



DEPARTMENT OF
ECOLOGY
State of Washington

**WASHINGTON STATE DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE
15 W YAKIMA AVE, SUITE 200
YAKIMA, WASHINGTON 98902**

**STATEMENT OF BASIS
FOR
FINAL AIR OPERATING PERMIT
NO. 08AQ-C073
SDS LUMBER COMPANY
BINGEN, WASHINGTON**

**PREPARED BY
WASHINGTON STATE DEPARTMENT OF ECOLOGY
REGIONAL AIR QUALITY SECTION
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May 26, 2009

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LIST OF ABBREVIATIONS

AOP	Air Operating Permit
BACT	Best Available Control Technology
bd ft	Board Feet
BDT	Bone-Dry Tons
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COM	Continuous Opacity Monitor
DESP	Dry Electrostatic Precipitator
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ESP	Electrostatic Precipitator
FCE	Full Compliance Evaluation
HAP	Hazardous Air Pollutant
HPV	High Priority Violation
hr	Hour
IEU	Insignificant Emission Unit
KEP	Klickitat Energy Partners
Lb/MMBF	Pounds per Million Board Feet
lb/yr	Pounds per Year
MACT	Maximum Achievable Control Technology
MMBtu	Millions of British Thermal Units
MRRR	Monitoring, Recordkeeping, and Reporting Requirement
NOC	Notice of Construction
NO _x	Oxides of Nitrogen
SO ₂	Sulfur Dioxide
Sq. ft	Square Feet
TAP	Toxic Air Pollutant
tpy	Tons per year
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
WESP	Wet Electrostatic Precipitator
yr	Year

1.0 GENERAL INFORMATION

Company Name: SDS Lumber Company

Source Name: SDS Lumber Company

Unified Business Identification Number: C201000457

Standard Industrial Classification Code: 2421, 2436

Mailing Address: PO Box 266
Bingen, Washington 98605

Facility Address: Walnut and Steuben Street
Bingen, Washington 98605 (Klickitat County)

Responsible Official: Jason Spadaro
President
PO Box 266
Bingen, Washington 98605
(509) 493-2155

Source Contact: Vernon Buchanan
Environmental Compliance Manager
PO Box 266
Bingen, Washington 98605
(509) 493-2155

2.0 BACKGROUND

This document sets forth the legal and factual basis for the permit conditions in an AOP issued by the State of Washington, Department of Ecology, for a sawmill and plywood manufacturer located in Bingen, Washington. This document is called a “statement of basis.” The statement of basis does not contain enforceable permit conditions. Enforceable permit conditions are contained in the AOP itself.

2.1 Basis for Title V Applicability:

The facility is a major source and has been included in the Title V AOP Program due to potential emissions of Particulate Matter, Carbon Monoxide, and Nitrogen Oxides exceeding 100 tpy.

2.2 Attainment Classification:

SDS Lumber Company is located in an area which is unclassified for all criteria pollutants.

2.3 Timeline:

April 9, 2007, April 11, 2007 – Ecology received SDS Lumber Company’s AOP renewal application.

May 25, 2007 – Ecology deemed AOP renewal application incomplete.

June 29, 2007 – Ecology received SDS Lumber Company’s revised AOP renewal application.

July 17, 2007 – Ecology deemed revised AOP renewal application incomplete.

July 17, 2007, September 28, 2007, and October 1, 2007 – Ecology received SDS Lumber Company’s revised AOP renewal application.

October 4, 2007 – Ecology deemed AOP renewal application complete.

March 26, 2008 – Ecology issued Draft AOP renewal.

May 10, 2008 – End of Draft AOP renewal comment period.

October 17, 2008 – Ecology issued Proposed AOP renewal.

October 20, 2008 – Ecology received EPA notification that “The permit is now eligible for issuance”.

3.0 SOURCE DESCRIPTION

3.1 Physical Description

SDS Lumber Company is located at Walnut and Steuben Street in the City of Bingen, Klickitat County, Washington. SDS Lumber Company manufactures studs, dimensional lumber, plywood, and wood chips. The source consists of a hog fuel boiler, two (2) veneer dryers, two (2) drying kilns, two (2) stud mills, a band mill, a wood chipper, miscellaneous wood processing equipment, and multiple emission control devices (i.e. baghouses, cyclones, wet electrostatic precipitator (WESP), dry electrostatic precipitator (DESP)). The overall production process includes four major process steps, namely; log preparation, plywood/veneer production, stud mills for dimensional lumber production, and steam production for heat and electricity.

The major process steps and a detailed plot plan of SDS Lumber Company are shown in Figures 1 and 2, respectively. The main products generated by SDS Lumber Company are summarized in Table 1.

