State-Enforceable only)

A. Twelve sheet molding compound presses (ID Nos. ES-SMC-1 through ES-SMC-12)

1. 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR 63, Subpart WWWW)

JELD-WEN is a major source of HAPS. Pursuant to 40 CFR 63.5785, as it is a reinforced plastic composites production facility, the twelve (12) sheet molding compound presses are subject to 15A NCAC 02D .1111: Maximum Achievable Control Technology (MACT), 40 CFR Part 63, Subpart WWWW “National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.” The facility is required to comply with all applicable provisions as required by the MACT. According to an email sent on October 16, 2024 by Mr. Brite, the two sheet molding compound presses (ID Nos. ES-SMC-11 and ES-SMC-12) have not been installed.

In the current permit 10247/T08 issued September 14, 2022, the requirements of MACT, 40 CFR Part 63, Subpart WWWW applied to the three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3) as well. During the technical review of this permit renewal application 9700175.24B, a pre-public notice draft of the renewed Title V permit was sent to JELD-WEN, Inc. - North Wilkesboro on December 13, 2024 for the applicant review. In the review comments emailed by Mr. Brite on December 17, 2024, the facility indicated that MACT WWWW does not apply to the foam filling of doors as this is not a composite plastics manufacturing process. Per this permit engineer’s request, the facility provided the technical additional information below on December 20, 2024.

“Per §63.5790, the following operations are specifically excluded from any requirements in this subpart:

- Application of putties, polyputties, and adhesives – The door foam is chemically and in emissions nearly identical to the adhesive used to build the doors and performs the same function in addition to being the insulation.
- Repair or production materials that do not contain resin or gel coat – chemically nor functionally the door foam is not a resin or gel-coat.
- §63.5785.a defining applicability of the subpart: Reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites. The foam does not contain styrene and is not a thermoset resin or gel coat.”

According to the report of the most recent compliance inspection performed on January 3, 2024, “Two skins with wood and steel frame components are assembled into hollow door using the hot melt glue where negligible methylene diphenyl diisocyanate (MDI, a HAP) is released as fugitive emissions. RapedEX the solid hot melt adhesive used contains 5% of MDI by weight. This product is applied to the door by robots in the form of beads. The assembled door is placed into a press to cure the glue bonds. Groups of assembled doors are placed into multi-opening presses which provide structural support during filling. The door is filled with polyurethane foam to provide structural rigidity and thermal insulation, which releases miniscule quantities of MDI. The doors are retained in the press until the foam is cured.”

Based on the technical additional information provided by the facility and the operation scenarios of the door assembly and foam fill lines described in the compliance inspection report, Mr. Rahul Thaker, DAQ Title V

Permitting Branch Supervisor, and this permit engineer evaluated the operations of door assembly and foam fill lines and agreed that MACT WWW is not applicable to the three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3). The MACT WWW requirements applied to the three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3) have been removed from the permit draft 10247/T09. Based on the previous years of Emissions Inventory submitted by JELD-WEN, Inc. - North Wilkesboro, the three lines of Door Foam Filling Operations (ID Nos. ES-DAS-1 through ES-DAS-3) may be eligible to be moved to the INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8). Per this permit engineer's request, the facility estimated the potential emission rates for VOC (tons/yr.) and hazardous air pollutant (MDI) (lbs/yr.) from each of Door Foam Filling line based on the consumption of adhesives at the maximum operating capacity of each line. The following is a summary of the Potential Emissions (PTE) of VOC and HAP (MDI) for each Door assembly and foam fill line based on the potential emissions estimates (See Attachment 3) provided by Mr. Brite on January 6, 2025. Please noted that Methylene Diphenyl Diisocyanate (MDI) is a VOC, therefore, the MDI potential emissions rates have been added to VOC PTE for each line.

Door assembly and foam fill lines (ID Nos.)	VOC PTE (tons/yr)	HAP (MDI) PTE (lbs/yr)
I-ES-DAS-1	0.000092	0.184
I-ES-DAS-2	0.000092	0.147
I-ES-DAS-3	0.581	322

The PTE emissions rates in the table above show that the emissions would not violate any applicable emissions standard and the potential emissions of particulate, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide before air pollution control devices, are each no more than five tons per year and whose potential emissions of hazardous air pollutants before air pollution control devices, are each below 1000 pounds per Year. Therefore, the three Door assembly and foam fill lines are eligible to be moved from the permitted source table (Section 1 Table) and listed (Section 4) as the INSIGNIFICANT ACTIVITIES per 15A NCAC 02Q .0503(8) with the ID Nos. I-ES-DAS-1 through I-ES-DAS-3 with this renewal.

As per this regulation, for the twelve sheet molding compound presses (ID Nos. ES-SMC-1 through ES-SMC-12), the facility shall comply with the work practice standards of Table 4 for Subpart WWW. To meet the standards for closed molding operation, the facility shall uncover, unwrap, or expose only one charge per mold cycle per compression molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting.

The facility shall not use cleaning solvents that contain HAP for cleaning the emission sources, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin.

The facility shall keep a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart WWW. The facility shall keep a copy of the certified statement indicating that the Permittee is in compliance with the work practice requirements in Table 4 to 40 CFR Part 63, Subpart WWW, as applicable.

The most recent compliance inspection was conducted by Mr. Barker on January 3, 2024. According to Mr. Barker's most recent inspection report, "The facility is maintaining a copy of the reports submitted to the DAQ. A copy of the certified statement indicating the facility is in compliance with the work practice requirements in Subpart WWW was verified on-site."

The facility shall report semi-annually any deviations from the requirements for work practice standards listed in Table 4 to 40 CFR Part 63, Subpart WWW. If there are no deviations, the facility must make a statement that there were no deviations. These reports must be postmarked no later than July 31st or January 31st, whichever date

is the first date following the semi-annual reporting period. If the facility meets or exceeds 100 TPY emissions of HAPs in any calendar year, the facility shall notify the DAQ in the semi-annual report.

Since the last Title V permit renewal - Permit No. 10247/T06 issued March 12, 2020 for JELD-WEN, Inc. - North Wilkesboro, there were two amendments of the Reinforced Plastic Composites Production NESHAP, 40 CFR part 63, Subpart WWWW. The permit conditions related to these two amendments have been evaluated with this permit renewal review as following:

(1) The amendments at 85 FR 15975, Mar. 20, 2020 include provisions addressing emissions during periods of startup, shutdown, and malfunction (SSM), amending provisions regarding electronic reporting of performance test and performance evaluation results and semiannual reports; and an amendment to clarify that mixers that route to a capture and control device system with at least 95-percent efficiency overall are not required to have covers. In this amendment, the EPA did not establish any separate emissions or work practice standards for SSM.

The conditions in the current permit No. 10247/T08 include the reporting periods of SSM per Table 14 to Subpart WWWW of Part 63—Requirements for Reports as amended 85 FR 15975, Mar. 20, 2020. The permit conditions are accurate with regard to recordkeeping and reporting requirements, related to the eliminated SSM exemption, therefore, no revision is required.

EPA is finalizing electronic reporting requirements that apply to owners and operators of facilities subject to the Plastic Composites Production NESHAP. Owners or operators are required to submit electronic copies of performance test reports and performance evaluation reports and semiannual reports through the EPA's Central Data Exchange (CDX), using the Compliance and Emissions Data Reporting Interface (CEDRI). The performance test and performance evaluation do not apply to this facility. For semiannual reports, the EPA final rule requires that owners and operators use the appropriate spreadsheet template to submit information to CEDRI. The electronic semiannual reporting requirements will be added to the permit with this Title V permit renewal revision.

