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JUN 03 2016

ORCAA

June 1, 2016

Mark V. Goodin
Senior Engineer
Olympic Region Clean Air Agency
2940 Limited Lane NW
Olympia, WA 98502

Re: Air Operating Permit Renewal Application
Simpson Door Company, McCleary, WA
Permit No. 09AOP717

Dear Mr. Goodin:

On behalf of Simpson Door Company (Simpson), SLR International Corporation is submitting this Air Operating Permit Renewal Application to the Olympic Region Clean Air Agency (ORCAA) for its door manufacturing facility located in McCleary, Washington. The facility operates under Air Operating Permit No. 09AOP717 which expires on December 6, 2016. In accordance with Washington Administrative Code (WAC) 173-401-710 and Permit Condition 3.10, the renewal application is due by June 6, 2016.

This cover letter provides a background of the facility and the regulatory analyses. A process flow diagram, site map, emissions calculations, and the required forms are provided in Attachment A.

BACKGROUND

Simpson Door Company operates a wood door manufacturing facility under Title V Air Operating Permit No. 09AOP717. The emission units associated with this facility are the residual transport systems (EU02), gas-fired package boiler (EU03), and lumber drying kilns (EU04).

Simpson was issued Notice of Construction (NOC) No. 11NOC869 on March 28, 2012 to construct a new sawdust bin and baghouse and modify the existing package boiler to operate on propane and natural gas. Simpson also ceased operation of the wood-fired boiler (EU01) on December 23, 2011. This project was successfully completed and the terms, conditions, and provisions of the NOC were incorporated into AOP No. 09AOP717.

Simpson has recently submitted an application for a proposed modification to the sawdust collection system that will eliminate the need for the current truck loading bin. Under this proposed plan, the sawdust from the dust collection system will be captured in the Atlas Bin prior to loading onto trucks. The sawdust from the Atlas bin will then be directly loaded into fully enclosed truck trailers through an enclosed system. The intent of the project is to reduce the

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fugitive dust emissions from the loading process (dust on the ground and residual in the atmosphere).

REGULATORY REVIEW

Pertinent regulations that have been promulgated or updated since issuance of the current permit were reviewed for applicability to Simpson operations.

New Source Performance Standards

New Source Performance Standards (NSPS) are air pollution control standards issued by the EPA under 40 CFR Part 60. The auxiliary boiler is still subject to 40 CFR Part 60 Subpart Dc, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, because the maximum heat input is greater than 10 MMBtu/hr but less than 100 MMBtu/hr. The requirements from Subpart Dc are already incorporated into Simpson's current Air Operating Permit.

National Emission Standards for Hazardous Air Pollutants

Ecology has adopted the federal National Emission Standards for Hazardous Air Pollutants (NESHAP) found in 40 CFR Part 63 as referenced in WAC 173-400-075. NESHAP regulations establish Maximum Achievable Control Technology (MACT) standards for specific types of equipment at qualifying facilities to control the emissions of Hazardous Air Pollutants (HAPs). Simpson is an area source of HAPs because potential emissions of HAPs is less than 25 tons per year (tpy) for total HAPs and 10 tpy for any individual HAP.

The regulations found in 40 CFR Part 63, Subpart DDDD, National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products, apply to plywood and composite wood products manufacturing facilities located at, or part of, major sources of HAPs emissions. As Simpson is an area source, this subpart is not applicable.

The requirements of 40 CFR Part 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, are not applicable to the package boiler since it is a natural gas or propane-fired boiler unit.

COMPLIANCE ASSURANCE MONITORING

40 CFR Part 64 requires compliance assurance monitoring (CAM) for emission units with add-on control devices that would have uncontrolled potential emissions greater than 100 tpy. The facility does not operate any such emissions unit.

COMPLIANCE CERTIFICATION

Simpson is currently in compliance with applicable air quality regulations and requirements. Form 8 in Attachment A provides the current compliance status and an explanation of how the compliance determination was evaluated for each specific applicable requirement. Per WAC 173-401-510(2)(i)(iii), Simpson proposes to continue to submit an annual compliance certification corresponding to the calendar year. The facility will continue to monitor its future

compliance status using the methods for compliance demonstration described in Form 7 in Attachment A.

Please feel free to contact me with any questions regarding the information in this application at (513) 723-4423 or skronholm@slrconsulting.com.

Respectfully,
SLR International Corporation

SDKronholm

Sarah D. Kronholm, P.E.
Principal Engineer

Cc: Tanya Dierick and Phil Steklenski, Simpson Door Company

Attachments

ATTACHMENT A

AIR OPERATING PERMIT APPLICATION FORMS

Air Operating Permit Application Form 1:

General Information and Certification

1. Company Name: Simpson Door Company
2. Plant or Facility Name: McCleary
3. Existing Air Operating Permit Number: ORCAA 09AOP717
4. Unified Business Identification Number (UBI#): 601912766
5. Facility Address: 400 Simpson Avenue, McCleary, Washington 98557
6. County: Grays Harbor
7. Mailing Address: (if different):
8. Owner: Simpson Door Company
9. Parent Company: Simpson Door Company
10. Parent Company Address if Different Than Above: _____
11. Plant or Facility site manager / contact: Tanya Dierick
12. Title: Director of HR, Compliance & Risk
13. Telephone: 360-495-2033
14. Claim of Confidentiality:
    Some of the records and information contained in this application are ☐ / are not ☒ (check one) unique to the applicant and/or are likely to adversely affect the competitive position of the applicant if released to the public or a competitor. If a claim of confidentiality is made for this application, provide a separate application for general distribution that is devoid of confidential information.
15. I certify that I am the responsible official, as defined in WAC 173-401-200(27) for this facility. I further certify as required by WAC 173-401-520, which, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.

Signature of Responsible Official

05/31/2016
Date

Title: Vice President/General Manager
Printed Name: Phil Steklenski
Phone Number: 360-495-3291
Mailing Address: 400 Simpson Avenue McCleary, Washington 98557

Air Operating Permit Application
Form 2: Emissions Units Form

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No)

Emissions and Emissions Units						
		Emissions			Compliance Assurance Monitoring	
Emissions Point Identifier	**Emission Point Description (including existing air pollution control equipment)**	**Annual Potential Emissions (for all regulated air pollutants)**	**Have Potential Emissions Changed Since Submittal of Most Recent AOP Application?**	**Actual Emissions for Calendar Year**	**Annual Potential Emissions without regard to Control Device**	**CAM needed? (yes or no)**
EU1	Emission Unit 1 was a Wood Boiler which ceased operation December 23, 2011.	See Footnote a	Yes - no longer in operation.	See Footnote a	See Footnote a	No
EU2	Residual Transport Systems: Particulate emissions from all cyclones serving mill operations such as wood cutting, slicing, planing, sanding, and milling operations.	See Footnote a	No	See Footnote a	See Footnote a	No
EU3	Package Boiler: Gas only 14.7 MMBtu/hr heat input rate 12,100 lbs/hr of steam at 200 psi	See Footnote a	No	See Footnote a	See Footnote a	No
EU4	Lumber Dry Kilns: 12 steam-heated, double-track lumber dry kilns (16' x 140' x 12' ht) with approximately 100,000 board-feet per kiln charge capacity for each kiln.	See Footnote a	No	See Footnote a	See Footnote a	No
	Adhesive Application	See Footnote a	No	See Footnote a	See Footnote a	No
	[a] Please see attached documents for emissions data.					