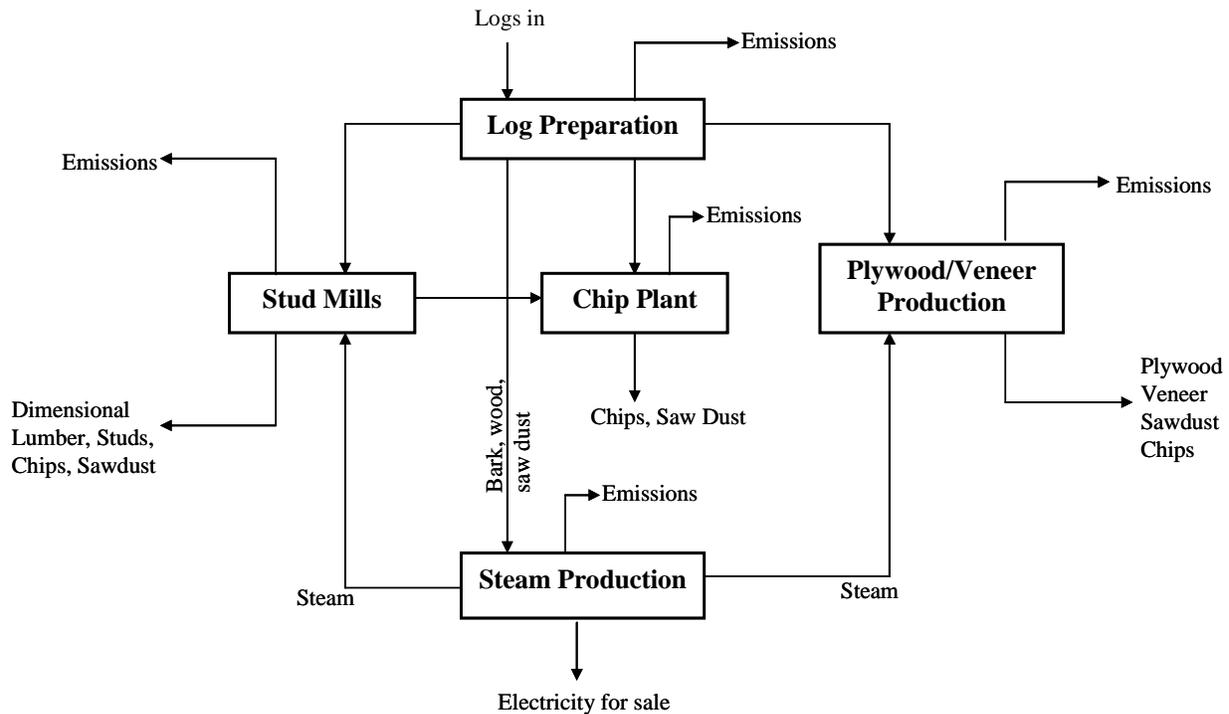
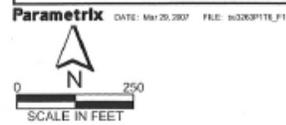
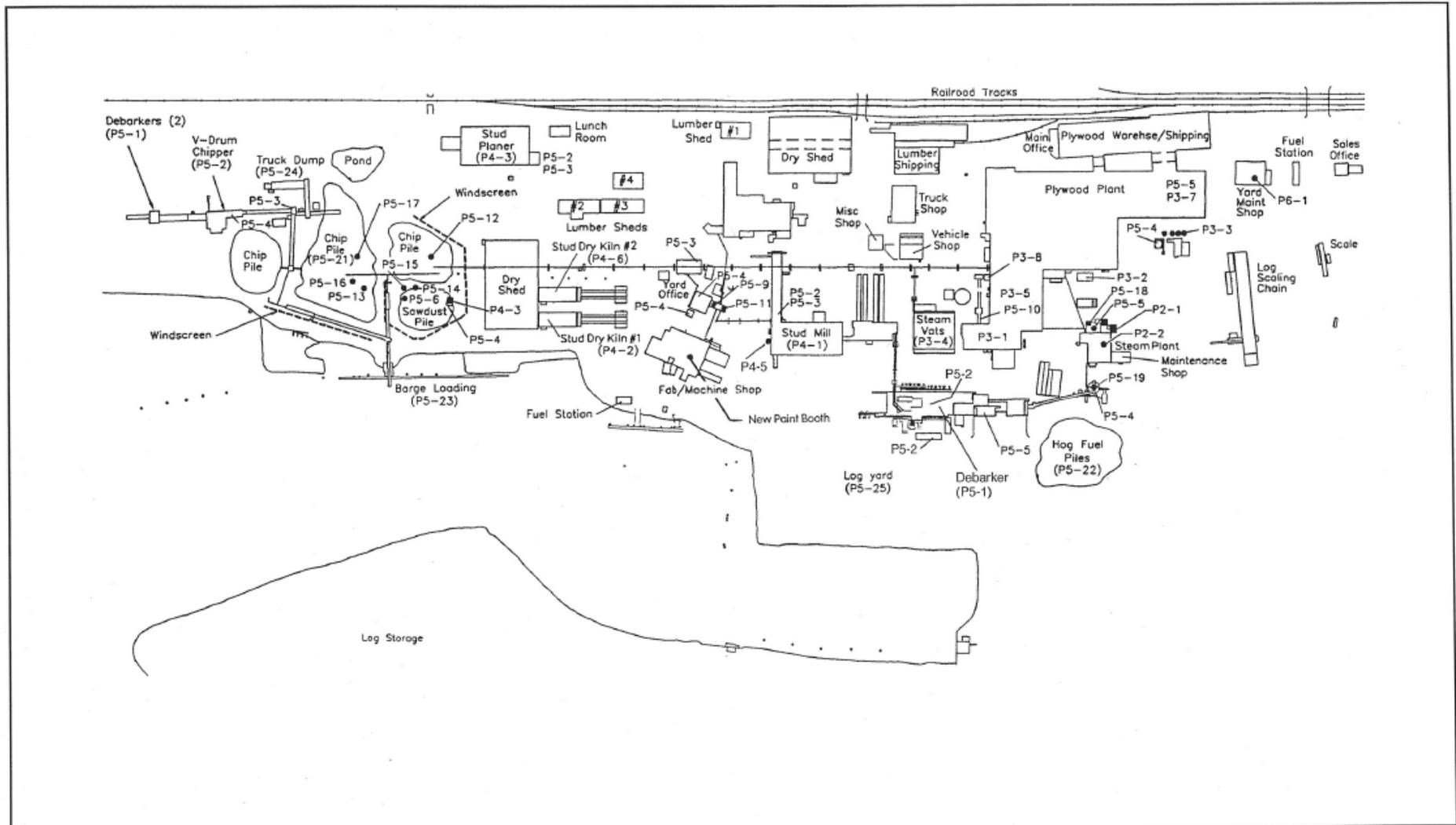


Figure 1. Simplified process flow diagram for SDS Lumber Company (Major unit operations only. See Figure 3 for a detailed flow diagram.)

3.2 Description of Processes

3.2.1 Process 1: Source-wide

Logs are transported to the source where they are stored on-site. Typically the logs are Douglas fir, white fir, or pine. Figure 3 displays a detailed process flow diagram for SDS Lumber Company. A listing of significant emission units and their estimated annual potential emissions is provided in Table 2. A listing of insignificant emission units and activities present at the source is provided in Section 10.0 of this document.



Site Map for Air Emissions Sources

Figure 2. Plot plan of SDS Lumber Company (Source: Ken Fellows, Parametrix, Inc.).

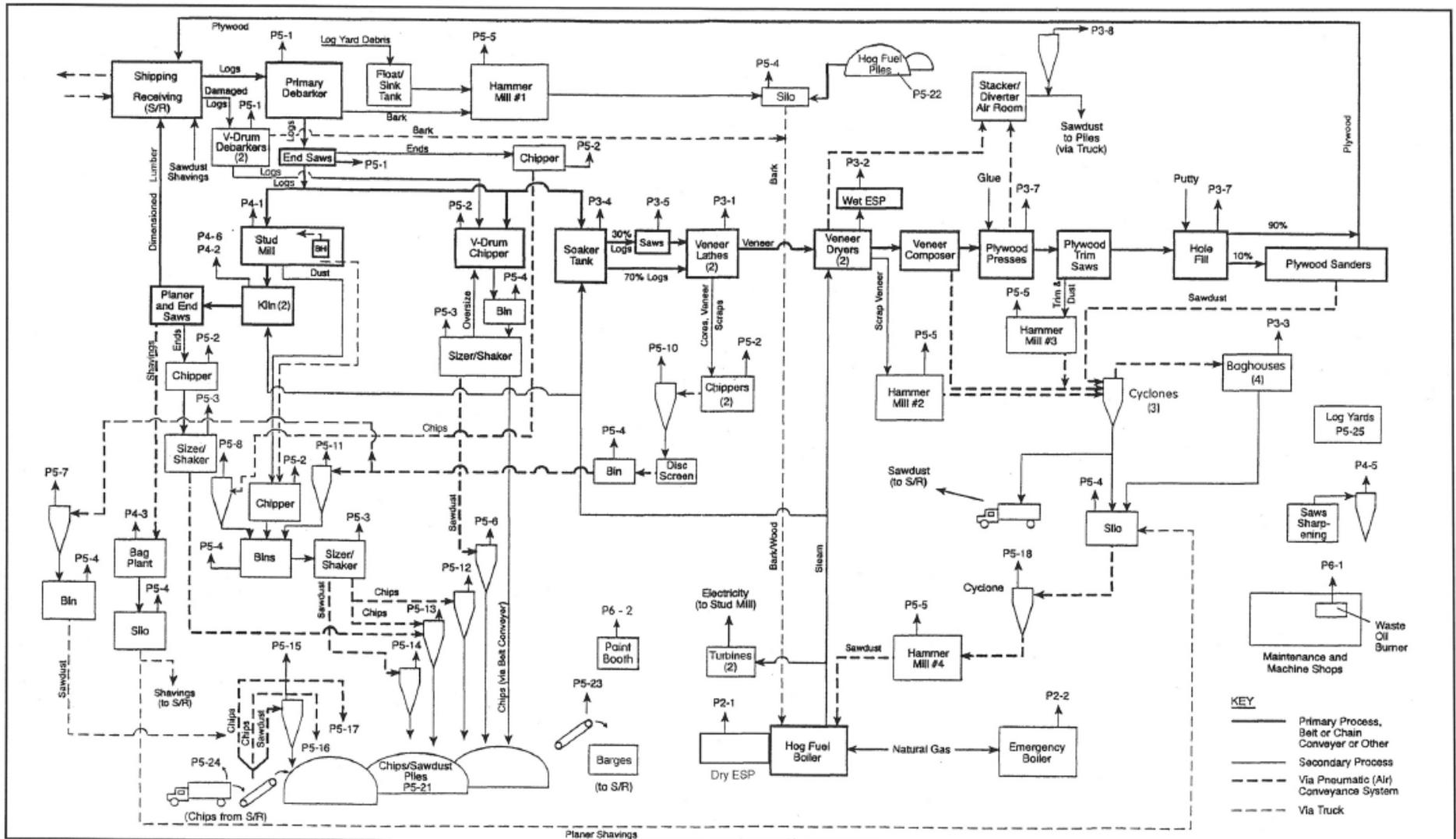


Figure 3. SDS Lumber Company process flow diagram (Source: Ken Fellows, Parametrix, Inc.).

