Standard

air contaminant discharge permit

DEQlogo.tiffDepartment of Environmental Quality

475 NE Bellevue Dr., Suite 110

Bend, OR 97701

This permit is being issued in accordance with the provisions of ORS 468A.040 and

based on the land use compatibility findings included in the permit record.

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| ISSUED TO:  JELD-WEN, inc. dba JELD-WEN  62845 Boyd Acres Road  Bend, OR 97701 | INFORMATION RELIED UPON:  Application No.: 26815  Date Received: 03/30/2012  This permit action replaces application #23765 that was received on 6/29/09 for renewal of the Title V permit. |
| PLANT SITE LOCATION:  62845 Boyd Acres Road  Bend, OR 97701 | LAND USE COMPATIBILITY FINDING:  Approving Authority: City of Bend  Approval Date: 07/26/1995 |

**ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY**

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Mark W. Bailey, Eastern Region Air Quality Manager Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-0020):

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| **Table 1 Code** | **Source Description** | **SIC** | **NAICS** |
| Part , B, 71 | Sawmills and/or Planing Mills 25,000 or more bd. ft./maximum 8 hr. finished product | 2431 | 321911 |
|  | Natural gas fired boiler <10 MMBtu/hr heat input | 4961 | 221330 |

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# GENERAL emission standards AND LIMITS

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| Visible Emissions | Emissions from any air contaminant source must not equal or exceed 20% opacity for a period aggregating more than 3 minutes in any one hour. |
| Particulate Matter Emissions | The permittee must comply with the following particulate matter emission limits, as applicable: |
|  | Particulate matter emissions from the boiler must not exceed 0.1 grains per standard cubic foot, corrected to 50% excess air. |
|  | Particulate matter emissions from any air contaminant source other than the boiler and fugitive emission sources must not exceed 0.1 grains per standard cubic foot. |
| Fugitive Emissions | The permittee must take reasonable precautions to prevent fugitive dust emissions by: |
| Treating vehicular traffic areas of the plant site under the control of the permittee. |
| Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times. |
| Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer. |
| Particulate Matter Fallout | The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. DEQ will verify that the deposition exists and will notify the permittee that the deposition must be controlled. |
| Nuisance and Odors | The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel. |
| Fuels and Fuel Sulfur Content | The permittee must not use any fuel other than natural gas, propane or butane. |

# specific performance and emission standards

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| Plant Production | Plant production must not exceed 50,000,000 board feet per year without first notifying the Department. |
| Pressure Treatment Process | VOC emissions from the pressure treatment process must not exceed 13 pounds per thousand board feet each calendar month. |
| Veneer Dryer | The permittee must not cause or allow the operation of the veneer dryer such that visible air contaminants emitted from the dryer stack(s) or emission point(s) exceed: |
| An average operating opacity of 10%; or |
| A maximum opacity of 20% |
| “Average operating opacity” means the opacity of emission determined using EPA Method 9 on any three days within a 12-month period which are separated from each other by at least 30 days; a violation of the average operating opacity limitation is judged to have occurred if the opacity of emissions on each of the three days is greater than the specified average operating opacity limitation. “Maximum opacity” means the opacity as determined by EPA Method 9. |

# plant site emission limits

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| Plant Site Emission Limits (PSEL) | Plant site emissions must not exceed the following: | | |
| **Pollutant** | **Limit** | **Units** |
| PM | 24 | tons per year |
| PM10 | 14 | tons per year |
| PM2.5 | 11 | tons per year |
| NOx | 39 | tons per year |
| CO | 99 | tons per year |
| VOC | 99 | tons per year |
| GHG | 74,000 | tons CO2e/yr |
|  |  | | |
| Annual Period | The annual plant site emissions limits apply to any 12-consecutive calendar month period. | | |