The twelve sheet molding compound presses (ID Nos. ES-SMC-1 through ES-SMC-12) do not have control devices. So the amendment regarding mixers with a capture and control device does not apply to these sources, and the permit conditions of Work Practice Standards [40 CFR 63.5805(b) and Table 4 of MACT Subpart WWWW] are accurate and no revision is required.

(2) The amendments at 85 FR 73911, Nov. 19, 2020 implement the plain language reading of the “major source” and “area source” definitions of section 112 of the Clean Air Act (CAA) and provide that a major source can be reclassified to area source status at any time upon reducing its potential to emit (PTE) hazardous air pollutants (HAP) to below the major source thresholds (MST) of 10 tons per year (tpy) of any single HAP and 25 tpy of any combination of HAP. The facility did not request any source reclassification in this application of Title V permit renewal without modification. Therefore, the amendments discussed in 85 FR 73911, Nov. 19, 2020, do not change any permit conditions for this facility and no revision is required.

In the most recent compliance inspection report, Mr. Barker indicated that “It appears based on observations made during the inspection and conversation with Mr. Joines the facility is complying with these work practice standards.” and “It should be noted that these reports should be submitted to the EPA through CEDRI. The facility was made aware of this requirement.”

According to the IBEAM records, the most recent semi-annually report was received by DAQ WSRO on 7/24/2024 and reviewed by Robert Barker on 7/25/2024 and no deviations were reported. The report stated that the facility did not exceed the 100 TPY of HAP emissions threshold in any calendar year as specified in Condition 2.1 A(1)(j) of the Title V permit. Therefore, no report for exceedance was required to be submitted. Compliance is indicated and continued compliance is expected.

- B. Eight door skin edge trimmers (ID Nos. ES-ET-1 through ES-ET-8) and one final door machining operation (ID No. ES-DT-1) controlled by one fabric filter (ID No. CD-BH-2); and Four door skin edge trimmers (ID Nos. ES-ET-9 through ES-ET-12), two door skin sizer saws (ID Nos. ES-SS-1 and ES-SS-2), and one final door machining operation (ID No. ES-DT-2) controlled by one fabric filter (ID No. CD-BH-1)**

1. **15A NCAC 02D .0515 - Particulates from Miscellaneous Industrial Processes**

This rule is applicable to the particulate emissions from the plant and limits them as described below.

$$E \leq 4.10(P)^{0.67} \quad \text{if } P \leq 30 \text{ tons per hour}$$

$$E \leq 55.0(P)^{0.11} - 40 \quad \text{if } P > 30 \text{ tons per hour}$$

Where: P = the process rate in tons per hour

E = the allowable emission rate of PM in pounds per hour

The following sources at the facility are subject to this regulation:

- Door skin edge trimmers (ID Nos. ES-ET-1 through ET-8)
- Door skin sizer saws (ID Nos. ES-SS-1 and ES-SS-2)
- Two final door machining operations (ID No. ES-DT-1 and ES-DT-2)
- Three natural gas-fired flame treating system for door skins (0.8 Million Btu per hour maximum heat input each) (ID Nos. I-FTS-1 through I-FTS-3)

All of these sources (with the exception of the flame heat treating systems) are controlled by the bag filters (ID Nos. BH-1 and BH-2). According to the previous permit modification review T07 dated August 9, 2022 by Joseph Voelker, Environmental Engineer III of DAQ, "The PM will consist primarily of waste door skin material (styrene) and some wood. A form C1 was included in the application for each bagfilter. Revised C1 forms were received via email on June 6, 2022. For BH-1, the air to cloth ratio is estimated to be 6.55 to 1. For BH-2, the air to cloth ratio is estimated to be 6.32 to 1. The Permittee claims 99% control for PM with these bagfilters. Given the expected service for the bagfilters the level of expected control is reasonable. The Permittee estimates the maximum PM emissions from each bagfilter to be 0.02 lb/hr or a total of 0.04 lb/hr. The expected process rate is 5,952 pounds per hour or approximately 3 tons per hour (tph). Using the equation above for process rates less than 30 tph, the allowable PM emission rate is 8.6 lb/hr. Thus, compliance with this rule is expected with the use of bagfilter controls."

The current permit requires:

- the continuous operation the bagfilters
- keeping a log of inspections and maintenance that is recommended by manufacturer
- associated recordkeeping and semiannual reporting

No substantial changes will be made to the existing permit conditions for this Title V permit renewal without modification. For the flame heat treating system, the only PM generation is PM formed by the combustion of natural gas, which is inherently low. Compliance with this rule for these sources is expected with no controls.

In the most recent compliance inspection report, Mr. Barker indicated that "A review of the records indicate that the facility is doing this. The last monthly inspection for both fabric filters was conducted on December 22, 2023. The facility shall also conduct an annual internal inspection of both fabric filters for structural integrity."

The facility shall submit a summary report of monitoring and recordkeeping activities. All instances of deviations from the requirements of this permit must be clearly identified. The last report was received by DAQ WSRO on 7/24/2024 and reviewed by Robert Barker on 7/25/2024. No instances of deviations from the requirements of this permit were identified. Compliance is indicated and continued compliance with this rule is expected.

2. **15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources**

This rule applies to any combustion source that emits sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

The SO₂ emissions from the facility are the result of natural gas combustion in the three natural gas-fired flame treating system for door skins (ID Nos. I-FTS-1 through I-FTS-3, 0.8 Million Btu per hour maximum heat input

each) and the newly added natural gas-fired infrared oven die heater (ID No. I-DH1, 1.5 Million Btu per hour maximum heat input).

Natural gas contains very low amounts of sulfur. Based on the AP-42 emission factor for natural gas combustion of 0.60 lb/10⁶ scf or 5.88E-04 lb/MMBtu, SO₂ emissions from the combustion of natural gas are expected to be well below 2.3 pounds per million Btu. Consistent with current DAQ policy, no testing, monitoring, recordkeeping, and reporting will be required. These sources appear on the insignificant activities list and this rule will not be listed in the proposed permit. Continued compliance is expected.

3. **15A NCAC 02D .0521, Control of Visible Emissions**

This rule applies to all fuel burning sources and industrial processes reasonably expected to have visible emissions. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

The following sources at the facility are subject to this regulation:

- Door skin edge trimmers (ID Nos. ES-ET-1 through ET-8)
- Door skin sizer saws (ID Nos. ES-SS-1 and ES-SS-2)
- Two final door machining operations (ID No. ES-DT-1 and ES-DT-2)
- Three natural gas-fired flame treating system for door skins (ID Nos. I-FTS-1 through I-FTS-3, 0.8 million Btu per hour maximum heat input each)

All of these sources (with the exception of the flame heat treating systems) are controlled by the bag filters (ID Nos. BH-1 and BH-2). Visible emissions from the combustion of natural gas in the flame heat treating systems are expected to be very low and well below 20% opacity. Consistent with current DAQ policy, no testing, monitoring, recordkeeping, and reporting will be required. Note that the flame treating systems (ID Nos. I-FTS-1 through I-FTS-3) are insignificant activities and appear in the insignificant activities section of the permit. Therefore, there are no monitoring, recordkeeping, and reporting requirements for them.