Table 1. Main Products Generated at SDS Lumber Company.

Product Name	Product Description	Maximum Annual Production⁽¹⁾	Units of Measure
Dimensional Lumber	Wood (logs) sawn to specific widths, thicknesses, and lengths. May or may not be dried after sawing.	Stud Mill Sawn: 150,000,000 ⁽²⁾ Kiln #1: 110,000,000 Kiln #2: 100,423,140 ⁽³⁾	bd ft Lumber
Veneer/ Plywood	Thin wood sheets (veneer), may or may not be dried. Some veneer may be glued together to form plywood.	Veneer: 86,400,000 3/8" Plywood: 3,027,000, 3/8"	Sq. ft
Chipped Wood	Wood cut into small pieces for use in paper production (pulp) or other use.	51,791	BDT
Electricity	Electrical power delivered to utilities.	13,043,000	Kilowatt-hours
Hog Fuel Scrap Wood	Scrap wood, bark, and/or sawdust.	142,000	Tons
Sawdust	Fine particles of wood produced as a byproduct from facility operations.	90,000	BDT

⁽¹⁾ Estimated maximum production rates (not regulatory limits). Maximum rates depend on variable material properties, production uncertainties, and weather conditions. Total logs debarked limited to 1,450,000 tons per 12-month period per AOP Condition 5.8.1.

⁽²⁾ AOP Condition 5.6.3.

⁽³⁾ AOP Condition 5.7.2.

Logs begin processing by first being debarked and then are sent to the various manufacturing operations. Typically these debarked logs will be used in the manufacture of either plywood or studs. Those logs not used elsewhere are chipped or sold for other uses. Chipped logs are processed in a v-drum chipper. Chips and sawdust are conveyed to the chip and sawdust piles through a combination of pneumatic, belt, and bucket conveyors, where they are stored in piles that are partially surrounded by wind screens. These chips along with additional chips and sawdust produced throughout the source are sold. Steam, produced by the hog fuel boiler, is used for process heating of the veneer dryers, stud mill kilns, and the steam vats. The source also has two steam powered turbines used to produce electrical power for use within the source and for sale to electric utilities.

For plywood production (SIC Code = 2436), debarked logs are soaked in steam vats to soften them prior to being peeled in the veneer lathes. Veneers are then dried in one of two single chamber veneer dryers. Some dried veneer is coated with glue and pressed into plywood. The rough plywood edges are trimmed to size and knot holes are routed out and filled with putty. Some of the plywood is sanded. Trimmings are hammer milled and then combined with sander residue. These residues are then size speciated in a cyclone with the finer material being exhausted through a baghouse. The larger material is generally used as hog fuel.

The stud mills process logs (SIC Code = 2421), into dimensional sizes such as 2x4s, 4x4s and 4x6s. Lumber produced in the stud mills is typically dried in any one of the dry kilns. These kilns are heated with steam from the hog fuel boiler. The dried lumber is then planed and sawn to the desired final dimensions.

Table 3 shows SDS Lumber Company's actual emissions for calendar year 2007.

Table 2. Potential Emissions from Significant Emission Units^a

Emission Unit	Description	TSP (tpy)	PM₁₀ (tpy)	PM_{2.5} (tpy)	VOC (tpy)	CO (tpy)	SO₂ (tpy)	NO_x (tpy)	Lead (tpy)	HAPs (tpy)^b
P1-2	Usage of VOC-Containing Products				2.4					1.9
P2-1	Hog Fuel Boiler	28.8	21.6	18.7	8.1	470	15.6	121.6	0.006	8.7
P3-2	Veneer Dryers (2)	2.5	1.8	1.6	8.0	3.1				3.2
P3-3	Plywood Plant Baghouses (4)	10.3	10.3	10.3						
P3-7	Plywood Glue and Putty Usage				7.9					2.3
P3-8	Stacker/Diverter Cyclone	2.0	1.0	0.6						
P4-2	Stud Mill Kiln #1 ^c	2.3	2.3	2.3	22.9					7.2
P4-3	Planer Mill Bagplant	5.3	5.3	5.3						
4-6	Stud Mill Kiln #2 ^c	2.1	2.1	2.1	20.8					6.6
P5-1	Debarkers and End Saws	17.4	8.7	3.5						
P5-9	End Saw Chip Cyclone	3.0	1.5	0.9						
P5-10	Veneer Lathe Chipper Cyclone #1	3.4	1.7	1.0						
P5-11	Veneer Lathe Chipper Cyclone #2	5.0	2.5	1.5						
P5-12	Stud Mill Sizer/Shaker Chip Cyclone #1 ^d	8.6	4.3	2.6						
P5-13	Stud Mill Sizer/Shaker Chip Cyclone #2 ^d	8.6	4.3	2.6						
P5-14	Stud Mill Sizer/Shaker Sawdust Cyclone	3.0	1.5	0.9						
P5-18	Hog Fuel Boiler Sawdust Cyclone	2.0	1.0	0.6						
P5-19	Hog Fuel Silo Cyclone	1.9	0.9	0.6						
P5-21	Wood Chip/Sawdust Piles	1.2	0.6	0.1						
P5-25	Logyard	60.0	17.1	2.6						
	TOTAL	167.4	88.5	57.8	70.1	473.1	15.6	121.6	0.006	29.9^b

^a Source: Air Operating Permit Application – Revision 2, Form 2, received 10/1/07. Potential-to-emit totals do not include emissions from insignificant emission units.

^b Potential HAP emissions are limited on a facility-wide basis to less than 10 tons per year of any single HAP and less than 25 tons per year of all HAPs by Ecology Order No. 07AQ-C061.

^c New emission factors for HAPs from dry kilns were used.

^d Stud mill sizer/shaker chip cyclone #1 and stud mill sizer/shaker cyclone #2 do not operate simultaneously.

3.2.2 Process 2: Hog Fuel Boiler

The hog fuel boiler is fueled by bark, wood waste, sander dust, and shavings. The boiler uses natural gas for startup and shutdown. Particulate matter emissions are controlled with two multiclones in series and a dry electrostatic precipitator. The boiler produces steam for use within SDS Lumber Company, as process heat, and to generate electrical power through two steam turbines (SIC Code = 2421). The electrical power generated is used within the source, and the remainder sold to electric utilities. The hog fuel boiler is capable of producing up to 80,000 lb of steam per hour.