Air Operating Permit Application
Form 3: Facility SIC Codes and Products

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No)

Principal Product Name	Principal Product Description	Maximum Annual Production	Units of Measure	SIC Code	SIC Description
Wooden Door panels	Wooden door	Not tracked/not used in emissions calculations;	N/A	2436	Softwood Veneer and Plywood
Wood Residuals (byproduct)	Wood residuals including sawdust, sander dust, planer shavings, and reject wood that is reduced in size by chipping.	Not tracked/not used in emissions calculations; potential emissions calculations are provided in the application	N/A	2421	Sawmills and Planing Mills, General

Air Operating Permit Application

Form 4: Process Information

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No)

Process Number	Process Name	SIC Code	Process Description
1	Yard Department	2421	Includes portion of the facility where lumber sorting, drying, planing, and slicing takes place. Operations prepare raw lumber to a quality suitable for making doors.
2	Cutting Department	2436	Includes processing of dried lumber from the Yard process into the dimensions required for door manufacturing. Short pieces of lumber are finger joined and glued to produce "core" material. A continuous edge gluer joins pieces of wood together to produce panel plants and other door components. Finished panels are graded and stacked.
3	Door Department	2421	Various parts and pieces of wood produced in previous processes are machined into door components for final door assembly. Door components are initially assembled by hand and then placed into a hydraulically pressured clamp which joins the parts together for a final fit. After assembly, the doors will receive their panels and go through glazing (if glass panels are used) and sanding. Each door is inspected before being packaged, banded, and readied for final product shipment.

Air Operating Permit Application
Form 5: Raw Materials Used by Processes

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No)

Number of Process	Raw Material Name/Description	Maximum Annual Use	UOM
1	Green Fir and Hemlock Lumber	6,787	MBF

Air Operating Permit Application
Form 6: Fuels Used by Processes

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No)

Number of Process	Fuel Name/Description*	Maximum Annual Use	Unit of Measure
1, 2, 3	Propane Gas	1,608,393	Gallons
1, 2, 3	Natural Gas	144.28	MMCF
	*Package boiler (EU3) can operate on both natural gas and propane		

Air Operating Permit Application
Form 7: Applicable Requirements

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No) Emissions Unit : Facility Wide

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
3.1	WAC 173-401-620(2)(a)	No	No additional monitoring requirements	Not Applicable
3.2	WAC 173-401-620(2)(e)	No	No additional monitoring requirements	Not Applicable
3.3	WAC 173-401-620(2)(b)	No	No additional monitoring requirements	Not Applicable
3.4	WAC 173-401-620(2)(d)	No	No additional monitoring requirements	Not Applicable
3.5	ORCAA 3.2; WAC 173-401-620(2)(f)	No	Requires annual permit fee payment to ORCAA.	Not Applicable
3.6	WAC 173-401-620(2)(h)	No	No additional monitoring requirements	Not Applicable
3.7	WAC 173-401-625	No	No additional monitoring requirements	Not Applicable
3.8	WAC 173-401-620(2)(c)	No	No additional monitoring requirements	Not Applicable
3.9	WAC 173-401-620(2)(i)	No	No additional monitoring requirements	Not Applicable
3.10	WAC 173-401-705; WAC 173-401-610; WAC 173-401-620(2)(j)	No	Requires submittal of permit renewal application at least 6 months prior to permit expiration date.	Not Applicable
3.11	WAC 173-401-500(6)	No	No additional monitoring requirements	Not Applicable
3.12	WAC 173-401-730	No	No additional monitoring requirements	Not Applicable
3.13	WAC 173-401-722; WAC 173-401-724	No	No additional monitoring requirements	Not Applicable
3.14	WAC 173-401-720	No	No additional monitoring requirements	Not Applicable
3.15	WAC 173-401-725	No	No additional monitoring requirements	Not Applicable
3.16	WAC 173-401-620(2)(g)	No	No additional monitoring requirements	Not Applicable
3.17	WAC 173-401-630(3)	No	No additional monitoring requirements	Not Applicable
3.18	ORCAA 7.2; WAC 173-400-105(7) (State/local only)	Yes	No additional monitoring requirements	Not Applicable
3.19	WAC 173-401-630(2)	No	No additional monitoring requirements	Not Applicable
3.20	ORCAA 1.5(e) (local only)	Yes	No additional monitoring requirements	Not Applicable
3.21(a)	WAC 173-400-105(4)	No	No additional monitoring requirements	Not Applicable
3.21(b)	ORCAA 1.5(d) (Local only)	Yes	No additional monitoring requirements	Not Applicable
3.22	40 CFR 51, §51.212; 40 CFR 52: §52.12, §52.33	No	No additional monitoring requirements	Not Applicable
3.23	WAC 173-401-645(2); WAC 173-401-645(5)	No	No additional monitoring requirements	Not Applicable
3.24	WAC 173-400-107; ORCAA 8.7	No	No additional monitoring requirements	Not Applicable
3.25	WAC 173-441-110 (state only)	Yes	Requires payment of a Greenhouse Gas Reporting Fee each year a Greenhouse Gas Report is submitted.	Not Applicable

Air Operating Permit Application
Form 7: Applicable Requirements

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No) Emissions Unit : Facility Wide (Continued)

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
4.1	WAC 173-400-110; ORCAA 6.1	Yes	No additional monitoring requirements	Not Applicable
4.2	WAC 173-400-114; ORCAA 6.1	Yes	Prior to commencing replacement or substantial alteration of existing control technology, all necessary approvals shall be secured.	Yes
4.3	ORCAA 6.3.1 (local only)	Yes	Prior to commencing any asbestos or demolition projects, all notification and approval requirements must be met.	Yes
4.4	40 CFR 61, §61.145(b)	No	Prior to commencing any renovation or demolition activities, all notification requirements must be met.	Yes
4.5	WAC 173-401-635; ORCAA 6.1.1	No	No additional monitoring requirements	Not Applicable
5.1	40 CFR 61, §61.145(b); ORCAA 6.3 (local only)	No	No additional monitoring requirements	Not Applicable
5.2	40 CFR 82, §82.3; 40 CFR 82, Subparts A, B, C, F, and H	No	No additional monitoring requirements	Not Applicable
5.3	WAC 173-400-040(5); ORCAA 7.6 (local only)	No	The facility shall provide a system for the general public to file a complaint whenever the facility is in operation. All air quality related complaints directed to the facility shall be monitored and recorded.	Yes
5.4	WAC 173-400-040(2); ORCAA 8.3(e) (state/local only)	No	The facility shall provide a system for the general public to file a complaint whenever the facility is in operation. All air quality related complaints directed to the facility shall be monitored and recorded. The facility will devise and implement a fugitive emissions control plan which assures reasonable and appropriate precautions are taken for preventing fugitive emissions or dust.	Yes
5.5	WAC 173-400-040(4) (state only)	Yes	The facility shall provide a system for the general public to file a complaint whenever the facility is in operation. All air quality related complaints directed to the facility shall be monitored and recorded.	Yes
5.6	ORCAA 8.5(a) (local only)	Yes	The facility shall provide a system for the general public to file a complaint whenever the facility is in operation. All air quality related complaints directed to the facility shall be monitored and recorded.	Yes
5.7	ORCAA 8.5(c) (local only)	Yes	The facility shall provide a system for the general public to file a complaint whenever the facility is in operation. All air quality related complaints directed to the facility shall be monitored and recorded.	Yes

Air Operating Permit Application
Form 7: Applicable Requirements

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No) Emissions Unit : Facility Wide (Continued)