The sources controlled by bagfilters are also expected to have very low visible emissions particularly when the bagfilters are operating properly. The bagfilters (ID Nos. BH-1 and BH-2) have monitoring consisting of once per week VE readings requiring corrective action if VEs are above normal. Associated recordkeeping and reporting is also required. In the current permit 10247/T08, it requires that the Permittee shall establish or re-establish the “normal” VE for all of these sources (excepting ID Nos. I-FTS-1 through I-FTS-3) within the first 30 days following initial operation of the fabric filter (ID No. CD-BH-2) after the issuance of Permit No. 10247T08. During this permit renewal review, according to Mr. Brite’s email sent on October 16, 2024, “normal was established by the site personnel for all sources listed as controlled by the new dust collector, BH-2 (Clark Pneufil) in November 2022, after it was started in October of 2022. The original dust collector’s, BH-1 (Nederman), was established after it was installed and confirmed following the reorganization of the dust collection marked by the startup of BH-2 in November 2022. Normal was again confirmed at the time of the startup of ES-ET-9 and ES-ET-9 to be unchanged.” The requirements of establishing “normal” have been met. Therefore, the following languages (in ~~striketrough~~ text) have been removed from the Section 2.1 B.2.c within this permit renewal revision:

- ~~“The Permittee shall establish “normal” for these sources (ID Nos. ES-ET-1 through ES-ET-8, ES-DT-1, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following initial operation of the fabric filter (ID No. CD-BH-2) after the issuance of Permit No. 10247T07. The Permittee shall establish “normal” for these sources (ID Nos. ES-ET-9 through ES-ET-12, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following the initial operation of any these sources (ID Nos. ES-ET-9 through ES-ET-12) after the issuance of Permit No. 10247T08.”~~
- ~~“if “normal” is not established for these for these sources (ID Nos. ES-ET-1 through ES-ET-8, ES-DT-1, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following initial operation of the fabric filter (ID No. CD-BH-2) after the issuance of Permit No. 10247T07; or if “normal” is not established for these sources (ID Nos. ES-ET-9 through ES-ET-12, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following the initial operation of any these sources (ID Nos. ES-ET-9 through ES-ET-12) after the issuance of Permit No. 10247T08.”~~

According to the most compliance inspection report, “A review of the records indicates that the facility is doing the weekly observations. The last weekly observation for both fabric filters was conducted on December 21, 2023 with no visible emissions above normal. It should be noted that the facility was shut down for the week of December 24, 2023. On review of the weekly observations, the facility did not observe the emission points of the fabric filters for the week of October 8, 2023.” For not conducting the weekly observation for the emission points for the fabric filters for the week of October 8, 2023, the facility is in violation of this condition and was issued a Notice of Violation (NOV) by DAQ WSRO on January 11, 2024.

The facility shall submit a summary report of the observations semi-annually. All instances of deviations from the requirements of this permit must be clearly identified. The last report was received by DAQ WSRO on 7/24/2024 and reviewed by Robert Barker on 7/25/2024. No instances of deviations from the requirements of this permit were identified. Compliance is indicated and continued compliance with this rule is expected.

C. Facility-Wide

1. 15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions (State-Enforceable only)

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

In the most recent compliance inspection report, Mr. Barker stated that “During the inspection, no objectionable odors were detected past the facility boundary. No odor complaints about the facility have been received since the last inspection. Compliance is indicated.” There was no odor complaint in IBEAM. Continued compliance is anticipated.

2. Disclosure of Information Relating to Emissions of Fluorinated Chemicals [15A NCAC 02Q .0308(a); 15A NCAC 02Q .0309(b)]

To undertake any future standards-setting for PFAS emissions, the DEQ is currently collecting information on PFAS uses, creation (product or byproduct), and its environmental releases through a set of screening questions from some air quality permit-applicants. As shown in the application chronology above, the DEQ sent a set of PFAS screening questions to JELD-WEN, Inc. - North Wilkesboro. The facility replied with “no” to all PFAS screening questions (See Attachment 2). Thus, DAQ has decided not to further investigate the PFAS issue for this facility.

V. NSPS, NESHAPS/MACT, PSD, Attainment Status, 112(r), and CAM

NSPS

The Permittee is not currently subject to any New Source Performance Standards. This permit renewal without modification does not affect this status.

NESHAP/MACT

The facility is a major source of HAP and is subject to 40 CFR Part 63 Subpart WWW, “National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.” See discussion in Section IV A.1 above for details.

It needs to be noted here that EPA has added a new HAP, 1-bromopropane, to the CAA §112(b) list. According to the email received on October 7, 2024, Mr. Brite stated that “1-Bromopropane is not used itself or as a component of any material in our production process.”

PSD

The County of Wilkes is in attainment/unclassified for all criteria pollutants.

For major stationary sources located in areas designated as attainment with respect to a specific regulated criteria pollutant, the requirements of the PSD program (40 CFR Part 51.166, as incorporated into 15A NCAC 02D .0530) apply. Major stationary sources are those sources with the potential to emit (as defined at 40 CFR 51.166(b)(4)) of

250 tons per year or more of a regulated New Source Review (NSR) pollutant. For sources in specific categories, the potential to emit threshold is 100 tons per year. The subject facility is in a "250 ton" source category. According to the previous permit modification review T08, "The regulated pollutant with the largest potential to emit facility-wide (controlled) after the modification is VOC at 81.2 tpy. Thus, it is a minor source under the PSD regulations." There is no actual or potential emissions increase in any NSR regulated pollutants above the major source threshold under this permit renewal without modification.

Attainment Status

The following are the minor source baseline dates for Wilkes County.

County	Pollutant	Baseline Date	Triggered By
Wilkes	PM ₁₀ SO ₂	05/30/1980 05/30/1980	Abitibi Abitibi

The actual emissions of PM₁₀ and SO₂ from the newly added natural gas-fired infrared oven die heater (ID No. I-DH1, maximum 1.5 mm BTU/hr. heat input) were 0.00 lb/hr and 0.00 lb/hr., respectively. The increment tracking of PM10 and SO2 is not required with this permit renewal.

112(r)

The facility is not subject to Section 112(r) because it does not store any of the regulated substances in quantities above the applicable thresholds.

CAM

The CAM rule (15A NCAC 02D .0614) applies to each pollutant specific emissions unit located at a facility required to obtain a Title V, Part 70 or 71 permit if it meets all of the following criteria:

- It is subject to an emission limitation or standard, and
- It uses a control device to achieve compliance, and
- It has potential pre-control emissions that equal or exceed the major source threshold (i.e., either 100 tons per year (tpy) for criteria pollutants, 10 tpy of any individual HAP, or 25 tpy of any combination of HAP).

The following emission limitations or standards are exempted from the CAM rule:

- NSPS or NESHAP standards proposed after November 15, 1990;
- Stratospheric ozone protection requirements under Title VI of the Clean Air Act
- Acid rain program requirements;
- Emission limitations or standards or other requirements that apply solely under an approved emissions trading program approved pursuant to of Subchapters 02D and 02Q of Chapter 15A and incorporated in a permit issued under 15A NCAC 02Q .0500;
- An emissions cap that is approved pursuant to Subchapters 02D and 02Q of Chapter 15A and incorporated in a permit issued under 15A NCAC 02Q .0500;
- Emission limitations or standards for which a permit issued under 15A NCAC 02Q .0500 specifies a continuous compliance determination method, as defined in 40 CFR 64.1—unless the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device; and
- Certain municipally owned utility units, as defined in 40 CFR 72.2.