Table 3. SDS Lumber Company Calendar Year 2007 Actual Emissions from Significant Emission Units^a

Emission Unit	Description	TSP (tpy)	PM₁₀ (tpy)	PM_{2.5} (tpy)	VOC (tpy)	CO (tpy)	SO₂ (tpy)	NO_x (tpy)	Lead (lb/yr)
P1-2	Usage of VOC-Containing Products				1.9				
P2-1	Hog Fuel Boiler	1.4	1.1	0.9	5.1	294.6	9.8	76.2	0.7
P3-2	Veneer Dryers (2)	2.5	1.8	1.6	0.1				
P3-3	Plywood Plant Baghouses (4)	10.3	10.3	10.3					
P3-7	Plywood Glue and Putty Usage				3.2				
P3-8	Stacker/Diverter Cyclone	2.0	1.0	0.6					
P4-2	Stud Mill Kiln #1	0.7	0.7	0.7	7.4				
P4-3	Planer Mill Bagplant	5.3	5.3	5.3					
P4-6	Stud Mill Kiln #2	0.7	0.7	0.7	7.1				
P5-1	Debarkers and End Saws	4.6	2.3	0.9					
P5-9	End Saw Chip Cyclone	3.0	1.5	0.9					
P5-10	Veneer Lathe Chipper Cyclone #1	3.4	1.7	1.0					
P5-11	Veneer Lathe Chipper Cyclone #2	5.0	2.5	1.5					
P5-12	Stud Mill Sizer/Shaker Chip Discharge ^b	8.6	4.3	2.6					
P5-13	Stud Mill Sizer/Shaker Chip Cyclone #2 ^b	0	0	0					
P5-14	Stud Mill Sizer/Shaker Sawdust Cyclone	3.0	1.5	0.9					
P5-17	Truck Sawdust Unload Cyclone #3	0	0	0					
P5-18	Hog Fuel Boiler Sawdust Cyclone	2.1	1.0	0.6					
P5-19	Hog Fuel Silo Cyclone	1.9	0.9	0.6					
P5-21	Wood Chip/Sawdust Piles	1.2	0.6	0.1					
P5-25	Logyard	60.0	17.1	2.6					
	Combined IEUs ^a	4.4	3.1	0.8	2.1	0.3	0.5	0.4	0.0
	TOTAL	120.1	57.4	32.6	26.9	294.9	10.3	76.7	0.7

^a Source: SDS Lumber Company's 2007 emissions inventory submittal, received April 2, 2008. A detailed emissions inventory for insignificant emission units, is provided in Table 4.

^b Stud mill sizer/shaker chip discharge and stud mill sizer/shaker cyclone #2 do not operate simultaneously.

3.2.3 Process 3: Veneer Dryers

There are two veneer dryers used in the production of plywood (SIC Code 2436). The dryers are heated by steam produced by the hog fuel boiler. The emissions from these dryers are captured and routed through a wet electrostatic precipitator.

3.2.4 Process 4: Plywood Sanding

Some of the plywood sheets are sanded after being trimmed to size and having the knot holes routed out and filled with putty (SIC Code = 2436). Particulate matter emissions are controlled by use of cyclones and baghouses used in series.

Table 4. SDS Lumber Company's Detailed Calendar Year 2007 Emissions from Insignificant Emission Units^a

EMISSION POINT	DESCRIPTION	TSP (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	SO ₂ (tpy)	NOx (tpy)	VOC (tpy)	CO (tpy)	LEAD (tpy)	NH ₃ (tpy)
P1-1	Natural Gas Combustion	0.025	0.025	0.025	0.002	0.332	0.018	0.278	0	0
P2-2	Emergency Backup Boiler, Gas-Fired	0	0	0	0	0	0	0	0	0
P3-1	Veneer Lathes	1.0	1.0	0	0	0	0	0	0	0
P3-4	Steam Vats	0	0	0	0	0	0	0	0	0
P3-5	End Saws	0.5	0.5	0.15	0	0	0	0	0	0
P4-1	Stud Mill Saws	0	0	0	0	0	0	0	0	0
P4-4	Band Mill Saws	0	0	0	0	0	0	0	0	0
P4-5	Saw Blade Sharpening Room Cyclone	0.4	0.4	0.12	0	0	0	0	0	0
P5-2	Wood Chippers	0.778	0.389	0.117	0	0	0	0	0	0
P5-3	Sizer/Shakers	0.584	0.292	0.088	0	0	0	0	0	0
P5-4	Wood Chip/Sawdust Silos	0	0	0	0	0	0	0	0	0
P5-5	Hammer Mills (4)	0	0	0	0	0	0	0	0	0
P5-6	V-Drum Chipper Cyclone	0.42	0.20	0.06	0	0	0	0	0	0
P5-7	Band Mill Cyclone #1	0	0	0	0	0	0	0	0	0
P5-8	Band Mill Cyclone #2	0	0	0	0	0	0	0	0	0
P5-15	Truck Chip Unload Discharge #1	0.027	0.013	0.004	0	0	0	0	0	0
P5-16	Truck Chip Unload Discharge #2	0.027	0.013	0.004	0	0	0	0	0	0
P5-22	Hog Fuel Piles	0.36	0.18	0.18	0	0	0	0	0	0
P5-23	Chip/Sawdust Loading To Piles & Barges	0.222	0.105	0.032	0	0	0	0	0	0
P5-24	Chip/Sawdust Truck Dump	0.006	0.003	0.0008	0	0	0	0	0	0
P6-1	Waste Oil Burner	0.011	0.009	0.009	0.515	0.033	0.0002	0.009	0	0
P6-2	Paint Booth	0	0	0	0	0	2.1	0	0	0
	Total IEU Emissions	4.4	3.1	0.8	0.5	0.4	2.1	0.3	0.0	0.0

^a Source: SDS Lumber Company's 2007 emissions inventory submittal, received April 2, 2008.

- 3.2.5 **Process 5: Materials Handling and Storage**
Chips and sawdust are conveyed, from various locations within the source, to a partially enclosed storage area (SIC Code = 2421). Chips and sawdust are conveyed to the storage piles by pneumatic, belt, and bucket conveyors. Some of the pneumatic conveyors terminate with cyclone collectors or baghouses to collect and minimize air emissions.
- 3.2.6 **Process 6: New Stud Mill**
The new stud mill (#2) (SIC Code = 2421) is located in the same building as the 1990 stud mill. The stud mill's total output is limited to 150,000,000 board feet of Douglas fir, true fir, or hemlock lumber sawn per 12-month period.
- 3.2.7 **Process 7, Stud Mill Kiln #2**
Stud Mill Kiln #2 (SIC Code = 2421) is located next to the previously existing Stud Mill Kiln #1. The dry kiln's total throughput is limited to 100,135,480 board feet of Douglas fir, true fir, or hemlock dried per 12-month period.
- 3.2.8 **Process 8, Debarker**
Up to 1,450,000 tons of logs may be debarked per 12-month period. Debarked logs are processed in the plywood plant, the sawmill, or are chipped.
- 3.2.9 **Process 9, Logyard**
Prior to processing, logs are stored in the log yard. Annual throughput is estimated at 1,450,000 tons of logs per year.

3.3 **Fuel Specifications**

Approximately 100,000 therms of natural gas are consumed annually, at SDS Lumber Company, by space heaters, water heaters, building furnace heaters, and during startup and shutdown of the hog fuel boiler.