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
5.8	WAC 173-400-040(3)(a)	Yes	The facility shall provide a system for the general public to file a complaint whenever the facility is in operation. All air quality related complaints directed to the facility shall be monitored and recorded. The facility will devise and implement a fugitive emissions control plan which assures reasonable and appropriate precautions are taken for preventing futivie emissions or dust.	Yes
5.9	WAC 173-400-040(8)(a); ORCAA 8.3(c) (local only)	Yes	The facility shall provide a system for the general public to file a complaint whenever the facility is in operation. All air quality related complaints directed to the facility shall be monitored and recorded. The facility will devise and implement a fugitive emissions control plan which assures reasonable and appropriate precautions are taken for preventing futivie emissions or dust.	Yes
5.10	WAC 173-400-040(7); ORCAA 7.5 (local only); 40 CFR 60, §60.12; 40 CFR 63,	No	No additional monitoring requirements	Not Applicable
5.11	ORCAA 8.8 (local only)	Yes	No additional monitoring requirements	Not Applicable
5.12	ORCAA 8.2 (local only); WAC 173-400-040(1)	No	Conduct visual observations at least once per week. If visual emissions are observed, or opacity testing is otherwise required, EPA Reference Method 9 shall be used. Keep records of all visual observations and certified testing.	None
5.13	WAC 173-400-040(6)	No	When an SO_2 source test is required to demonstrate compliance, the testing procedure should follow the guidance outlined in Permit Condition 7.7.	None
5.14	WAC 173-400-050(1); ORCAA 8.3(a) (local only)	No	Conduct visual observations at least once per week. If visual emissions are observed, or opacity testing is otherwise required, EPA Reference Method 9 shall be used. Keep records of all visual observations and certified testing. When a particulate source test is required to demonstrate compliance, the testing procedure should follow the guidance outlined in Permit Condition 7.7.	None
5.15	WAC 173-400-060; ORCAA 8.3(a) (local only)	No	No additional monitoring requirements	None
8.1	WAC 173-401-615 (2)(c); §60.48c(i)	No	All required records will be retained for at least 5 years from the origination date and be available upon agency request.	Yes

8.2	WAC 173-401-615 (2)(b)	No	Maintain records describing changes made that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.	Yes
8.3	WAC 173-401-615 (2)(a); 11NOC869, Condition 5c & 5d	No	Maintain records of all required monitoring and testing.	Yes
8.4	WAC 173-401-615 (3)(b)	No	Maintain records of all permit deviations for the duration of the permit.	Yes
8.5	ORCAA 8.11(b) (local only)	Yes	No additional monitoring requirements	Not Applicable
8.6	WAC 173-400-105(1); ORCAA 8.11(a)	Yes	Maintain records of all data used to calculate any reported emissions.	Yes
8.7	ORCAA 7.3 (local only)	Yes	No additional monitoring requirements	Not Applicable
8.8	ORCAA 7.4 (local only)	Yes	No additional monitoring requirements	Not Applicable

Air Operating Permit Application
Form 7: Applicable Requirements

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No) Emissions Unit : Facility Wide (Continued)

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
8.9	WAC 173-401-615 (2)(a)	No	Maintain records of all received complaints, an assessment of their validity, and what, if any, corrective actions were taken.	Yes
8.10	WAC 173-401-615 (2)(a)	No	Maintain records of all actions taken to maintain air pollution control equipment.	Yes
8.11	40 CFR 63.1(b)(3); 40 CFR 63.10(b)(3)	No	Maintain records of applicability determinations of relevant standards or other applicable requirements under 40 CFR Part 63, which are determined inapplicable.	Yes
8.12	Chapter 173-441 WAC 12/1/10 (state only)	Yes	Maintain records of all Greenhouse Gas Reporting related activities and data.	Yes
8.15	WAC 173-401-615 (2)(a)	Yes	Maintain copies of up-to-date and representative material safety data sheets (MSDS) for all VOC-containing materials used to make wood doors.	Yes
9.1	WAC 173-401-630(1)	Yes	No additional monitoring requirements	Yes
9.2	WAC 173-401-630(5)	Yes	Submittal of the Annual Compliance Certification to ORCAA and the U.S. EPA within 30 days of the end of the reporting period.	Yes
9.3	ORCAA 1.6 (local only)	Yes	No additional monitoring requirements	Yes
9.4	WAC 173-401-615(3)(a)	Yes	Submittal of a Semi-Annual Monitoring Report to ORCAA within 30 days of the end of the reporting period.	Yes
9.5	WAC 173-401-615(3)(b); WAC 173-400-107(3); WAC 173-401-645; 97NOC014, Condition 10	No	Any deviations from permit conditions will be promptly reported and documented.	Yes
9.6	WAC 173-401-615(3)	Yes	Malfunctions of control equipment will be reported to ORCAA if a repair cannot be completed within 24 hours.	Yes
9.7	WAC 173-401-615(3)	Yes	Complaints received will be reported to ORCAA within 24 hours of the time it was received.	Yes
9.8	WAC 173-400-105(1); ORCAA 8.11(b)	Yes	Submittal of an Annual Inventory Report to ORCAA within 30 days of receiving the standard reporting forms from the agency.	Yes
9.9	WAC 173-401-630(1)	Yes	Notification will be made to ORCAA in writing at least 14 days in advance of any compliance testing which will include a test plan. Notifications will also be made in the event of a compliance test being rescheduled.	Yes
9.10	WAC 173-401-630(1)	Yes	Submittal of source test results to ORCAA within 45 days of the test completion.	Yes
9.11	Chapter 173-441WAC 12/1/10 (state only)	Yes	Requires monitoring of Greenhouse Gas emissions and reporting if emission thresholds are exceeded.	Yes
9.12	WAC 173-401-630(1)	Yes	No additional monitoring requirements	Not Applicable

Air Operating Permit Application
Form 7: Applicable Requirements

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No) Emissions Unit : EU2: Residuals Transport Systems

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
6.1(a)	WAC 173-401-600(1) & (2); ORCAA 8.8 (local only)	Yes	Operating ranges specified for EU2 shall be used as an indication of good operating condition of air pollution controls. Corrective actions shall be taken as soon as possible whenever monitoring indicated out-of-range operations, but no later than 24 hours.	Yes
6.1(b)	11NOC869, Condition 3a	No	Conduct weekly observations of the Sawdust Bin operation and keep inspection records. Monitor and record Baghouse and Sawdust Bin filter pressure drop daily and keep monitoring data records. Inspect Baghouse, Sawdust Bin, Cyclones, and Pneumatic Transport Systems daily and keep inspection records.	Yes
6.1(c)	11NOC869, Condition 3b	No	Conduct visual observations at least once per week. If visual emissions are observed, or opacity testing is otherwise required, EPA Reference Method 9 shall be used. Keep records of all visual observations and certified testing.	Yes
6.1(d)	11NOC869, Condition 3c	No	Conduct weekly observations of the Sawdust Bin truck unloading operation and keep inspection records.	Yes

Air Operating Permit Application

Form 7: Applicable Requirements

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No) Emissions Unit : EU3: Package Boiler