Please note that the emission unit is not exempted from the CAM rule if nonexempt emission limitations or standards (e.g., a state rule or an older NSPS emission limits) apply to the emissions unit.

The potential pre-controlled emissions for each pollutant for each of the permitted sources are less than 100 tpy; therefore, as above, CAM requirements do not apply. This Title V permit renewal without modification does not change this status for the facility.

VI. Facility Wide Air Toxics

The regulation at 15A NCAC 02Q .0700 requires, with some exceptions, a permit to emit any toxic air pollutant (TAP) at levels greater than the TAP permitted emission rate (TPER) specified in 15A NCAC 02Q .0711. These regulations include the procedural rules used to comply with the TAP control requirements found at 15A NCAC 02D .1100. 15A NCAC 02D .1104 contains Acceptable Ambient Levels (AALs) for each TAP. Generally, a facility must conduct a dispersion modeling analysis to demonstrate that each TAP emitted above its respective TPER will not result in the respective AAL being exceeded beyond the facility's premises. Collectively, these "toxics" rules are state-enforceable only and are not subject to the TV requirements found at 15A NCAC 02Q .0500.

According to the previous permit modifications review T08, "The proposed modifications will result in increases in TAPs primarily from the use of styrene in the new SMC presses" and "the Permittee chose to provide to the DAQ a dispersion modeling analysis. The only TAP over its respective TPER was styrene. In the current application, JELD-WEN estimates the potential total annual styrene emissions after the modification to be 79.5 tpy or assuming 8760 hours per year operation, 18.1 lb/hr. The modeling was reviewed by the DAQs Air Quality Analysis Branch (AQAB). In a memo dated June 30, 2022, it states: "*The modeling adequately demonstrates compliance, on a source-by-source basis, for styrene.*"

As discussed in the permit modification review T08, "Given that the dispersion modeling results show a wide margin of compliance with the AAL for styrene, it's reasonable to conclude that exempting the SMC presses from toxics permitting pursuant to 15A NCAC 02Q .0702(a)(27) will not pose an unacceptable risk to human health. No permit conditions addressing 02D .1100 will be added to the permit." This Title V permit renewal without modification does not affect this status.

Compliance with House Bill 952

There is no expected increase in toxics for this renewal application without modification and will not present an unacceptable risk to human health and thus comply with North Carolina General Statute (NCGS) 143-215.107(a)(5) (House Bill 952).

VII. Facility Emissions Review

Actual emissions for criteria pollutants and HAPs for the previous five years reporting periods (2019 to 2023) are provided in the header of this permit review. The potential emissions of NOx, CO, and VOC increased 0.64 tons/yr, 0.51 tons/yr, and 0.04 tons/yr due to the addition of the natural gas-fired infrared oven die heater (ID No. I-DH1, 1.5 mm BTU/hr. maximum heat input)

VII. Compliance Status

The following violations and deficiencies were issued to the facility within the last five years:

- The facility was inspected on January 3, 2024 by Robert Barker and Deionta Sutton. At the time of the inspection, the facility was judged to be in non-compliance with the requirements of Condition 2.1.B.2 (15A NCAC 2D .0521 "Control of Visible Emissions") which requires the facility to conduct a weekly observation of the emission points on the fabric filters (CD-BH-1 and CD-BH-2). The facility did not conduct a weekly observation of the emission points for the fabric filters for the week of October 8, 2023. For not conducting the weekly observation for the emission points for the fabric filters for the week of October 8, 2023, the facility is in violation of this condition and was issued a Notice of Violation (NOV) on January 11, 2024. The NOV has been resolved after a response letter sent from the facility was received by DAQ WSRO on January 22, 2024.
- December 20, 2021 – NOD for not conducting an annual internal inspection of fabric filter BH-1 within 12 months as required under 2D .0515 (Condition 2.1.B.1). While the fabric filter had been inspected on November 12, 2021, the previous annual internal inspection for the fabric filter was conducted on April 7,

2020. The two inspections cover a period of 19 months. The NOD has been resolved after a response letter was received on January 3, 2022.

The most recent Annual Compliance Certification received January 22, 2024 was reviewed by Mr. Barker on March 12, 2024, and indicated compliance with all applicable requirements in 2023. Through submittal of Form E5, Mr. Martin Weed, Plant Manager, Authorized Contact of JELD-WEN, Inc. – North Wilkesboro has certified that the facility is in compliance with all applicable requirements.

IX. Other Regulatory Considerations

Professional Engineer Seal

As per NCAC 02Q .0112, "Applications Requiring Professional Engineer Seal" - a professional engineer's seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in Rule .0103 of this Section. A professional engineer's seal (PE Seal) is not required for this renewal application without modification.

Consistency Determination

A zoning consistency determination is NOT required for this renewal application without modification.

Application Type

This application will be processed as a Title V permit renewal without modification, i.e., it will be subject to a 30-day public notice and 45-day EPA review. A permit fee is NOT required for this renewal application without modification.

EPA Rule Promulgation

EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in light of prior court decisions¹. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses² and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J. Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance. Accordingly, through this permit renewal, DAQ will remove the GC J from the facility permit that contains the emergency affirmative defense provisions, as discussed above.

¹ NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

² In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).

X. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above. DAQ voluntarily provides notice to each bordering State (Virginia, Tennessee, Georgia, and South Carolina) and all local air programs in these states, regardless a particular state is deemed an “affected state” for this facility.

XI. Recommendations

The permit renewal application for JELD-WEN, Inc. - North Wilkesboro has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 10247/T09 to JELD-WEN, Inc. - North Wilkesboro.

XII. Summary of Attachment

1. Email Correspondence with Mr. Aaron Brite.
2. Facility’s response to the DAQ’s PFAS questionnaire
3. Potential emissions estimates for the door assembly and foam fill lines

XIII. Applicant Comments

DAQ provided a pre-public notice draft of the renewed Title V permit to JELD-WEN, Inc. - North Wilkesboro on December 13, 2024. Below is the summary of the review comments provided by the facility on December 17 & 20, 2024 and DAQ’s response.

DAQ notes in red.

1. MACT WWW does not apply to the foam filling of doors as this is not a composite plastics manufacturing process. Per §63.5790 The following operations are specifically excluded from any requirements in this subpart:
 - Application of putties, polyputties, and adhesives – The door foam is chemically and in emissions nearly identical to the adhesive used to build the doors and performs the same function in addition to being the insulation.
 - Repair or production materials that do not contain resin or gel coat – chemically nor functionally the door foam is not a resin or gel-coat.
 - §63.5785.a defining applicability of the subpart: Reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain **styrene** to produce plastic composites. The foam does not contain styrene and is not a thermoset resin or gel coat.

Based on the technical additional information provided by the facility, DAQ evaluated the operations of door assembly and foam fill lines and agrees that MACT WWW is not applicable to the three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3). The MACT WWW requirements applied to the three door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3) have been removed. The three door assembly and foam fill lines are eligible to be moved from the permitted source table to the INSIGNIFICANT

ACTIVITIES per 15A NCAC 02Q .0503(8) with the new assigned source ID Nos. I-ES-DAS-1 through I-ES-DAS-3 with this permit renewal. Refer to Section IV. A.1 in this review for further details.

2. Comment on page 8 of Section 2.1.B.2.c.ii - “Weekly visual observation, is this the time period available for correcting above-normal emissions?”
Yes, one week before next observation is the time period available for correcting above-normal emissions.
3. Comment on page 12 of Section 4.H.2 – “Should General Condition NN be reference in this section for clarity?”
Section 4 General Conditions are same in every Title V permit and DAQ can’t adjust any permit General Conditions.