SDS Lumber Company's current Order No. DE 80-184 is for the "hog fuel fired boiler." This order does not list allowable fuel types, however, Ecology maintains that the reference to "hog fuel fired boiler," means that only hog fuel may be burned in the boiler. For the purposes of this Air Operating Permit, "hog fuel" means wood pieces or particles generated as a by-product or waste from the manufacturing of wood products, and the handling and storage of raw materials, trees, and stumps. This definition includes but is not limited to sawdust, chips, shavings, bark, pulp, and log sort yard waste, but **does not** include wood pieces or particles containing chemical preservatives such as creosote, pentachlorophenol, or copper-chrome-arsenate.

4.0 **NEW SOURCE REVIEW HISTORY**

In Washington State, new sources of air pollution are potentially subject to four types of new source review (air quality permitting). Federal new source review includes Prevention of Significant Deterioration (Title 40 Code of Federal Regulations Part 52.21) and Nonattainment New Source Review (Title 40 Code of Federal Regulations Part 52.24). These Federal programs apply to large sources with potential emissions equal or greater than specified thresholds. Additionally, State new source review, referred to as Notice of Construction permitting, applies to smaller sources, and the lesser emissions at the larger sources. Notice of Construction permitting may be required for criteria pollutants (WAC 173-400-110) and/or toxic air pollutants (WAC 173-460-030).

Also referred to as an NOC permit, but not "new source review," are permits for the replacement or substantial alteration of emission control technology at an existing stationary source (a.k.a. control technology orders), issued under the authority of (WAC 173-400-114). These control technology orders require a source to continue use of installed control technology and are state-only enforceable.

- 4.1 **Plywood Plant.** The original plywood plant and its two veneer dryers existed prior to installation of the current hog fuel boiler, in 1977.
- Installation and operation of a wet electrostatic precipitator, to control veneer dryer emissions, was approved under a control technology order, Notice of Construction Order No. DE 95AQ-C221, on August 4, 1995. Additionally, installation and operation of a six-headed plywood sander was approved under Notice of Construction Order No. DE 97AQ-C164 on October 23, 1997 (as subsequently revised on May 8, 1998).
- 4.2 **Hog Fuel Boiler.** Operation of the hog fuel boiler has been dictated by three Orders, an NOC, an enforcement order, and a “control technology” order, sequentially. The parameter that has received the most attention is the boiler’s enforceable steam production rate.
- 4.2.1 The NOC application (April 5, 1977) originally submitted for SDS’ boiler listed the maximum output per hour as 60,000 pounds of steam. NOC Order No. DE 80-184 (originally issued as Order No. DE 77-435) does not specifically state a steam production limitation, but does contain incorporation language: “All plans, specifications and other information submitted ... relative to this project ... and by such action shall be incorporated herein and made a part hereof.”
- 4.2.2 Enforcement Order No. DE 87-C392 (April 15, 1988) allows for steam production at a rate of 66,000 lbs/hr or more under the following condition: “A state-approved source test on December 2, 1987 has demonstrated that the company’s Bingen boiler is capable of being operated in compliance with air pollution regulations while producing steam at a flow rate up to 66,000 lbs per hour. Operation of the boiler at steam flow rates above 66,000 lbs per hour would require that a state-approved source test be conducted while the boiler is operating at the higher steam flow rate.”
- 4.2.3 NOC Order No. DE 98AQ-C143 (June 11, 1998), a control technology order, was issued allowing installation of a dry electrostatic precipitator on the existing hog fuel boiler. This order contains the condition that, “operation of the hog fuel boiler shall be limited to 80,000 pounds of steam per hour.”
- Ecology’s Air Quality Program commonly views information submitted as part of the Notice of Construction (air quality permit) process as enforceable parameters of source operation. This has been reiterated by the inclusion of “incorporation language” in most permits which states that “All plans, specifications and other information submitted...relative to this project...shall be incorporated herein and made a part hereof.” In this specific instance, subsequent actions taken by Ecology, following original submittal of the NOC application, indicate that Ecology has not considered 60,000 lbs/hr of steam to be an applicable limitation for operation of the hog-fuel boiler. At present, Ecology believes that 80,000 lbs/hr of steam is the proper applicable limitation and has listed this steam production rate as an applicable requirement in the air operating permit.
- 4.3 **1990 Stud-Mill.** A new stud-mill was constructed in 1990. At the time of installation, Ecology determined that an NOC was required, under WAC 173-400-110 (1/3/89). The requirement to submit an NOC was also included in a stipulated compliance schedule, which expired 12/30/91. Ecology has no record that a complete application was ever submitted. On 9/5/97, SDS Lumber Company submitted information demonstrating that the new stud mill replaced an older stud mill. The new stud mill employs saws with smaller kerfs and particulate matter control equipment; which translates to less emissions than those produced by the old stud mill. Considering this information and Ecology’s 2/7/97 policy for addressing changes to equipment at existing sources, a stud-mill NOC is no longer being pursued by Ecology.
- 4.4 **1995 NOC Application.** An NOC application was submitted 4/10/95, to cover cyclones and baghouses which emit directly to the atmosphere from different processes. This application was

interpreted, by Ecology, as a control technology order application. This NOC application was deemed to be “approved without conditions,” due to Ecology taking no action within 30 days of receipt, as provided in RCW 70.94.153.

- 4.5 **2002 Dry Kiln & Studmill.** Installation and operation of a 2nd studmill and 2nd drying kiln was approved under Notice of Construction Order No. 02AQCR-5091, on December 30, 2002. This project increased the quantity of logs the mill as a whole could saw into green-lumber studs and the quantity of green-lumber studs that could be dried. As a result of the installation of these new units, the quantity of logs debarked, in the existing debarker, was expected to increase. Because this modification has the potential to increase the total amount of incoming logs and logs debarked, this Order contains conditions which are applicable to the logyard and the debarker. Additionally, since the amount of steam available for all uses mill-wide did not increase under this approval, the drying kiln will use steam, produced by the hog fuel boiler, previously employed by other equipment (i.e., the plywood plant).
- 4.6 **Klickitat Energy Partners.** In 1995 Ecology issued an NOC for a separate source to be located within the boundaries of SDS Lumber Company. Ecology has determined that construction of Klickitat Energy Partners’ turbine, permitted by Order No. DE 95AQ-C102, was not commenced within 18 months after receipt of final approval, and therefore the Order has become void. Subsequently, on April 2, 1998, Ecology rescinded Order No. DE 94AQ-C193, issued to SDS Lumber Company. This order contained requirements which would have been triggered by the operation of the proposed Klickitat Energy Partners power generation project.

5.0 **AIR OPERATING PERMIT HISTORY**

Title V of the 1990 Federal Clean Air Act Amendments required all states to develop a renewable operating permit program for industrial and commercial sources of air pollution. Congress structured the air operating permit system as an administrative tool for applying existing regulations to individual sources. The goal is to enhance accountability and compliance by clarifying in a single document which requirements apply to a given business or industry.

The Washington State Clean Air Act (Chapter 70.94 Revised Code of Washington) was amended in 1991 and 1993 to provide the Department of Ecology and local air agencies with the necessary authority to implement a state-wide operating permit program. The law requires all sources emitting one hundred tons or more per year of a criteria pollutant, or ten tons of a hazardous air pollutant, or twenty-five tons in the cumulative of hazardous air pollutants, to obtain an operating permit. Criteria pollutants include sulfur dioxide, nitrogen oxides, particulate matter, carbon monoxide, and volatile organic compounds.

Ecology authored Chapter 173-401 of the Washington Administrative Code (WAC), which specified the requirements of Washington State’s Operating Permit Regulation. This regulation became effective on November 4, 1993. On November 1, 1993, this regulation was submitted to the United States Environmental Protection Agency (EPA), for program approval. On December 9, 1994, EPA granted interim approval of Chapter 173-401 WAC. This interim approval was extended until EPA granted final approval on August 13, 2001. The current version of this regulation was filed on September 16, 2002.