Applicable Requirement Identifier	Applicable Requirement	State Only?	Required Monitoring Recordkeeping & Reporting	Proposed Monitoring Recordkeeping & Reporting Adequate to Assure Compliance
6.2(a)	WAC 173-401-600(1) & 2; ORCAA 8.8	Yes	Perform an Annual Combustion Evaluation by comparing O_2, NO_x, and CO concentrations with acceptable ranges for each pollutant recommended by the boiler manufacturer. Document recommended operating ranges in the written Operation and Maintenance plan for the boiler.	Yes
6.2(b)	11NOC869, Condition 4a	No	No additional monitoring requirements	Not Applicable
6.2(c)	97NOC014, Condition 3 (6/7/96)	No	Conduct visual observations at least once per week. If visual emissions are observed, or opacity testing is otherwise required, EPA Reference Method 9 shall be used. Keep records of all visual observations and certified testing.	Yes
6.2(d)	97NOC014, Condition 4 (6/7/96)	No	Conduct visual observations at least once per week. If visual emissions are observed, or opacity testing is otherwise required, EPA Reference Method 9 shall be used. Keep records of all visual observations and certified testing.	Yes
6.2(e)	97NOC014, Condition 6 (6/7/96)	No	When a NO_x source test is required to demonstrate compliance, the testing procedure should follow the guidance outlined in Permit Condition 7.7.	Yes
6.2(f)	97NOC014, Condition 7	No	When a CO source test is required to demonstrate compliance, the testing procedure should follow the guidance outlined in Permit Condition 7.7.	Yes
6.2(g)	11NOC869, Condition 4b & 4d	No	Perform an Annual Combustion Evaluation by comparing O_2, NO_x, and CO concentrations with acceptable ranges for each pollutant recommended by the boiler manufacturer. Document recommended operating ranges in the written Operation and Maintenance plan for the boiler.	Yes
6.2(h)	11NOC869, Condition 4f	No	Corrective actions will need to be initiated promptly if an Annual Combustion Evaluation indicated that combustion is out-of-range. Combustion should then be rechecked to confirm the boiler is operating properly.	Yes
6.2(i)	97NOC014, Condition 8; 11NOC869, Condition 4d & 5b	No	Maintain an EU3 Operation and Maintenance Plan onsite including maintenance for the boiler and associated equipment, manufacturer's recommended operating ranges that indicate proper combustion, maintenance and repair procedures, and recordkeeping requirements.	Yes

8.13	11NOC869, Condition 5a; 40 CFR Part 60, Subpart Dc: §60.48c(g)(3)	No	Maintain records of monthly and 12-month cumulative reocrds of the amount of natural gas and propane combusted each calendar months by EU3.	Yes
8.14	40 CFR Part 60, Subpart Da: §60.7(b)	No	Maintain records of the occurrence and duration of any startup, shutdown, or malfunction of EU3.	Yes

Air Operating Permit Application
Form 8: Compliance Schedule

Facility Name: Simpson Door Company
Confidentiality Claim? Yes (No) Emissions Unit : Facility Wide

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
1-2	In	Continuous	N/A
2	In	Continuous	N/A
3.1 - 3.25; except for	In	Continuous	Permit administration records required by the permit
3.5	In	Intermittent	Permit administration records required by the permit
4.1 - 4.5	In	Continuous	Records of facility projects
5.1 - 5.15	In	Continuous	Records from required monitoring
7.1	In	Continuous	Records from required monitoring
7.2	In	Continuous	Records from required monitoring; EPA Reference Method 9
7.3	In	Continuous	Records from required monitoring; training records
7.4	In	Continuous	Facility complaint log
7.5	In	Continuous	Facility records, records from required monitoring
7.6	In	Intermittent	Records from required monitoring
7.7	In	Continuous	Records of source test data and procedure
7.8	In	Continuous	Not required to maintain a GHG monitoring plan
7.9	In	Continuous	Not required to use GHG measurement devices
7.10	In	Continuous	Facility records
8.1	In	Continuous	Records as required by the permit
8.2	In	Continuous	Records as required by the permit
8.3	In	Continuous	Records as required by the permit
8.4	In	Continuous	Records as required by the permit
8.5	In	Continuous	Records as required by the permit
8.6	In	Continuous	Records as required by the permit

Air Operating Permit Application
Form 8: Compliance Schedule

Facility Name: Simpson Door Company
Confidentiality Claim? Yes (No) Emissions Unit : Facility Wide

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
8.7	In	Continuous	Permit administration records required by the permit
8.8	In	Continuous	Permit administration records required by the permit
8.9	In	Continuous	Complaint log
8.10	In	Continuous	Inspection and maintenance records
8.11	In	Continuous	Records as required by the permit
8.12	In	Continuous	Records as required by the permit
8.15	In	Continuous	Records as required by the permit
9.1	In	Continuous	Records of reports submitted as required by the permit
9.2	In	Continuous	Records of reports submitted as required by the permit
9.3	In	Continuous	Records of reports submitted as required by the permit
9.4	In	Continuous	Records of reports submitted as required by the permit
9.5	In	Continuous	Records of reports submitted as required by the permit
9.6	In	Continuous	Records of reports submitted as required by the permit
9.7	In	Intermittent	Records of reports submitted as required by the permit
9.8	In	Continuous	Records of reports submitted as required by the permit
9.9	In	Continuous	Records of source test data and procedure
9.10	In	Continuous	Records of source test data and procedure
9.11	In	Continuous	Not required to report GHG emissions
9.12	In	Continuous	Records of reports submitted as required by the permit
10.1 – 10.3	In	Continuous	N/A

Air Operating Permit Application
Form 8: Compliance Schedule

Facility Name: Simpson Door Company
Confidentiality Claim? Yes (No) Emissions Unit : EU2: Residuals Transport Systems

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
6.1(a) - 6.1(d); except	In	Continuous	Records from required monitoring
6.1(c)	In	Continuous	Records from required monitoring; EPA Method 9 procedures

Air Operating Permit Application
Form 8: Compliance Schedule

Facility Name: Simpson Door Company

Confidentiality Claim? Yes (No) Emissions Unit :EU3: Package Boiler

Applicable Requirement Identifier	Current Compliance Status (In or Out)	Compliance Status over Past Year (Continuous or Intermittent)	Method used to Determine Compliance Status
6.2(a) - 6.2(i); except	In	Continuous	Records from facility records and required monitoring
6.2(c)	In	Continuous	Records from required monitoring; EPA Reference Method 5
6.2(d)	In	Continuous	Records from required monitoring; EPA Reference Method 9
6.2(e)	In	Continuous	Records from required monitoring; EPA Reference Method 7, 7A, 7C, or 7D
6.2(f)	In	Continuous	Records from required monitoring; EPA Reference Method 10
8.13	In	Continuous	Records as required by the permit
8.14	In	Continuous	Records as required by the permit

2015 ACTUAL EMISSIONS CALCULATIONS

Table 1. Auxiliary Package Boiler (EU3) - Natural Gas Combustion
2015 Actual Emissions Calculation
Simpson Door Company, McCleary, WA

Pollutant	Emission Factor			Annual Emissions (tons/yr)	
Criteria Pollutants					
$PM/PM_{10}/PM_{2.5}$	7.6	lb/MMcf	(1)	0.00	(a)
SO_2	0.6	lb/MMcf	(1)	0.00	(a)
NO_X	100	lb/MMcf	(2)	0.00	(a)
CO	84	lb/MMcf	(2)	0.00	(a)
VOC	5.5	lb/MMcf	(1)	0.00	(a)
CO_2	117	lb/MMBtu	(3)	0.00	(b)
CH_4	0.0022	lb/MMBtu	(3)	0.00	(b)
N_2O	0.00022	lb/MMBtu	(3)	0.00	(b)
Total CO_2e				0.00	(c)
Hazardous Air Pollutants					
Arsenic	2.0E-04	lb/MMcf	(4)	0.00	(a)
Benzene	2.1E-03	lb/MMcf	(4)	0.00	(a)
Beryllium	1.2E-05	lb/MMcf	(4)	0.00	(a)
Cadmium	1.1E-03	lb/MMcf	(4)	0.00	(a)
Chromium (total)	1.4E-03	lb/MMcf	(4)	0.00	(a)
Cobalt	8.4E-05	lb/MMcf	(4)	0.00	(a)
Formaldehyde	7.5E-02	lb/MMcf	(4)	0.00	(a)
Hexane	1.8E+00	lb/MMcf	(4)	0.00	(a)
Lead	5.0E-04	lb/MMcf	(1)	0.00	(a)
Manganese	3.8E-04	lb/MMcf	(4)	0.00	(a)
Mercury	2.6E-04	lb/MMcf	(4)	0.00	(a)
Naphthalene	6.1E-04	lb/MMcf	(4)	0.00	(a)
Nickel	2.1E-03	lb/MMcf	(4)	0.00	(a)
Polycyclic Organic Matter [7]	7.0E-04	lb/MMcf	(4)	0.00	(a)
Selenium	2.4E-05	lb/MMcf	(4)	0.00	(a)
Toluene	3.4E-03	lb/MMcf	(4)	0.00	(a)
Total HAPs				**0.000**	