9700175.24B Attachment 1

From: [Aaron Brite](#)
To: [Xiao, Chengqing](#)
Cc: [Joel Scheffler](#); [Jason Jones](#); [Tom Graham](#); [Thaker, Rahul](#)
Subject: RE: [External] Jeld-Wen - SOC Discussion
Date: Monday, January 6, 2025 2:59:51 PM
Attachments: [image001.png](#)
[NWLK AIR PMT 2025-01 PTE Door Assembly by line.pdf](#)

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Hello Chengqing,

An error was found on the previous version, please use this version of the door assembly potential emissions.

Aaron

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER

GLOBAL ENVIRONMENTAL, HEALTH & SAFETY

JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Friday, January 3, 2025 12:10 PM
To: Aaron Brite <Abrite@jeldwen.com>
Cc: Joel Scheffler <Jscheffler@jeldwen.com>; Jason Jones <JasJones@jeldwen.com>; Tom Graham <ToGraham@jeldwen.com>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: RE: [External] Jeld-Wen - SOC Discussion

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Good afternoon Mr. Brite,

I hope you had great Christmas and new year holidays.

I have couple more questions below for processing the permit renewal application 9700175.24B.

1. DAQ received the revised Forms A and E5 along with the notification letter of Responsible Official Change. However, Form A was accidentally signed on the Section AA4 – Application for an ownership change. Please revise and resubmit the Form A with Mr. Joel Scheffler’s signature at the bottom Section - Signature of

Responsible Official/Authorized Contact on the Page 1 of 2.

2. We all agree that MACT WWWW is not applicable to the Door Foam Filling Operations. The requirements of MACT WWWW applied to the three lines of Door Foam Filling Operations have been removed from the permit draft 10247/T09. After reviewing the previous years of Emissions Inventory submitted by JELD-WEN, Inc. - North Wilkesboro and it seems to me that the three lines of Door Foam Filling Operations (ID Nos. ES-DAS-1 through ES-DAS-3) may be eligible to move to the INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8). Attached is the 2023 Emissions Inventory. The emissions from the three door assembly lines (ID Nos. ES-DAS-1 through ES-DAS-3) from the most recent four years were reported as following:

	VOC (tons/yr.)	MDI (lbs/yr.)
2023	0.08	6.48
2022	0.08	8.45
2021	0.49	7.72
2020	0.034	8.05

Please estimate the potential emission rates for VOC (tons/yr.) and MDI (lbs/yr.) from **Each** of Door Foam Filling line based on the consumption of adhesives at the maximum operating capacity of each line and email me the potential emissions data.

Please respond to DAQ as early as you can and be advised that the permit renewal application 9700175.24B will be on hold until the above technical additional information has been received. Please feel free to contact me if you have any questions.

Thank you for your assistance in this matter. Happy new year!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Joel Scheffler <Jscheffler@jeldwen.com>
Sent: Monday, December 23, 2024 4:39 PM
To: Aaron Brite <Abrite@jeldwen.com>
Cc: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; Jason Jones <JasJones@jeldwen.com>; Tom Graham <ToGraham@jeldwen.com>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: RE: [External] Jeld-Wen - SOC Discussion

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Aaron,
Thank you. Acknowledged.

JOEL SCHEFFLER | Regional Operations Director – Southeast/Michigan

JELD-WEN, inc.
Mobile: 802-299-5122

From: Aaron Brite <Abrite@jeldwen.com>
Sent: Monday, December 23, 2024 4:23 PM
To: Joel Scheffler <Jscheffler@jeldwen.com>
Cc: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; Jason Jones <JasJones@jeldwen.com>; Tom Graham <ToGraham@jeldwen.com>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: FW: [External] Jeld-Wen - SOC Discussion

Good afternoon Mr. Scheffler,

Please be aware that the environmental team has provided the below response to the NC DAQ's request for more information pertaining to our comments on the North Wilkesboro draft Title V permit.

Please contact me if you have any questions or concerns with these comments or the draft permit.

Best Regards,

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER
GLOBAL ENVIRONMENTAL, HEALTH & SAFETY

JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

From: Aaron Brite <Abrite@jeldwen.com>
Sent: Friday, December 20, 2024 3:45 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Cc: Jason Jones <JasJones@jeldwen.com>; Tom Graham <ToGraham@jeldwen.com>
Subject: RE: [External] Jeld-Wen - SOC Discussion

Hello Mr. Xiao,

1. Per 63.5790 The following operations are specifically excluded from any requirements in this subpart:
 - a. Application of putties, polyputties, and adhesives – The door foam is chemically and in emissions nearly identical to the adhesive used to build the doors and performs the same function in addition to being the insulation.
 - b. Repair or production materials that do not contain resin or gel coat – chemically nor functionally the door foam is not a resin or gel-coat
 - c. 5785.a defining applicability of the subpart: Reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain **styrene** to produce plastic composites.
The foam does not contain styrene and is not a thermoset resin or gel coat.
Therefore, MACT WWWW is not applicable to the Door Foam Filling Operations
2. The requested forms with the updated Responsible Official are in progress and should be in the mail early next week.

Regarding , “Comment on page 12 of Section 4.H.2 – “Should General Condition NN be reference in this section for clarity?”

No. Section 4 General Conditions are same in every Title V permit and can’t be changed.”

I believe there was a misunderstanding. I meant to suggest that condition 4.H.2 include a reference to G.C. NN as they speak to the same topic. For example, at the end of condition 4.H.2. **“Please refer to General Condition NN for additional guidance.”**

Best Regards,

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER
GLOBAL ENVIRONMENTAL, HEALTH & SAFETY

JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Friday, December 20, 2024 10:19 AM
To: Aaron Brite <Abrite@jeldwen.com>
Cc: Jason Jones <JasJones@jeldwen.com>; De Oleo, Adriana <adriana.deoleo@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: RE: [External] Jeld-Wen - SOC Discussion

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Good afternoon Mr. Brite,

Mr. Rahul Thaker, DAQ Title V Permitting Branch Supervisor and I discussed the facility's permit draft review comments. We request the following technical additional information.

1. Regarding the comment "MACT WWWW does not apply to the foam filling of doors as this is not a composite plastic manufacturing process", Mr. Thaker and I reviewed the 40 CFR Part 63 Subpart WWWW regulations. Attached is the § 63.5790 of Subpart WWWW. Please read the yellow highlighted paragraph (c) and provide information to us:

Under what operations listed in this paragraph, the door assembly and foam fill lines (ID Nos. ES-DAS-1 through ES-DAS-3) are eligible to be excluded from Subpart WWWW. Based on the information you provide, we will evaluate whether Subpart WWWW applies to the three door assembly and foam fill lines or not.
2. Regarding the change of Responsible Official, for processing this Title V permit renewal application 9700175.24B, the facility is required to resubmit the application Form A and Form E5 with the Authorized Contact information updated. Both forms need to be signed by Mr. Joel Scheffler, the new facility's Authorized Contact.

Please respond to DAQ as early as you can and be advised that the permit renewal application 9700175.24B will be on hold until the above technical additional information has been received.

Regarding the other permit draft review comments, please see DAQ response in blue

text below.

- Comment on page 8 of Section 2.1.B.2.c.ii - “Weekly visual observation, is this the time period available for correcting above-normal emissions?”