On January 28, 1994, Ecology notified the permittee that records indicated that SDS Lumber Company would be required to obtain an Air Operating Permit. On December 9, 1994, Ecology notified the permittee of their obligation to submit an Air Operating Permit application. The permittee submitted an initial draft application on June 6, 1995, and a complete application on December 7, 1995. Ecology issued a draft Air Operating Permit on September 10, 1997, and a revised draft on March 9, 1998. In response to public comments, Ecology held a public hearing on each of these drafts on December 10, 1997, and May 13, 1998, respectively. On October 9, 1998, Ecology issued Air Operating Permit No. DE 98AOP-C164 (valid 10/9/98 through 7/6/99). The Permit went through an administrative amendment, resulting in the issuance of Air Operating Permit No. DE 98AOP-C164, First Revision, on July 7, 1999 (valid 7/7/99 through 2/26/01). Additionally, the Permit went through a significant modification and reopening for cause, to

remove an ambient air monitoring requirement and to correct a material mistake with the “permit shield,” respectively. This resulted in the issuance of Air Operating Permit No. DE 98AOP-C164, Second Revision, on February 27, 2001 (valid 2/27/01 through 10/9/03).

On October 6, 2003, Ecology issued Air Operating Permit No. 03AQ-C004 per WAC 173-401-710(1) (valid 10/6/03 through 10/8/08). The permit underwent a significant permit modification, per WAC 173-401-725(4), to revise AOP Condition 5.3.2. The revised permit, AOP No. 03AQ-C004 First Revision, was issued on November 19, 2004 (valid 11/19/04 through 10/8/08).

On October 9, 2008, Ecology notified the permittee that in accordance with WAC 173-401-710(3), Expired Permits, the permittee must continue to operate in compliance with all terms and conditions of Air Operating Permit No. 03AQ-C004 First Revision, until a final AOP renewal has been issued.

6.0 FEDERAL REGULATIONS

6.1 New Source Performance Standards (NSPS).

On July 25, 1977, EPA promulgated Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971 (Title 40 Code of Federal Regulations Part 60 Subpart D). This NSPS applies to wood-residue-fired steam generating units capable of firing fossil fuel at a heat input rate of more than 73 megawatts (MW) (250 million British thermal units per hour (MMBtu/hr)).

On June 11, 1979, EPA promulgated Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978 (Title 40 Code of Federal Regulations Part 60 Subpart Da). This NSPS applies to electric utility steam generating units capable of combusting more than 73 MW (250 MMBtu/hr) heat input of fossil fuel (either alone or in combination with any other fuel).

On December 16, 1987, EPA promulgated Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (Title 40 Code of Federal Regulations Part 60 Subpart Db). This NSPS applies to steam generating units that commence construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 MMBtu/hr).

On September 12, 1990, EPA promulgated Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (Title 40 Code of Federal Regulations Part 60 Subpart Dc). This NSPS applies to steam generating units that commence construction, modification, or reconstruction after June 9, 1989, and that have a maximum design heat input capacity of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

SDS Lumber Company’s hog fuel boiler was installed in 1980. It has a maximum heat input rate of approximately 150 MMBtu/hr. None of the aforementioned NSPS are applicable to this boiler.

6.2 National Emission Standards for Hazardous Air Pollutants (NESHAP).

On July 30, 2004, EPA promulgated National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products Manufacture, Final Rule (Title 40 Code of Federal Regulations, Part 63, Subpart DDDD, the “Plywood MACT”), with a compliance deadline of October 1, 2007 for existing major sources. On February 16, 2006, EPA published amendments to the final Plywood MACT that, among other things, extended the compliance deadline to October 1, 2008. On June 19, 2007, the United States Court of Appeals for the District of Columbia Circuit vacated EPA’s provisions in the Plywood MACT that established an October 1, 2008 compliance deadline and that created and de-listed a low risk subcategory of plywood and composite wood products facilities. On October 29, 2007, EPA promulgated ministerial

amendments incorporating the Court of Appeal's decision into the Code of Federal Regulations, and re-establishing an October 1, 2007 compliance deadline.

On September 13, 2004, EPA promulgated National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, Final Rule (Title 40 Code of Federal Regulations Part 63 Subpart DDDDD, the "Boiler MACT"), with a compliance deadline of September 13, 2007 for existing major sources. The final rule also put in place multiple compliance alternatives. On December 28, 2005, EPA published amendments to the final Boiler MACT that, among other things, clarified the eligibility criteria for the health-based compliance alternative. On December 6, 2006, EPA clarified the procedures for implementing the emissions averaging provision and for conducting compliance testing when boilers are vented to a common stack. On July 30, 2007, the United States Court of Appeals for the District of Columbia Circuit issued a formal mandate fully vacating the Boiler MACT, and rendering it unenforceable.

On May 1, 2002, Ecology received notice from SDS Lumber Company that both of the aforementioned NESHAPs, as originally proposed, would potentially apply to their facility. On September 26, 2003, Ecology received notification, on behalf of SDS Lumber Company, based in part upon July 2003 source testing of the hog fuel boiler, that the source was not major for hazardous air pollutants and therefore neither of the aforementioned NESHAPs would apply.

On August 24, 2007, Ecology notified SDS Lumber Company that EPA is now using new emission factors for HAP emissions from lumber drying kilns, and that if the new emission factors were applied to SDS Lumber Company's dry kilns, potential facility-wide HAP emissions would make the source subject to the Plywood and Boiler MACTs.

On August 29, 2007, Ecology received SDS Lumber Company's request for a voluntary order to limit their HAP emissions below major source thresholds. A Synthetic Minor Order No. 07AQ-C061, approving this request, was issued to SDS Lumber Company on September 30, 2007. This Order limits facility-wide emissions of any single HAP to less than 10 tons per year, and total HAP emissions to less than 25 tons per year, quantified as a 12-month rolling total. The voluntary limits keep SDS Lumber Company out of mandatory compliance with the Plywood and Boiler MACTs.

On January 9, 2008, EPA promulgated National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources; Final Rule (Title 40 Code of Federal Regulations Part 63 Subpart HHHHHH), with a compliance deadline of January 10, 2011 for existing sources, and upon startup after January 9, 2008 for new affected sources. On September 16, 2008, Ecology notified SDS Lumber Company that Ecology believed the above NESHAP (40 CFR part 63, subpart HHHHHH) might apply to the source.

On September 24, 2008, Ecology received notice from SDS Lumber Company that SDS Lumber is not subject to 40 CFR part 63, subpart HHHHHH based upon the following:

- SDS Lumber does not use paint strippers containing MeCl.
- All paint stripping and surface coating performed at SDS Lumber qualifies as "facility maintenance" as defined at 40 CFR 63 §63.11180. SDS Lumber only paints stationary equipment, buildings and other fixed items, and vehicles that always remain on site. Other vehicles are painted by a commercial off-site paint shop
- SDS Lumber emits much less than one ton per year of MeCl from painting/solvent use operations, based on coating use records and Material Safety Data Sheets.

Additionally, SDS Lumber has proposed the following voluntary measures to prevent triggering future applicability of 40 CFR part 63, subpart HHHHHH:

- Prepare a “policy memo” stating that “coating of vehicles is limited to vehicles that always stay on site, and stationary equipment like tanks, buildings, machinery, etc.” The policy memo will note any specific types of vehicles/equipment that must be painted only at an off-site paint shop, and will prohibit use of MeCl-based paint strippers.
- Maintain receipts for vehicles like log trucks/chip trucks that have been painted off-site.