Calculations:

(a) Annual Emissions (tons/yr) = [Fuel Usage (MMCF/yr)] x [Emission Factor (lb/MMcf)] / [2,000 lbs/ton]

(b) GHG Annual Emissions (tons/yr) = [Fuel Usage (MMCF/yr)] x [Heating Value (Btu/scf)] x [GHG Emission Factor (lb/MMBtu)] / [2,000 lbs/ton]

Fuel Usage (MMCF/yr) =	0.00	(5)
Heating Value (Btu/scf) =	1,020	(1)
Hours of Operation (hrs/yr) =	4,437	(6)

(c) Total CO_2 Equivalent Emissions = [CO_2 Emissions] + [CH_4 Emissions x CH_4 Global Warming Potential] + [N_2O Emissions x N_2O Global Warming Potential]

CH_4 Global Warming Potential =	25	(3)
N_2O Global Warming Potential =	298	(3)

Notes:

(1) AP-42, Chapter 1.4, Table 1.4-2, Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion (July 1998).

(2) AP-42, Chapter 1.4, Table 1.4-1, Emission Factors for Nitrogen Oxides and Carbon Monoxide from Natural Gas Combustion - Uncontrolled Small Boilers (July 1998).

(3) 40 CFR 98 - Mandatory Greenhouse Gas Reporting, Table A-1, Table C-1 and Table C-2.

(4) AP-42, Chapter 1.4, Table 1.4-3, Emission Factors for Speciated Organic Compounds from Natural Gas Combustion and Table 1.4-4, Emission Factors for Metals from Natural Gas Combustion (July 1998).

(5) Fuel Usage is from 2015 Emission Inventorry Report submitted to ORCAA.

(6) The facility operated 51 weeks; 16 hours per day Monday-Friday, 7 hours per day Saturday, and 0 hours per day Sunday.

(7) HAP because it is Polycyclic Organic Matter (POM). POM is a HAP as defined by Section 112(b) of the Clean Air Act. Naphthalene is an individual HAP in addition to being a POM.

Table 2. Auxiliary Package Boiler (EU3) - Propane
2015 Actual Emissions Calculation
Simpson Door Company, McCleary, WA

Pollutant	Emission Factor			Annual Emissions (tons/yr)	
Criteria Pollutants					
PM/PM10/PM2.5	0.70	lb/1000 gal	(1)	0.06	(a)
SO_2	1.50	lb/1000 gal	(1)	0.12	(a)
NO_X	13.00	lb/1000 gal	(1)	1.03	(a)
CO	7.50	lb/1000 gal	(1)	0.59	(a)
VOC	1.00	lb/1000 gal	(1)	0.08	(a)
CO_2	139	lb/MMBtu	(2)	1,007	(b)
CH_4	0.0066	lb/MMBtu	(2)	0	(b)
N_2O	0.00132	lb/MMBtu	(2)	0	(b)
Total CO_2e			(b)	1,011	(c)

Calculations:

(a) Annual Emissions (tons/yr) = [Fuel Usage (gallons/yr)] x [1/1000] x [Emission Factor (lbs/1000 gal)] / [2,000 lbs/ton]

(b) GHG Annual Emissions (tons/yr) = [Fuel Usage (gallons/yr)] x [1/1000] x [Heating Value (MMBtu/1000 gal)]x [GHG Emission Factor (lb/MMBtu)] / [2,000 lbs/ton]

Fuel Usage (gallons/yr) =	158,347	(3)
Heating Value (MMBtu/1000 gal) =	92	(1)
Sulfur Content (gr/100 scf) =	15	(4)
Hours of Operation (hrs/yr) =	4,437	(5)

(c) Total CO_2 Equivalent Emissions = [CO_2 Emissions] + [CH_4 Emissions x CH_4 Global Warming Potential] + [N_2O Emissions x N_2O Global Warming Potential]

CH4 Global Warming Potential =	25	(2)
N2O Global Warming Potential =	298	(2)

Notes:

(1) Emission factors and heating value are obtained from EPA's AP-42, Table 1.5-1, Emission Factors for LPG Combustion, July 2008.

(2) 40 CFR 98 - Mandatory Greenhouse Gas Reporting, Table A-1, Table C-1 and Table C-2.

(3) Fuel Usage is from 2015 Emission Inventorry Report submitted to ORCAA.

(4) Sulfur concentration based on Gas Processors Association Engineering Data Book (Ninth Edition, 1972).

(5) The facility operated 51 weeks; 16 hours per day Monday-Friday, 7 hours per day Saturday, and 0 hours per day Sunday.

Table 3. In-Fired Lumber Drying Kilns - Douglas Fir
2015 Actual Emissions Calculation
Simpson Door Company, McCleary, WA

Pollutant	Emission Factor			Annual Emissions[(a)] (tons/yr)
Criteria Pollutants				
PM	8.9E-02	lb/MBF	(1)	0.00
PM_{10}	8.9E-02	lb/MBF	(1)	0.00
$PM_{2.5}$	8.9E-02	lb/MBF	(1)	0.00
VOC	6.0E-01	lb/MBF	(1)	0.00
Hazardous Air Pollutants				
Acetaldehyde	5.7E-02	lb/MBF	(1)	0.00
Acrolein	6.5E-04	lb/MBF	(1)	0.00
Formaldehyde	1.0E-03	lb/MBF	(1)	0.00
Methanol	3.8E-02	lb/MBF	(1)	0.00
Propionaldehyde	5.5E-04	lb/MBF	(1)	0.00
Total HAPs	**9.7E-02**	**lb/MBF**		**0.00**

Calculations:

(a) Annual Emissions (tons/yr) = [Material Processed (MBF/yr)] x [Emission Factor (lbs/MBF)] / [2,000 lbs/ton]

Material Processed (MBF/yr) = 0 (2)

Notes:

(1) Emission factors and the maximum production are obtained from the PTE Calculation spreadsheet for Simpson Door Company provided by the Olympia Region Clean Air Agency (ORCAA).

(2) Material processed is from 2015 Emission Inventorry Report submitted to ORCAA.

Table 4. In-Fired Lumber Drying Kilns - Hemlock
2015 Actual Emissions Calculation
Simpson Door Company, McCleary, WA

Pollutant	Emission Factor			Annual Emissions[(a)] (tons/yr)
Criteria Pollutants				
PM	3.2E-02	lb/MBF	(1)	0.00
PM_{10}	3.2E-02	lb/MBF	(1)	0.00
$PM_{2.5}$	3.2E-02	lb/MBF	(1)	0.00
VOC	3.9E-01	lb/MBF	(1)	0.00
Hazardous Air Pollutants				
Acetaldehyde	1.1E-01	lb/MBF	(1)	0.00
Acrolein	1.6E-03	lb/MBF	(1)	0.00
Formaldehyde	1.2E-03	lb/MBF	(1)	0.00
Methanol	8.2E-02	lb/MBF	(1)	0.00
Propionaldehyde	1.0E-03	lb/MBF	(1)	0.00
Total HAPs	**2.0E-01**	**lb/MBF**		**0.00**

Calculations:

(a) Annual Emissions (tons/yr) = [Material Processed (MBF/yr)] x [Emission Factor (lbs/MBF)] / [2,000 lbs/ton]

Material Processed (MBF/yr) = 0 (1)

Notes:

(1) Emission factors and the maximum production are obtained from the PTE Calculation spreadsheet for Simpson Door Company provided by the Olympia Region Clean Air Agency (ORCAA).