[Yes, one week before next observation is the time period available for correcting above-normal emissions.](#)

- Comment on page 12 of Section 4.H.2 – “Should General Condition NN be reference in this section for clarity?”

[No. Section 4 General Conditions are same in every Title V permit and can’t be changed.](#)

Please feel free to contact me if you have any questions.

Thank you for your assistance in this matter. Merry Christmas!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Xiao, Chengqing

Sent: Wednesday, December 18, 2024 2:25 PM

To: Aaron Brite <Abrite@jeldwen.com>

Cc: Barker, Robert <robert.barker@deq.nc.gov>; Jason Jones <JasJones@jeldwen.com>; De Oleo, Adriana <adriana.deoleo@deq.nc.gov>; Parekh, Samir <samir.parekh@deq.nc.gov>

Subject: RE: [External] Jeld-Wen - SOC Discussion

Good afternoon Mr. Brite,

I got your email and phone call message. I called you back couple times and the calls always went to your voice mail.

For facility's Authorized Contact change, please submit a letter to inform DAQ for the personnel change. Once the letter is received, we will update DAQ IBEAM file system for the change.

I received your permit draft review comments yesterday and am working on addressing the comments. Please feel free to contact me if you have any questions.

Thank you for your help!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov



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From: Aaron Brite <Abrite@jeldwen.com>
Sent: Wednesday, December 18, 2024 1:55 PM
To: Parekh, Samir <samir.parekh@deq.nc.gov>; Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Cc: Barker, Robert <robert.barker@deq.nc.gov>; Jason Jones <JasJones@jeldwen.com>
Subject: [External] Jeld-Wen - SOC Discussion

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Good day Samir and Xiao,

Martin Weed, Plant Manager for our North Wilkesboro facility is no longer with the company. Joel Scheffler, Regional Operations Director is filling in. He can be reached at JScheffler@jeldwen.com or 802-299-5122. A Change of Responsible Official is on its way.

Best Regards,
Aaron

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER

GLOBAL ENVIRONMENTAL, HEALTH & SAFETY

JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

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From: [Aaron Brite](#)
To: [Xiao, Chengqing](#); [Martin Weed](#)
Cc: [Jamie Joines](#); [Barker, Robert](#); [De Oleo, Adriana](#); [Murphy, Davis](#); [Parekh, Samir](#); [Thaker, Rahul](#); [Jason Jones](#)
Subject: [External] RE: Permit draft review - Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro
Date: Tuesday, December 17, 2024 10:08:30 AM
Attachments: [image001.png](#)
[AO_F_9700175_PRMT_PmtRvwWork_T09_draft_RPT_20241213_Draft_review_JW_Comments.docx](#)
[AO_F_9700175_PRMT_PmtWork_T09_draft_RPT_20241213_Draft_review_JW_Comments.docx](#)

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Good day Mr. Xiao,

Please find attached our comments on the draft permit and technical review document.

Best regards,

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER

GLOBAL ENVIRONMENTAL, HEALTH & SAFETY

JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Friday, December 13, 2024 12:48 PM
To: Martin Weed <MWeed@jeldwen.com>
Cc: Aaron Brite <Abrite@jeldwen.com>; Jamie Joines <JJoines@jeldwen.com>; Barker, Robert <robert.barker@deq.nc.gov>; De Oleo, Adriana <adriana.deoleo@deq.nc.gov>; Murphy, Davis <davis.murphy@deq.nc.gov>; Parekh, Samir <samir.parekh@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: Permit draft review - Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro

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Good afternoon Mr. Weed,

Please find the attached draft permit No. 10247/T09 and the supporting legal basis for Title V air permit renewal application 9700175.24B received on September 5 for JELD-WEN, Inc. - North Wilkesboro. Please review these documents carefully and email me any comments or changes you may have by the close of Friday, December 20, 2024.

DAQ looks forward to hearing from you on the above draft documents and starting the required public participation and EPA review soon.

Thank you all for the help!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

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From: [Aaron Brite](#)
To: [Parekh, Samir](#); [Xiao, Chengqing](#)
Cc: [Martin Weed](#); [Jason Jones](#); [Jamie Joines](#); [Tom Graham](#)
Subject: RE: [External] RE: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro
Date: Thursday, December 12, 2024 11:45:31 AM
Attachments: [image001.png](#)
[image002.png](#)

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Thank you Samir and we look forward to talking with you Monday. - Aaron

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER

GLOBAL ENVIRONMENTAL, HEALTH & SAFETY

JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

From: Parekh, Samir <samir.parekh@deq.nc.gov>
Sent: Thursday, December 12, 2024 11:20 AM
To: Aaron Brite <Abrite@jeldwen.com>; Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Cc: Martin Weed <MWeed@jeldwen.com>; Jason Jones <JasJones@jeldwen.com>; Jamie Joines <JJoines@jeldwen.com>
Subject: RE: [External] RE: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro

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Hi Aaron,

The time interval for the SOC is likely to be when the final action on the facility renewal application is taken. We can discuss this and the SOC procedure more on Monday 12/16.

Thanks.
Samir

Samir Parekh, P.E.

Supervisor, Stationary Source Compliance Branch
Division of Air Quality
North Carolina Department of Environmental Quality
1641 Mail Service Center, Raleigh, NC 27699-1641
Office: (919) 707-8409

samir.parekh@deq.nc.gov ****New email address****



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From: Aaron Brite <Abrite@jeldwen.com>
Sent: Thursday, December 12, 2024 11:11 AM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Cc: Martin Weed <MWeed@jeldwen.com>; Jason Jones <JasJones@jeldwen.com>; Jamie Joines <JJoines@jeldwen.com>; Parekh, Samir <samir.parekh@deq.nc.gov>
Subject: RE: [External] RE: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro

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Good morning Chengqing,

Thank for the notice and I look forward to speaking with Mr. Parekh.
I am curious if you have an estimate date of the permit renewal issuance and thus the interval the SOC will be needed?

Best regards,
Aaron

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER
GLOBAL ENVIRONMENTAL, HEALTH & SAFETY
JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Thursday, December 12, 2024 10:44 AM
To: Aaron Brite <Abrite@jeldwen.com>
Cc: Martin Weed <MWeed@jeldwen.com>; Jason Jones <JasJones@jeldwen.com>; Jamie Joines <JJoines@jeldwen.com>; Parekh, Samir <samir.parekh@deq.nc.gov>
Subject: RE: [External] RE: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. -

North Wilkesboro

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Good morning Mr. Brite,

I hope that this email finds you well. Please be advised that the review of the renewal application (9700175.24B) for Air Quality No. 10247T08 will not be completed, nor the renewed permit issued prior to the permit expiration date of February 28, 2025. Due to the late submission of the Title V permit renewal application (postmarked on 9/4/2024), Special Orders by Consent (SOCs) is required to allow the facility to continue to operate past the expiration date.

I copied this email to Mr. Samir Parekh, Supervisor, Stationary Source Compliance Branch of DAQ. He will contact you to explaining the SOC procedure.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov



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From: Aaron Brite <Abrite@jeldwen.com>

Sent: Wednesday, October 16, 2024 10:22 AM

To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>

Cc: Martin Weed <MWeed@jeldwen.com>; Jason Jones <JasJones@jeldwen.com>; Jamie Joines <JJoines@jeldwen.com>

Subject: Re: [External] RE: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro

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Chengqing,

Yes ES-ET-10 was installed and started with ES-ET-9, which was not meant to be repeated below.