7.0 VOLUNTARY PROCESS TO LIMIT EMISSIONS

As discussed in section 6.2 above, Synthetic Minor Order No. 07AQ-C061, 9/30/07, limits facility-wide HAP emissions from SDS Lumber Company to below the major source thresholds. In the absence of source-specific emission factors, SDS will use approved generic emission factors (“designated emission factors”) to quantify HAP emissions. Currently-recognized HAP emission factors for wood-fired boilers and lumber drying kilns are shown in Appendix A of this Statement of Basis. SDS may propose other HAP emission factors for review and approval by Ecology. Upon submission to Ecology, the proposed new emission factors will be considered “designated emission factors” for purposes of compliance with the AOP, unless Ecology specifically rejects those emission factors. If Ecology rejects the proposed emission factors, the permittee must demonstrate compliance using approved emission factors for the period when the new emission factors were being used.

8.0 COMPLIANCE ASSURANCE MONITORING (CAM)

8.1 Criteria

On October 22, 1997, EPA promulgated the Compliance Assurance Monitoring rule (Title 40 Code of Federal Regulations Part 64). This Rule requires specialized pollutant-specific monitoring for those emission units which meet the following criteria:

- 8.1.1 The unit is located at a Title V Air Operating Permit source
- 8.1.2 The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof), other than an emission limitation or standard that is exempt.
- 8.1.3 The unit uses a control device to achieve compliance with any such emission limitation or standard; and
- 8.1.4 The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as an Air Operating Permit source.

8.2 Applicability

The emission unit considered for CAM applicability was the hog fuel boiler. Following is a summary of how the hog fuel boiler matches up with the above listed criteria:

- 8.2.1 SDS Lumber Company is a Title V Air Operating source (see Basis for Title V Applicability, on page 5).
- 8.2.2 The boiler is subject to WAC 173-400-050(1) which limits particulate matter emissions to 0.2 gr/dscf. Additionally, NOC Order No. DE 98AQ-C143 limits particulate matter emissions, from the dry electrostatic precipitator exhaust, to 0.040 gr/dscf. These are emission limitations for an applicable regulated air pollutant, particulate matter.

- 8.2.3 The hog fuel boiler employs a multiclone followed by a dry electrostatic precipitator to control particulate matter emissions.
- 8.2.4 Prior to installation of the dry electrostatic precipitator, a source test resulted in particulate matter emissions of 48.7 pounds per hour, when operating at a steam production rate of 66,000 pounds of steam per hour. If this emission rate is ratioed up to the current steam production limit of 80,000 pounds per hour and multiplied by the number of hours in a year (8760), the pre-control particulate matter emissions are approximately 259 tons per year. The trigger for a source to be classified as an Air Operating Permit source is 100 tons of particulate matter per year.

Therefore, CAM is an applicable requirement for the hog fuel boiler.

CAM requirements are located under the MRRR for permit condition 5.2.2. CAM includes the use of parametric monitoring. In a letter dated June 13, 2003, PPC Industries, manufacturer of SDS Lumber Company’s dry electrostatic precipitator, states that, “the secondary voltage of the third field of the electrostatic precipitator...should be maintained at a minimum average of 28,000 volts in order to meet the performance level of 0.04 grains per dry standard cubic foot corrected to 7% O₂.” Additional detail can be found in the *Compliance Assurance Monitoring Plan for Particulate Matter from Hog Fuel Boiler*, received June 23, 2003 (updated October 1, 2007).

9.0 SIGNIFICANT EMISSION UNITS AND ACTIVITIES

SDS Lumber Company’s significant emission units and activities are identified as processes #1 through #9, in section 3.2 of this Statement of Basis. The requirements which apply to these processes are identified in the tables of Section 5 of the AOP. The tables include five columns. The first column identifies the applicable requirements. It includes both a permit specific identification number and the location of the underlying applicable requirement. Column two simply identifies whether the requirement is state or federally enforceable. (See section 13, for further discussion on enforceability.) Column three is an unenforceable description of the underlying requirement identified in the first column. The description is, in most cases, a paraphrase or summary of the underlying requirement(s) and has been included for informational purposes only. The fourth column specifies the recognized monitoring and analysis procedure or method to use for the applicable requirement. The last column specifies the monitoring, record keeping, and/or reporting that SDS Lumber Company must perform to demonstrate their compliance status. Elements required in the last column must be addressed in the semi-annual monitoring report(s) required by AOP Condition 2.6.1.

10.0 INSIGNIFICANT EMISSION UNITS AND ACTIVITIES

Source-wide combustion of natural gas (P1-1), a 5 MMBtu/hr emergency backup boiler (P2-2), veneer lathes (P3-1), plywood end saws (P3-5), steam vats (P3-4), stud-mill #1 saws (P4-1), band mill saws (P4-4), saw blade sharpening room cyclone (P4-5), wood chippers (P5-2), sizer/shakers (P5-3), wood chip and sawdust silos (P5-4), four (4) hammer mills (P5-5), a v-drum cyclone (P5-6), trucking of chip and sawdust unload discharge (P5-15, P5-16, P5-17), hog fuel piles (P5-22), chip and sawdust barge loading (P5-23), chip and sawdust truck dump (P5-24), truck sawdust loading (P5-26), and the paint booth (P6-2), are insignificant emission units or activities because their actual emission of all regulated pollutants are less than the emissions thresholds of WAC 173-401-530(4). The emissions thresholds for insignificant emission units are provided in Table 5. [WAC 173-401-530(1)(a), 9/16/02]

Table 5. Insignificant Emissions Units Thresholds. [WAC 173-401-530(4)]

TSP	PM ₁₀	VOC	CO	SO ₂	NO _x	Lead
0.5 tpy	0.75 tpy	2 tpy	5 tpy	2 tpy	2 tpy	0.005 tpy

Dust from vehicle traffic is insignificant on the basis that these activities generate only fugitive emissions. [WAC 173-401-530(1), (d), 9/16/02]

Categorically insignificant activities at the source, include oil storage, aqueous parts washers, storage tanks, solids storage, building vents and openings, recreational fireplaces, brazing, soldering, welding, plant upkeep and housekeeping, cleaning, sweeping of streets and paved areas, laundering, steam cleaning, food preparation, portable drums and totes, lawn and landscaping activities, general vehicle maintenance, heat/air conditioning, restroom vents, office activities, sampling connections, fire fighting activities, infirmary activities, vehicle exhaust, saws sharpening cyclone, metal cutting and machining, structural changes, photographic equipment and copiers, sample gathering, preparation and management, non-emission unit installation, repair, and maintenance activities, solid waste containers, totally enclosed conveyors, steam vents and safety valves, air compressors and pneumatic equipment, electric equipment, laboratory drying ovens and autoclaves, and wastewater pumping and conveying systems. [WAC 173-401-532(3), (4), (6), (9), (11), (12), (33), (35), (38), (39), (41), (42), (43), (45), (46), (48), (49), (51), (52), (53), (54), (55), (67), (70), (73), (74), (79), (86), (87), (88), (118), (119), (120), 5/7/94]; Welding (< 1 ton/day welding rod), maintenance shop used oil burner (0.5 MMBtu/hr), administration building furnace (< 5 MMBtu/hr, natural gas fired), above ground gasoline, diesel, oil, and propane storage tanks, and steel cutting burning are insignificant on the basis of size or production rate. [WAC 173-401-533(2)(c), (e), (h), (i), 9/16/02]

11.0 GAPFILLING

Section 5 of the air operating permit identifies requirements that are applicable to existing emission units at the source. The air operating permit must contain emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance. Where the applicable requirement does not require periodic testing or monitoring, periodic monitoring sufficient to yield reliable data has been identified and included in the permit. This action is termed gapfilling.