(3) Material processed is from 2015 Emission Inventorry Report submitted to ORCAA.

Table 5. Residuals Transport Systems - Cyclones (EU02)
2015 Actual Emissions Calculation
Simpson Door Company, McCleary, WA

Cyclone ID #	Flowrate (CFM)[1]	Material[1]	Control Device[1]	Annual Emissions (tons/yr)		
				PM[a]	PM_{10}[b]	$PM_{2.5}$[c]
CD10(1A)	45,000	Sanderdust	Baghouse	0.5	0.5	0.4
CD11(1B)	45,000	Sawdust	Baghouse	0.3	0.3	0.2
CD12(2A)	45,000	Sawdust	Baghouse	0.3	0.3	0.2
CD13(2B)	45,000	Sawdust	Baghouse	0.3	0.3	0.2
CD2	42,000	Planer Shavings	None	24.0	9.6	7.7
CD3	15,000	Sawdust	None	8.6	3.4	2.7
CD4	10,000	Sawdust	None	5.7	2.3	1.8
CD5	12,000	Sawdust	None	6.8	2.7	2.2
CD6	30,000	Sawdust	Baghouse	0.2	0.2	0.1
CD7	36,000	Sanderdust	Baghouse	0.4	0.4	0.3
CD8	12,000	Sawdust	None	6.8	2.7	2.2
CD9	6,000	Sawdust	None	3.4	1.4	1.1
CD14	12,000	Sawdust	Baghouse	0.1	0.1	0.1
CD15	30,000	Sawdust	Baghouse	0.2	0.2	0.1
Sawdust Bin[2]	12,000	Sawdust	Baghouse	0.1	0.1	0.1
Total				**57.4**	**24.2**	**19.4**

Calculations:

(a) PM Annual Emissions (tons/yr) = Flowrate (CFM) x Emission Factor (gr/scf) x [1 lb/ 7,000 gr] x [60 min/hr] x [1 - Control Efficiency/100] x [Hours of Operation (hr/yr)] x [1 ton/ 2,000 lbs]

(b) PM_{10} Annual Emissions (tons/yr) = PM Annual Emissions (tons/yr) x [% of PM_{10} in PM/100]

(c) $PM_{2.5}$ Annual Emissions (tons/yr) = PM_{10} Annual Emissions (tons/yr) x [% of $PM_{2.5}$ in PM_{10}/100]

PM Emission Factor - Sanderdust (gr/scf) =	0.055	(1)
PM Emission Factor - Other Cyclone (gr/scf) =	0.03	(1)
PM_{10}, Sanderdust, No Baghouse (% of PM) =	50	(1)
PM_{10}, Sanderdust, Baghouse (% of PM) =	100	(1)
PM_{10}, Other Materials, No Baghouse (% of PM) =	40	(1)
PM_{10}, Other Materials, Baghouse (% of PM) =	100	(1)
$PM_{2.5}$, All Material (% of PM_{10}) =	80	(1)
Baghouse Control Efficiency (%) =	99	(1)
Hours of Operation =	4,437	(3)

Notes:

(1) Flowrates, Materials, Control Devices, Emission factors, and Control efficiency are obtained from the PTE Calculation spreadsheet for Simpson Door Company provided by the Olympia Region Clean Air Agency (ORCAA).

(2) Information of sawdust bin are provided by Simpson Door Company.

(3) The facility operated 51 weeks; 16 hours per day Monday-Friday, 7 hours per day Saturday, and 0 hours per day Sunday.

Table 6. Adhesive Application
2015 Actual Emissions Calculation
Simpson Door Company, McCleary, WA

Material ID #[1]	Material Name[1]	Annual Usage[2] (gal)	Density[1] (lb/gal)	Hazardous/Toxic Air Pollutants[1]	Content[1] (wt.%)	Annual Emissions[a] (tons/yr)
XB-9325 LFF	Emulsion Adhesive	0	9	None	--	--
M-318-LY	Aluminum Chloride Catalyst	0	11	None	--	--
MF-2L	Methylated Melamine Resin	0	10	Formaldehyde	0.99	0.00
CR5H	Liquid UF Resin	50	11	Formaldehyde	5	0.01
132 658	Kaurit 176 Splicing Glue	0	N/A	None	--	--
133 659	Kaurit 106 Splicing Glue	0	N/A	None	--	--
FM-132-B	UF Resin Catalyst	0	N/A	None	--	--
35-.188.-.	PTSA Catalyst- Wonderboard	0	9	None	--	--
16-.S32.-.	Liq. PVA Adhesive - Cascorez IB S-32 Borden	0	N/A	None	--	--
142-931A	Purebond	0	9	4,4 Diphenyl Methane Diisocyanate	40	0.00
				Total Formaldehyde		**0.01**
				Total 4,4 Diphenyl Methane Diisocyanate		**0.00**
				Total HAPs/TAPs		**0.01**

Calculations:
(a) Annual Emissions (tons/yr) = [Annual Usage (gal/yr)] x [Density (lb/gal)] x [Content (%)/100] x [1 ton/2,000 lbs]

Notes:
(1) The adhesive materials and usage information are obtained from the 2015 Air Emissions Inventory Report provided to Olympia Region Clean Air Agency (ORCAA).
(2) Provided by Simpson Door Company

Table 7. Facility Wide Pollutant Emissions Summary
2015 Actual Emissions Calculation
Simpson Door Company, McCleary, WA

Emission Sources	Annual Emissions (tons/year)								
	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO_2e	HAPs
Auxiliary Package Boiler (EU3) - Natural Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Auxiliary Package Boiler (EU3) - Propane	0.1	0.1	0.1	0.1	1.0	0.6	0.1	1,011.0	--
In-Fired Lumber Drying Kilns - Douglas Fir	0.0	0.0	0.0	--	--	--	0.0	--	0.0
In-Fired Lumber Drying Kilns - Hemlock	0.0	0.0	0.0	--	--	--	0.0	--	0.0
Residuals Transport Systems - Cyclones (EU02)	57.4	24.2	19.4	--	--	--	--	--	--
Adhesive Application (EU05)	--	--	--	--	--	--	--	--	0.01
Total Emissions	**57.5**	**24.3**	**19.4**	**0.1**	**1.0**	**0.6**	**0.1**	**1,011.0**	**0.01**

POTENTIAL EMISSIONS CALCULATIONS

Table 1. Auxiliary Package Boiler (EU3) - Natural Gas Combustion
Potential Emissions Calculation - Air Operating Permit Renewal Application
Simpson Door Company, McCleay, WA