Aaron Brite, Regional Environmental Manager

Sent from my iPhone, please excuse brevity and typos.

On Oct 16, 2024, at 09:45, Xiao, Chengqing <chengqing.xiao@deq.nc.gov> wrote:

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Good morning Aaron,

Thank you for the information. Has the source ES-ET-10 (door skin edge trimmer) been installed?

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

<image001.png>

From: Aaron Brite <ABrite@jeldwen.com>

Sent: Tuesday, October 15, 2024 4:14 PM

To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>

Cc: Martin Weed <MWeed@jeldwen.com>; Jason Jones <JasJones@jeldwen.com>;
Jamie Joines <JJoines@jeldwen.com>

Subject: RE: [External] RE: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro

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Hello Chengqing,

“Normal” was established by the site personnel for all sources listed as controlled by the new dust collector, BH-2 (Clark Pneufil) in November 2022, after it was started in October of 2022.

The original dust collector’s, BH-1 (Nederman), was established after it was installed and confirmed following the reorganization of the dust collection marked by the startup of BH-2 in November 2022. Normal was again confirmed at the time of the startup of ES-ET-9 and ES-ET-9 to be unchanged. Please note that ES-ET-11 and ES-ET-12 have not been installed.

Best regards

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER

GLOBAL ENVIRONMENTAL, HEALTH & SAFETY

JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>

Sent: Tuesday, October 8, 2024 4:05 PM

To: Aaron Brite <ABrite@jeldwen.com>

Cc: Martin Weed <MWeed@jeldwen.com>; Jason Jones <JasJones@jeldwen.com>;
Jamie Joines <JJJoines@jeldwen.com>

Subject: RE: [External] RE: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro

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Good afternoon Mr. Brite,

Thank you for your quick response. I added the emailed technical additional information to the Title V permit renewal application 9700175.24B.

Regarding my question 3, please provide the following information:

(a) the month and year when the “normal” was established for the sources

(ID Nos. ES-ET-1 through ES-ET-8, ES-DT-1, ES-DT-2, ES-SS-1, and ES-SS-2), which was in the first 30 days following initial operation of the fabric filter (ID No. CD-BH-2) after the issuance of Permit No. 10247T07 on August 9, 2022;

(b) the month and year when the “normal” was established for the sources (ID Nos. ES-ET-9 through ES-ET-12), which was in the first 30 days following the initial operation of any these sources (ID Nos. ES-ET-9 through ES-ET-12) after the issuance of Permit No. 10247T08 on September 14, 2022.

Please feel free to contact me if you have any questions.

Thank you for your time in helping with this.

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

<image001.png>

From: Aaron Brite <ABrite@jeldwen.com>
Sent: Monday, October 7, 2024 1:49 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; Jamie Joines <JJoines@jeldwen.com>
Cc: Martin Weed <MWeed@jeldwen.com>; Jason Jones <JasJones@jeldwen.com>
Subject: [External] RE: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro

You don't often get email from abrite@jeldwen.com. [Learn why this is important](#)

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Good day Chengqing,

I have reviewed the latest permit modification where our second dust collector was added. Normal for these sources was established during the initial 30 days following the issuance of the permit. Weekly EPA Method 22 observations established that normal for these sources is no visible emissions.

1-Bromopropane is not used itself or as a component of any material in our production process.

Our PFAS questionnaire is attached.

Best regards,

AARON BRITE, MSc | REGIONAL ENVIRONMENTAL MANAGER

GLOBAL ENVIRONMENTAL, HEALTH & SAFETY

JELD-WEN, Inc.
2645 Silver Crescent Dr.
Charlotte, NC 28273
Mobile: 336.479.1925
Email: abrite@jeldwen.com

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>

Sent: Thursday, October 3, 2024 5:18 PM

To: Jamie Joines <JJoines@jeldwen.com>

Cc: Martin Weed <MWeed@JELDWEN.com>; Aaron Brite <ABrite@jeldwen.com>

Subject: Title V air permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro

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Good afternoon Mr. Joines,

The Title V permit renewal application (9700175.24B) for JELD-WEN, Inc. - North Wilkesboro has been assigned to me. I am currently working on the technical review for this application and have some questions below.

1. For this permit renewal application, the facility should be sent a DAQ's PFAS questionnaire. Please provide the facility response to the attached DEQ questionnaire on fluorinated compounds (e.g., PFAS) uses and emissions for your facility. Please note that DAQ will proceed on public participation with the Title V renewal application only after we receive a response on the requested information on fluorinated compounds.
2. EPA has added 1-bromopropane (CAS 106-94-5) to the HAP list on January 5, 2022. Please clarify whether JELD-WEN, Inc. - North

Wilkesboro facility emits 1-bromopropane. If it does, please provide the emissions rates including both on actual and PTE basis.

3. Please see the attached current permit 10247/T08 issued 09/14/2022. On page 8 under **Monitoring** highlighted in orange in Section 2.1 B.2.c, *“The Permittee shall establish “normal” for these sources (ID Nos. ES-ET-1 through ES-ET-8, ES-DT-1, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following initial operation of the fabric filter (ID No. CD-BH-2) after the issuance of Permit No. 10247T07. The Permittee shall establish “normal” for these sources (ID Nos. ES-ET-9 through ES-ET-12, ES-DT-2, ES-SS-1, and ES-SS-2) in the first 30 days following the initial operation of any these sources (ID Nos. ES-ET-9 through ES-ET-12) after the issuance of Permit No. 10247T08.”*

If the facility has completed these requirements, please confirm and provide the dates of “normal” established for the sources (ID Nos. ES-ET-1 through ES-ET-8, ES-DT-1, ES-DT-2, ES-SS-1, and ES-SS-2), and for the sources (ID Nos. ES-ET-9 through ES-ET-12), respectively.

Once we receive your email confirmation, the language of establishing “normal” can be removed from the proposed permit with this permit renewal revision.

Please feel free to contact me if you have any questions.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov

<image001.png>

9700175.24B Attachment 2

PFAS Screening Questionnaire for JELD-WEN Inc, North Wilkesboro, NC Facility ID#9700175

DAQ Question 1:

Will your facility use any material or products in your operations that contain fluorinated chemicals? If so, please identify such materials or products and the fluorinated chemicals they contain.

No

DAQ Question 2:

Will your facility formulate/create products or byproducts (directly or indirectly) that contain fluorinated chemicals (across multiple media)? If so, please identify such products or byproducts and the fluorinated chemicals they contain.

No

DAQ Question 3:

Will your facility generate solid, liquid, or gaseous related emissions, discharges, or wastes/products containing fluorinated chemicals? If so, please identify such waste streams or materials and the fluorinated chemicals they contain.

No

DAQ Question 4:

Do your facility's processes or operations use equipment, material, or components that contain fluorinated chemicals (e.g., surface coating, clean room applications, solvents, lubricants, fittings, tubing, processing tools, packaging, facility infrastructure, air pollution control units)? Could these processes or operations directly or indirectly (e.g., through leaching, chemical process, heat treatment, pressurization, etc.) result in the release of fluorinated chemicals into the environment?