# compliance demonstration

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| Monitoring Requirements | At least once each quarter for a minimum period of 30 minutes, the permittee must visually survey the entire plant for visible emissions. If visible emissions are detected for more than 5% of the survey period (90 seconds) from an emission source, the permittee must either take corrective action to eliminate the visible emissions or conduct a Method 9 test within 24 hours of the survey period. The permittee must maintain records of the surveys, corrective action (if necessary), and Method 9 tests (if conducted). |
|  | The permittee must inspect each baghouse and cyclone at least monthly and replace the bags or make other repairs as necessary to retain efficiency. The permittee must maintain records of the inspections and any corrective action. |
| PSEL Compliance Monitoring | Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant, except GHG:  E = Σ(EF x P)/2000 lbs  Where,  E = Pollutant emissions (ton/yr);  EF = Pollutant emission factor (see Condition 10.0);  P = Process production (see Condition 11.0) |
| Emission Factors | The permittee must use the default emission factors provided in Condition 10.0 for calculating pollutant emissions, unless alternative emission factors are approved by DEQ. The permittee may request or DEQ may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by DEQ. |
| VOC Mass Balance | VOC emissions for each 12 consecutive calendar month period are calculated by the following formula:  EVOC/MB = ∑(RMi \* Di \* VOCi) x K  Where,  EVOC/MB = VOC emissions based on material balance (tons)  RMi = Amount of each type of VOC containing raw material used in gallons  Di = Density of each type of VOC containing raw material used in lbs/gal.  VOCi = VOC content of raw material (weight fraction form MSDS)  K = Conversion constant = 1 ton/2000 lb |
| VOC Total for Facility | The total VOC emissions are the sum of the emissions calculated in Conditions 4.2 and 4.4. |
| Greenhouse Gas (GHG) Registration and Reporting | If the calendar year emission rate of greenhouse gases (CO2e) is greater than or equal to 2,756 tons (2,500 metric tons), the permittee must register and report its greenhouse gas emissions with DEQ in accordance with OAR 340-215. |
| T-Butyl Acetate (TBAC) | TBAC is not a VOC for purposes of demonstrating compliance with the VOC Plant Site Emission Limit. However, TBAC emissions must be determined using the procedures in Condition 4.4, as appropriate, and reported separately in the annual report. |

# recordkeeping requirements

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| Operation and Maintenance | The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices: |
| Quarterly visible emission surveys and corrective action or Method 9 tests, if applicable; and |
| Process records identified in Condition 11.0. |
| Excess Emissions | The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity for 3 minutes or more in any 60-minute period. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by DEQ in accordance with OAR 340-214-0330(4). |
| Complaint Log | The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee’s actions to investigate the validity of each complaint and a record of actions taken for complaint resolution. |
| Retention of Records | Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to DEQ upon request. |

# reporting requirements

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| Excess Emissions | The permittee must notify DEQ of excess emissions events if the excess emission is of a nature that could endanger public health. |
|  | Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 7.4 by email, telephone, facsimile or in person. |
|  | If the excess emissions occur during non-business hours, the permittee must notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311. |
|  | The permittee must also submit follow-up reports when required by DEQ. |
| Annual Report | For each year this permit is in effect, the permittee must submit to DEQ by **February 15** two (2) copies of the following information for the previous calendar year: |
|  | Operating parameters: |
|  | type and amount of fuel burned in the boiler; |
|  | material throughput for cyclones and baghouses, (BDT) |
|  | veneer dried in the veneer dryer (MSF – 3/8” basis) |
|  | material dried in the dehumidification kilns (MBF) |
|  | VOC material balance records, including the quantity of each VOC containing material used, the density of the VOC containing material, and the VOC content of the VOC containing material. |
|  | A summary of annual pollutant emissions determined each month in accordance with Condition 4.2 through 4.7. |
|  | Records of all planned and unplanned excess emissions events. |
|  | Summary of complaints relating to air quality received by permittee during the year. |
|  | List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions. |
|  | List major maintenance performed on pollution control equipment. |
| Notice of Change of Ownership or Company Name | The permittee must notify DEQ in writing using a Departmental “Transfer Application” form *(AQ103)* within 60 days after the following: |
| Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or |
| Sale or exchange of the activity or facility. |
| Construction or Modification Notices | The permittee must notify DEQ in writing using a Departmental “Notice of Intent to Construct” form *(AQ104)*, or other permit application forms, and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before: |
|  | Constructing, installing or establishing a new stationary source that will cause an increase in any regulated pollutant emissions; |
| Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or |
| Constructing or modifying any air pollution control equipment. |
| Where to Send Reports and Notices | The reports, with the permit number prominently displayed, must be sent to the Permit Coordinator for the region where the source is located as identified in condition 7.3. |

# Administrative requirements

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| Permit Renewal Application | The completed application package for renewal of this permit is due on **April 1, 2017**. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in Condition 7.3. |
| Permit Modifications | Application for a modification of this permit must be submitted not less than **60** days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the DEQ Business Office. |
| Permit Coordinator’s Address | All reports, notices and applications should be directed to the Permit Coordinator at the following DEQ office:  Department of Environmental Quality  Eastern Region – Bend Office  475 NE Bellevue Drive, Suite 110  Bend, OR 97701-7415  Telephone: 541-633-2021 |
| Department Contacts | Information about air quality permits and DEQ’s regulations may be obtained online at [www.oregon.gov/DEQ/](http://www.oregon.gov/DEQ/). All inquiries about this permit should be directed to the DEQ office listed above. |