Pollutant	Emission Factor			Potential Emissions (tons/yr)	
Criteria Pollutants					
$PM/PM_{10}/PM_{2.5}$	7.6	lb/MMcf	(1)	0.55	(a)
SO_2	0.6	lb/MMcf	(1)	0.04	(a)
NO_X	100	lb/MMcf	(2)	7.21	(a)
CO	84	lb/MMcf	(2)	6.06	(a)
VOC	5.5	lb/MMcf	(1)	0.40	(a)
CO_2	117	lb/MMBtu	(3)	8,609	(b)
CH_4	0.0022	lb/MMBtu	(3)	0.16	(b)
N_2O	0.00022	lb/MMBtu	(3)	0.02	(b)
Total CO_2e				8,618	(c)
Hazardous Air Pollutants					
Arsenic	2.0E-04	lb/MMcf	(4)	1.4E-05	(a)
Benzene	2.1E-03	lb/MMcf	(4)	1.5E-04	(a)
Beryllium	1.2E-05	lb/MMcf	(4)	8.7E-07	(a)
Cadmium	1.1E-03	lb/MMcf	(4)	7.9E-05	(a)
Chromium (total)	1.4E-03	lb/MMcf	(4)	1.0E-04	(a)
Cobalt	8.4E-05	lb/MMcf	(4)	6.1E-06	(a)
Formaldehyde	7.5E-02	lb/MMcf	(4)	5.4E-03	(a)
Hexane	1.8E+00	lb/MMcf	(4)	1.3E-01	(a)
Lead	5.0E-04	lb/MMcf	(1)	3.6E-05	(a)
Manganese	3.8E-04	lb/MMcf	(4)	2.7E-05	(a)
Mercury	2.6E-04	lb/MMcf	(4)	1.9E-05	(a)
Naphthalene	6.1E-04	lb/MMcf	(4)	4.4E-05	(a)
Nickel	2.1E-03	lb/MMcf	(4)	1.5E-04	(a)
Polycyclic Organic Matter [7]	7.0E-04	lb/MMcf	(4)	5.0E-05	(a)
Selenium	2.4E-05	lb/MMcf	(4)	1.7E-06	(a)
Toluene	3.4E-03	lb/MMcf	(4)	2.5E-04	(a)
Total HAPs				**0.136**	

Calculations:

(a) Potential Emissions (tons/yr) = [Maximum Heating Rate (MMBtu/hr)] / [Heating Value (Btu/scf)] x [Emission Factor (lb/MMcf)] x [Operating Hours (hrs/yr)] / [2,000 lbs/ton]

(b) GHG Potential Emissions (tons/yr) = [Maximum Heating Rate (MMBtu/hr)] x [GHG Emission Factor (lb/MMBtu)] x [Hours of Operation (hrs/yr)] / [2,000 lbs/ton]

Maximum Heating Rate (MMBtu/hr) =	16.80	(5)
Heating Value (Btu/scf) =	1,020	(1)
Hours of Operation (hrs/yr) =	8,760	(6)

(c) Total CO_2 Equivalent Emissions = [CO_2 Emissions] + [CH_4 Emissions x CH_4 Global Warming Potential] + [N_2O Emissions x N_2O Global Warming Potential]

CH_4 Global Warming Potential =	25	(3)
N_2O Global Warming Potential =	298	(3)

Notes:

(1) AP-42, Chapter 1.4, Table 1.4-2, Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion (July 1998).

(2) AP-42, Chapter 1.4, Table 1.4-1, Emission Factors for Nitrogen Oxides and Carbon Monoxide from Natural Gas Combustion - Uncontrolled Small Boilers (July 1998).

(3) 40 CFR 98 - Mandatory Greenhouse Gas Reporting, Table A-1, Table C-1 and Table C-2.

(4) AP-42, Chapter 1.4, Table 1.4-3, Emission Factors for Speciated Organic Compounds from Natural Gas Combustion and Table 1.4-4, Emission Factors for Metals from Natural Gas Combustion (July 1998).

(5) Maximum capacity of burner, provided by Simpson Door Company.

(6) Assumed continuous operation for PTE calculations.

(7) HAP because it is Polycyclic Organic Matter (POM). POM is a HAP as defined by Section 112(b) of the Clean Air Act. Naphthalene is an individual HAP in addition to being a POM.

Table 2. Auxiliary Package Boiler (EU3) - Propane
Potential Emissions Calculation - Air Operating Permit Renewal Application
Simpson Door Company, McCleay, WA

Pollutant	Emission Factor			Potential Emissions (tons/yr)	
Criteria Pollutants					
PM/PM10/PM2.5	0.70	lb/1000 gal	(1)	0.56	(a)
SO_2	1.50	lb/1000 gal	(1)	1.21	(a)
NO_X	13.00	lb/1000 gal	(1)	10.45	(a)
CO	7.50	lb/1000 gal	(1)	6.03	(a)
VOC	1.00	lb/1000 gal	(1)	0.80	(a)
CO_2	139	lb/MMBtu	(2)	10,228	(b)
CH_4	0.0066	lb/MMBtu	(2)	0.49	(b)
N_2O	0.00132	lb/MMBtu	(2)	0.10	(b)
Total CO_2e				10,269	(c)

Calculations:

(a) Potential Emissions (tons/yr) = [Maximum Heat Input (MMBtu/hr)] / [Heating Value (MMBtu/1000 gal)] x [Emission Factor (lbs/1000 gal)] x [Hours of Operation (hrs/yr)] / [2,000 lbs/ton]

(b) GHG Potential Emissions (tons/yr) = [Maximum Heating Rate (MMBtu/hr)] x [GHG Emission Factor (lb/MMBtu)] x [Hours of Operation (hrs/yr)] / [2,000 lbs/ton]

Maximum Heating Rate (MMBtu/hr) =	16.80	(3)
Heating Value (MMBtu/1000 gal) =	92	(1)
Sulfur Content (gr/100 scf) =	15	(4)
Hours of Operation (hrs/yr) =	8,760	(5)

(c) Total CO_2 Equivalent Emissions = [CO_2 Emissions] + [CH_4 Emissions x CH_4 Global Warming Potential] + [N_2O Emissions x N_2O Global Warming Potential]

CH4 Global Warming Potential =	25	(2)
N2O Global Warming Potential =	298	(2)

Notes:

(1) Emission factors and heating value are obtained from EPA's AP-42, Table 1.5-1, Emission Factors for LPG Combustion, July 2008.

(2) 40 CFR 98 - Mandatory Greenhouse Gas Reporting, Table A-1, Table C-1 and Table C-2.

(3) Maximum capacity of burner, provided by Simpson Door Company.

(4) Sulfur concentration based on Gas Processors Association Engineering Data Book (Ninth Edition, 1972).

(5) Assumed continuous operation for PTE calculations.

Table 3. In-Fired Lumber Drying Kilns - Douglas Fir
Potential Emissions Calculation - Air Operating Permit Renewal Application
Simpson Door Company, McCleay, WA

Pollutant	Emission Factor			Potential Emissions[(a)] (tons/yr)
Criteria Pollutants				
PM	8.9E-02	lb/MBF	(1)	0.3
PM_{10}	8.9E-02	lb/MBF	(1)	0.3
$PM_{2.5}$	8.9E-02	lb/MBF	(1)	0.3
VOC	6.0E-01	lb/MBF	(1)	2.0
Hazardous Air Pollutants				
Acetaldehyde	5.7E-02	lb/MBF	(1)	0.19
Acrolein	6.5E-04	lb/MBF	(1)	0.002
Formaldehyde	1.0E-03	lb/MBF	(1)	0.003
Methanol	3.8E-02	lb/MBF	(1)	0.13
Propionaldehyde	5.5E-04	lb/MBF	(1)	0.002
Total HAPs	**9.7E-02**	**lb/MBF**		**0.33**

Calculations:

(a) Potential Emissions (tons/yr) = [Material Processed (MBF/yr)] x [Emission Factor (lbs/MBF)] / [2,000 lbs/ton]

Maximum Material Processed (MBF/yr) = 6,787 (1)

Notes:

(1) Emission factors and the maximum production are obtained from the PTE Calculation spreadsheet for Simpson Door Company provided by the Olympia Region Clean Air Agency (ORCAA).