No

DAQ Question 5:

List the fluorinated chemicals identified (i.e., through testing or desktop review) above in your response under the appropriate methods/approaches? If one is not, are they on any other known US or International target lists? OTM-45 (air emissions) Methods 533 & 537.1 (drinking water) SW-846: Method 8327 (water) Draft Method 1633 (water, solids, tissue) Total PFAS" Draft Method 1621 for Adsorbable Organic Fluorine (wastewater) Non targeted analytical methods Qualitative approach through suspect screening.

N/A

DAQ Question 6:

Are there other facilities or operations in the U.S. or internationally engaged in the same or similar activities involving fluorinated chemicals addressed in your response to the above questions? If so, please provide facility identification information? In addition, are there any ISO (International Organization for Standardization) certification requirements?

No

DAQ Question 7:

Do you plan to store AFFF on site, use it in fire training at the site, use it for fighting fires at the facility, or include it in a fire fighting system at the site?

No

DAQ Question 8:

Are other emerging contaminants (e.g., 1,4-dioxane, bromine, perchlorate, 1,2,3-Trichloropropane) used in some capacity within your facility or operations?

No

DAQ Question 9: Do you need technical assistance to answer the questions above.

No

Permit condition language

State-enforceable only

Disclosure of Information Relating to Emissions of Fluorinated Chemicals [15A NCAC 02Q.0308(a); 15A NCAC 02Q.0309(b)]

The Permittee shall have an ongoing duty to disclose the presence of materials containing fluorinated chemicals at the facility that have the potential to result in the emission of fluorinated chemicals to the environment. Such disclosures shall be in writing and submitted to the Regional Office Supervisor within thirty days of the Permittee becoming aware of such information, unless such information has already been disclosed to DAQ by the Permittee. The disclosure shall describe the identity, quantity, and use of such material to the extent known. DAQ may require the permittee to conduct analysis or testing of fluorinated chemical emissions as necessary to properly evaluate emissions sources at the facility. As used in this condition, the term “fluorinated chemicals” includes but is not limited to per- and polyfluoroalkyl substances (PFAS).

9700175.24B Attachment 3



Table 2a
JELD-WEN, inc.

Exterior Door Division - North Wilkesboro, North Carolina

Exterior Door Assembly -Assembly, Foam Filling, Inbuilt Glazing Emissions

Based on 12 SMC presses (permitted), 100% of skins produced onsite used onsite in door production.

Current state is 10 SMC presses installed, up to 30% of skin production transferred to other facilities.

	Raw Material ⁽¹⁾				Hourly PTE Usage ⁽²⁾ (lbs)	Annual PTE Usage ⁽²⁾ (lbs)	Raw Material Components ⁽¹⁾		Estimated PTE ^(c)			
	Product	Supplier	Capacity doors/ Hour	% of Foam Mix			Name	Emission Factor	VOC (lbs/hr)	VOC (tons/yr)	HAP (lbs/hr)	HAP (lbs/yr)
ES-DAS-1	ELASTOPOR P Isocyanate	BASF	100	58.8%	352.94	3,091,765	Total VOC Diphenylmethane 4,4'-diisocyanate Methylenediphenyldiisocyanate, isomers and homologues	0.00 0.00 2.10E-05 1.84E-01 These emissions are calculated on Table 3 using calculations developed by the Alliance for the Polyurethanes Industry.				
	ELASTOPOR P Resin	BASF		41.2%	247.06	2,164,235	No VOC or HAP content					
	RapidEx Hot Melt Adhesive	HB Fuller		NA	5	46,350	Total VOC MDI		See table 4 0.00 0.00 2.52E-08 2.21E-04			
									TOTAL ^{(2):}	0.00	0.00	2.10E-05
ES-DAS-2	ELASTOPOR P Isocyanate	BASF	80	58.8%	282.35	2,473,412	Total VOC Diphenylmethane 4,4'-diisocyanate Methylenediphenyldiisocyanate, isomers and homologues	0.00 0.00 1.68E-05 1.47E-01 These emissions are calculated on Table 3 using calculations developed by the Alliance for the Polyurethanes Industry.				
	ELASTOPOR P Resin	BASF		41.2%	197.65	1,731,388	No VOC or HAP content					
	RapidEx Hot Melt Adhesive	HB Fuller		NA	4	37,080	Total VOC MDI		See table 4 0.00 0.00 2.02E-08 1.77E-04			
									TOTAL ^{(2):}	0.00	0.00	1.68E-05
ES-DAS-3	ELASTOPOR P Isocyanate	BASF	60	58.8%	211.76	1,855,059	Total VOC Diphenylmethane 4,4'-diisocyanate Methylenediphenyldiisocyanate, isomers and homologues	0.00 0.00 1.26E-05 1.10E-01 These emissions are calculated on Table 3 using calculations developed by the Alliance for the Polyurethanes Industry.				
	ELASTOPOR P Resin	BASF		41.2%	148.24	1,298,541	No VOC or HAP content					
	Instantglaze 3	Dow Corning		NA	8	69,905	Total VOC Methanol	1.2% 0.5%	0.10	0.4	0.04	321.56
	RapidEx Hot Melt Adhesive	HB Fuller		NA	3	27,810	Total VOC MDI		See table 4 0.00 0.00 1.51E-08 1.33E-04			
									TOTAL ^{(2):}	0.10	0.42	3.67E-02

Constants, Calculations, and References

Dow Corning InstantGlaze is a silicone sealant used to bond window inserts into cutouts in the doors. Only line 3 and a separate standalone door glazing line use this material.				Dow Corning SDS 9/15/2017 and HAP letter	
Usage per door for the largest glass pane option:				VOC content	13 g/l
60	grams	0.133	pounds	Relative density	1.087 kg/L
Annual usage at 100% of doors receive glass insert,				VOC % weight	1.2%
RapidEx Hot Melt Adhesive per door=				Methanol generated by hydrolysis - wt%	
Annual Usage=				0.46%	
		0.053	pounds		
		111240	pounds		

Notes:

- (a) Hourly PTE Usage [lbs/hr] = (Total Foam/Adhesive/Glazing Used [lbs/door]) x (Doors Produced [doors/hr]) x (%Total Foam Used [%/wt]) - Applicable to Foam Only
- (b) Hourly and Annual PTE Emission of MDI [lbs/hr or yr] = (Doors/hour X Calculated Emissions per Door X Hours/Year for Annual Emissions)
- (c) Annual PTE Usage [lbs/yr] = (Total Foam/Adhesive/Glazing Used [lbs/hour]) x (8760 hours/year) X Emissions factor (%wt VOC or HAP)
- | | | | | | | |
|------------------------------|-----------|-----|----------------------------|-----|---------------------|------|
| Total Foam Used [lbs/door] = | 6 | (3) | DAS 1 Capacity doors/hour= | 100 | Hours/year for PTE= | 8760 |
| Doors Produced [doors/hr] = | 240 | (4) | DAS 2 Capacity doors/hour= | 80 | | |
| Doors Produced [doors/yr] = | 2,102,400 | (4) | DAS 3 Capacity doors/hour= | 60 | | |

- (c) PTE emissions [lbs/hr] = (PTE Usage [lbs/hr]) x (Amount in Product [wt%])

PTE emissions [lbs/yr] = (PTE Usage [lbs/yr]) x (Amount in Product [wt%])

References:

- (1) From Vendor MSDS, Product Information Sheets, or conversations with vendors.
- (2) Total VOC emissions include calculated individual HAP emissions on this table as well as the calculated MDI emissions shown on Table 2.
- (3) Estimated usage of required foam to insulate each door as suggested by urethane vendor.
- (4) Based on maximum SMC door facing per hour and annual production.