# fees

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| Annual Compliance Fee | The Annual Fee specified in OAR 340-216-0020, Table 2, Part 2 for a Standard ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by DEQ regulations will be mailed prior to the above date. **Late fees in accordance with Part 4 of the table will be assessed as appropriate.** |
| Change of Ownership or Company Name Fee | The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company. |
| Special Activity Fees | The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit. |
| Where to Submit Fees | Fees must be submitted to:  Department of Environmental Quality  Business Office  811 SW Sixth Avenue  Portland, OR 97204-1390 |

# general conditions and disclaimers

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| Permitted Activities | This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked. |
| Other Regulations | In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by DEQ. |
| Conflicting Conditions | In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply. |

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| Masking of Emissions | The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety or welfare of any person or otherwise violate any other regulation or requirement. |
| Department Access | The permittee must allow DEQ’s representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095. |
| Permit Availability | The permittee must have a copy of the permit available at the facility at all times. |
| Open Burning | The permittee may not conduct any open burning except as allowed by OAR 340 Division 264. |
| Asbestos | The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction and maintenance. |
| Property Rights | The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. |
| Permit Expiration | A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit:a timely and complete application for renewal or for an Oregon Title V Operating Permit has been submitted; oranother type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially. |
| Permit Termination, Revocation or Modification | DEQ may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084. |

# Emission Factors

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| **Emissions Device or Activity** | **Pollutant** | **Emission Factor (EF)** | **EF Units** | **EF Reference** |
| Boiler | PM/PM10/PM2.5 | 7.6 | lb/mmcf | AP-42 |
| NOx | 94 |
| CO | 40 |
| VOC | 5.5 |
| Cyclones | PM | 0.5 | lb/BDT | DEQ |
| PM10/PM2.5 | 0.25 |
| Baghouses | PM/ PM10/PM2.5 | 0.04 |
| Truck Load Out | PM/ PM10/PM2.5 | 0.1 |
| Veneer Drying | PM/ PM10/PM2.5 | 8.0 | lb/MSF – 3/8” basis |
| VOC | 3.0 |
| Wood Dehumidification Kilns | VOC | 0.73 | lb/MBF | Engineering Estimate |

# Process/Production Records

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| **Emissions Device or Activity** | **Process or Production Parameter** | **Frequency** |
| Boiler | Cubic feet of natural gas burned | Monthly |
| Cyclones | Material throughput (BDT) | Monthly |
| Baghouses | Material throughput (BDT) | Monthly |
| Truck Load Out | Material throughput (BDT) | Monthly |
| Veneer Drying | Veneer dried (MSF – 3/8” basis) | Monthly |
| Wood Dehumidification Kilns | Material dried (MBF) | Monthly |
| VOC Containing Materials | Quantity used (gallons/lbs), density, VOC content (%) | Monthly |

BDT = bone dry ton

MSF = thousand square feet

MBF = thousand board feet

# Abbreviations, acronyms and definitions

|  |  |
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| ACDP | Air Contaminant Discharge Permit |
| Calendar Year | The 12-month period beginning January 1st and ending December 31st |
| CFR | Code of Federal Regulations |
| CH4 | Methane |
| CO | Carbon Monoxide |
| CO2 | Carbon Dioxide |
| CO2e | Carbon Dioxide Equivalent |
| DEQ | Oregon Department of Environmental Quality |
| dscf | dry standard cubic foot |
| EPA | US Environmental Protection Agency |
| FCAA | Federal Clean Air Act |
| Gal | Gallon(s) |
| GHG | Greenhouse Gas |
| gr/dscf | grains per dry standard cubic foot |
| HAP | Hazardous Air Pollutant as defined by OAR 340-244-0040 |
| I&M | Inspection and Maintenance |
| lb | Pound(s) |
| MMBtu | Million British thermal units |
| N2O | Nitrous Oxide |
| NA | Not Applicable |
| NESHAP | National Emissions Standards for Hazardous Air Pollutants |
| NOx | Nitrogen Oxides |
| NSPS | New Source Performance Standard |
| NSR | New Source Review |
| O2 | Oxygen |
| OAR | Oregon Administrative Rules |
| ORS | Oregon Revised Statutes |
| O&M | Operation and Maintenance |
| PCD | Pollution Control Device |
| PM | Particulate Matter |
| PM10 | Particulate Matter less than 10 microns in size |
| PM2.5 | Particulate Matter less than 2.5 microns in size |
| PSD | Prevention of Significant Deterioration |
| PSEL | Plant Site Emission Limit |
| PTE | Potential to Emit |
| RACT | Reasonably Available Control Technology |
| scf | standard cubic foot |
| SER | Significant Emission Rate |
| SIC | Standard Industrial Code |
| SIP | State Implementation Plan |
| SO2 | Sulfur Dioxide |
| Special Control Area | as defined in OAR 340-204-0070 |
| VE | Visible Emissions |
| VOC | Volatile Organic Compound |
| Year | A period consisting of any 12- consecutive calendar months |