Table 4. In-Fired Lumber Drying Kilns - Hemlock
Potential Emissions Calculation - Air Operating Permit Renewal Application
Simpson Door Company, McCleay, WA

Pollutant	Emission Factor			Potential Emissions[(a)] (tons/yr)
Criteria Pollutants				
PM	3.2E-02	lb/MBF	(1)	0.1
PM_{10}	3.2E-02	lb/MBF	(1)	0.1
$PM_{2.5}$	3.2E-02	lb/MBF	(1)	0.1
VOC	3.9E-01	lb/MBF	(1)	1.3
Hazardous Air Pollutants				
Acetaldehyde	1.1E-01	lb/MBF	(1)	0.38
Acrolein	1.6E-03	lb/MBF	(1)	0.01
Formaldehyde	1.2E-03	lb/MBF	(1)	0.004
Methanol	8.2E-02	lb/MBF	(1)	0.28
Propionaldehyde	1.0E-03	lb/MBF	(1)	0.003
Total HAPs	**2.0E-01**	**lb/MBF**		**0.67**

Calculations:

(a) Potential Emissions (tons/yr) = [Material Processed (MBF/yr)] x [Emission Factor (lbs/MBF)] / [2,000 lbs/ton]

Maximum Material Processed (MBF/yr) = 6,787 (1)

Notes:

(1) Emission factors and the maximum production are obtained from the PTE Calculation spreadsheet for Simpson Door Company provided by the Olympia Region Clean Air Agency (ORCAA).

Table 5. Residuals Transport Systems - Cyclones (EU02)
Potential Emissions Calculation - Air Operating Permit Renewal Application
Simpson Door Company, McCleay, WA

Cyclone ID #	Flowrate (CFM)[1]	Material[1]	Control Device[1]	Potential Emissions (tons/yr)		
				PM[a]	PM_{10}[b]	$PM_{2.5}$[c]
CD10(1A)	45,000	Sanderdust	Baghouse	0.9	0.9	0.7
CD11(1B)	45,000	Sawdust	Baghouse	0.5	0.5	0.4
CD12(2A)	45,000	Sawdust	Baghouse	0.5	0.5	0.4
CD13(2B)	45,000	Sawdust	Baghouse	0.5	0.5	0.4
CD2	42,000	Planer Shavings	None	47.3	18.9	15.1
CD3	15,000	Sawdust	None	16.9	6.8	5.4
CD4	10,000	Sawdust	None	11.3	4.5	3.6
CD5	12,000	Sawdust	None	13.5	5.4	4.3
CD6	30,000	Sawdust	Baghouse	0.3	0.3	0.3
CD7	36,000	Sanderdust	Baghouse	0.7	0.7	0.6
CD8	12,000	Sawdust	None	13.5	5.4	4.3
CD9	6,000	Sawdust	None	6.8	2.7	2.2
CD14	12,000	Sawdust	Baghouse	0.1	0.1	0.1
CD15	30,000	Sawdust	Baghouse	0.3	0.3	0.3
New Sawdust Bin[2]	12,000	Sawdust	Baghouse	0.1	0.1	0.1
Total				**113.4**	**47.8**	**38.3**

Calculations:

(a) PM Potential Emissions (tons/yr) = Flowrate (CFM) x Emission Factor (gr/scf) x [1 lb/ 7,000 gr] x [60 min/hr] x [1 - Control Efficiency/100] x [Hours of Operation (hr/yr)] x [1 ton/ 2,000 lbs]

(b) PM_{10} Potential Emissions (tons/yr) = PM Annual Emissions (tons/yr) x [% of PM_{10} in PM/100]

(c) $PM_{2.5}$ Potential Emissions (tons/yr) = PM_{10} Annual Emissions (tons/yr) x [% of $PM_{2.5}$ in PM_{10}/100]

PM Emission Factor - Sanderdust (gr/scf) =	0.055	(1)
PM Emission Factor - Other Cyclone (gr/scf) =	0.03	(1)
PM_{10}, Sanderdust, No Baghouse (% of PM) =	50	(1)
PM_{10}, Sanderdust, Baghouse (% of PM) =	100	(1)
PM_{10}, Other Materials, No Baghouse (% of PM) =	40	(1)
PM_{10}, Other Materials, Baghouse (% of PM) =	100	(1)
$PM_{2.5}$, All Material (% of PM_{10}) =	80	(1)
Baghouse Control Efficiency (%) =	99	(1)
Hours of Operation =	8,760	(3)

Notes:

(1) Flowrates, Materials, Control Devices, Emission factors, and Control efficiency are obtained from the PTE Calculation spreadsheet for Simpson Door Company provided by the Olympia Region Clean Air Agency (ORCAA).

(2) Information of new sawdust bin are provided by Simpson Door Company.

(3) Assumed continuous operation for PTE calculations.

Table 6. Adhesive Application
Potential Emissions Calculation - Air Operating Permit Renewal Application
Simpson Door Company, McCleay, WA

Material ID #[1]	Material Name[1]	Maximum Annual Usage[2] (gal)	Density[1] (lb/gal)	Hazardous/Toxic Air Pollutants[1]	Content[1] (wt.%)	Potential Emissions[a] (tons/yr)
XB-9325 LFF	Emulsion Adhesive	80,352	9	None	--	--
M-318-LY	Aluminum Chloride Catalyst	1,942	11	None	--	--
CR5H	Liquid UF Resin	286	11	Formaldehyde	5	0.08
Giral NH 10/23	Splicing Adhesive	136	6	Formaldehyde	0.99	0.004
FM-132-B	UF Resin Catalyst	72	N/A	None	--	--
35-.188.-.	PTSA Catalyst- Wonderboard	390	9	None	--	--
16-.S32.-.	Liq. PVA Adhesive - Cascorez IB S-32 Borden	1,562	N/A	None	--	--
142-931A	Purebond	32	9	4,4 Diphenyl Methane Diisocyanate	40	0.06
				Total Formaldehyde		**0.08**
				Total 4,4 Diphenyl Methane Diisocyanate		**0.06**
				Total HAPs/TAPs		**0.14**

Calculations:

(a) Potential Emissions (tons/yr) = [Maximum Usage (gal/yr)] x [Density (lb/gal)] x [Content (%)/100] x [1 ton/2,000 lbs]

Notes:

(1) The adhesive materials information are obtained from the 2010 Actual Emissions Calculation spreadsheet for Simpson Door Company provided by the Olympia Region Clean Air Agency (ORCAA).

(2) Maximum annual usage is derived from 2010 annual usage and hours of operation.

Table 7. Facility Wide Pollutant Emissions Summary
Potential Emissions Calculation - Air Operating Permit Renewal Application
Simpson Door Company, McCleay, WA

Emission Sources	Potential Emissions (tons/year)								
	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO_2e	HAPs
Auxiliary Package Boiler (EU3) - Natural Gas[(1)]	0.5	0.5	0.5	0.0	7.2	6.1	0.4	8,618.2	0.1
Auxiliary Package Boiler (EU3) - Propane[(1)]	0.6	0.6	0.6	1.2	10.5	6.0	0.8	10,269.3	--
In-Fired Lumber Drying Kilns - Douglas Fir	0.3	0.3	0.3	--	--	--	2.0	--	0.3
In-Fired Lumber Drying Kilns - Hemlock	0.1	0.1	0.1	--	--	--	1.3	--	0.7
Residuals Transport Systems - Cyclones (EU02)	113.4	47.8	38.3	--	--	--	--	--	--
Adhesive Application (EU05)	--	--	--	--	--	--	--	--	0.1
Total Emissions	**114.9**	**49.4**	**39.8**	**1.2**	**17.7**	**12.1**	**4.6**	**18,887.5**	**1.3**

Notes:

(1) The highest emissions from natural gas or propane combustion are used in the total emissions.