The last column of the tables in section 5, of the AOP, contains the monitoring, recordkeeping, and reporting to be performed by the permittee (MRRR). This column identifies the periodic action that must be taken to demonstrate compliance with the applicable requirement. It should be noted that in addition to the MRRR a source must consider all other credible evidence when certifying to their compliance status.

For some applicable requirements no action is warranted and instead the permittee will annually certify their compliance status. These requirements are identified with, "no additional monitoring required," in the MRRR column.

Many applicable requirements specified periodic MRRR, while gapfilling was used for the remainder. The source of the MRRR is identified in brackets for each MRRR requirement. Those that reference WAC 173-401-615(1) were gapfilled. Table 6 provides a brief explanation of the basis for each instance of gapfilling.

Table 6. Identification and Basis of “Gapfilled” Items.

Applicable Requirement(s)	Gapfilling Basis
5.1.6, 5.1.7, 5.1.10, 5.2.6, 5.4.2, 5.6.2, 5.6.5	MRRR required for other similar applicable requirement(s) should sufficiently demonstrate compliance with the specified applicable requirement.
5.1.4, 5.1.5, 5.1.6, 5.1.7, 5.1.10	This source has not had a recent history of violating these "nuisance" requirements. Since these could be subjective, we determined it is appropriate to consider complaints in MRRR.
5.1.12, 5.1.15, 5.1.18, 5.2.1, 5.2.5, 5.2.7, 5.2.9, 5.2.10, 5.3.2, 5.4.6, 5.6.7	Simple records, generally already kept, will be helpful in proving such operations.

Applicable Requirement(s)	Gapfilling Basis
5.1.3, 5.3.3, 5.4.3, 5.4.5	This source has not had a history of visible emissions, from these units, and is not expected to have problems complying with established visible emission standards. Monthly MRRR is determined to be appropriate. Additionally, action is required when visible emissions are observed at times other than the monthly survey.
5.2.4, 5.2.8, 5.3.1, 5.3.4, 5.4.4, 5.4.7, 5.6.4, 5.6.8	Development and implementation of these documents fulfill the applicable requirement. Periodic review/inspections will aid in assuring that the contents of the documents are being followed.
5.6.3, 5.7.2, 5.8.1	The underlying NOC Order No. 02AQCR-5091, 12/30/02, requires SDS to quantify sawn lumber, dried lumber and debarked logs, respectively, on a quarterly basis. This condition has been gap-filled to require quantification on a monthly basis so as to assure compliance with the 12 month production limit required by Order No. 02AQCR-5091.

12.0 STREAMLINING

Streamlining is the combination of two or more similar applicable requirements. The resulting applicable requirement is stated as the most stringent of those streamlined. This permit appears to contain streamlining from the perspective that the “description” columns of section 5, of the AOP, describe only the most stringent requirement, while all of the similar requirements are listed as applicable. All of the underlying requirements, listed in the “applicable requirement” columns of section 5, remain as enforceable conditions which must be complied with. However, to avoid confusion, only the most stringent requirement is described. This “streamlining” like process was used as specified in Table 7.

Table 7. Identification and basis of “streamlined” items.

Applicable Requirement	Most Stringent Requirement Included in Description	Less Stringent Requirement(s) Left Out of the “Description”
5.2.2	PM shall not exceed 0.040 gr/dscf, corrected to 7% O ₂ , from the DESP outlet. PM shall not exceed 14.9 lb/hr. [Order No. DE 98AQ-C143, 6/11/98, Approval Condition 2.2.1, 2.4.4, 2.4.5, 2.4.6, 2.4.7, 2.4.9 (S)]	PM emissions shall not exceed 0.2 gr/dscf corrected to 7% O ₂ . [WAC 173-400-050(1), (3), 8/20/93; WAC 173-400-050(1), (3), 7/11/02 (S)]
5.2.3	Opacity as calculated by using a six (6) minute averaging time shall not exceed 10%. [Order No. DE 98AQ-C143, 6/11/98, Approval Condition 2.2.2, 2.2.3, 2.3.2, 2.3.4 (S)]	Hog fuel boilers shall meet all provisions of WAC 173-400-040 & WAC 173-400-050(1), except that opacity may exceed 20% for up to fifteen (15) consecutive minutes once in any eight (8) consecutive hours for grate cleaning and soot blowing. Grate cleaning and soot blowing shall be scheduled for the same specific times each day and Ecology shall be notified of the schedule or any changes. [WAC 173-400-070(2)(a), 8/20/93; Order No. DE 87-C392, 4/15/88, Condition 2; WAC 173-400-070(2)(a), 12/23/97 (S)]
5.2.4	All equipment associated with the boiler and the pollution control equipment shall be maintained in good condition and properly operated. [NOC Order No. DE 80-184, 2/27/80, Condition 2]	DESP shall be operated & maintained according to an O&M manual. [Order No. DE 98AQ-C143, 6/11/98, Approval Condition 2.3.1, 2.3.4, 2.5.1, 2.5.2 (S)]
5.2.9	Operation of the hog fuel boiler shall be limited to 80,000 pounds of steam per hour. [Order No. DE 98AQ-C143, 6/11/98, Approval Condition 2.1.1, 2.3.3 (S)]	Operation of boiler steam flow rate > 66,000 lb/hr requires source test prior to operation. [Order No. DE 87-C392, 4/15/88, Condition 1]

13.0 COMPLIANCE CERTIFICATION

By virtue of the Air Operating Permit application and the issuance of this permit, the reporting frequency for compliance certification for this source shall be annual.

14.0 ENFORCEABILITY

Unless specifically designated otherwise, all terms and conditions of the Air Operating Permit, including any provisions designed to limit the source's potential to emit, are enforceable by EPA, and citizens, under the Federal Clean Air Act. Those terms and conditions which are designated as state-only enforceable, by (S), are enforceable only by Ecology. It should be noted that state-only terms and conditions will become federally enforceable upon approval of the requirement in the State Implementation Plan. However, the enforceability of the terms and conditions of this Air Operating Permit are not expected to change during the Permit term. All terms and conditions of the Air Operating Permit are enforceable by Ecology.

Following is an example of how to identify a state-only enforceable condition. At the end of Condition 2.7.2 the following notation occurs: “[WAC 173-400-107, 8/20/93, 9/6/07 (S)].” If a version of the regulation is cited with no reference to enforceability, it is federally enforceable. Thus, this notation means that the authority for this permit condition is contained in the 8/20/93 version of WAC 173-400-107 (this is the version of WAC 173-400-107 that is in the SIP and is federally enforceable) and in the 9/6/07 version of WAC 173-400-107. The (S) after 9/6/07 means that the 9/6/07 version of WAC 173-400-107 is State-only enforceable.

15.0 OPERATIONAL FLEXIBILITY

The permittee did not request or specify any alternative operating scenarios.

In the event that an emission unit is not operated during a period equal to or greater than the monitoring period designated, no monitoring is required. (ex. A monthly visible emission survey is not required if the emission unit is not operated during the month that the survey covers. A monthly visible emission survey is required if the emission unit is operated for any portion of the month that the survey covers.)

Recordkeeping and reporting must note the reason why, and length of time, the emission unit was not operated.

16.0 OTHER PERMITTING ISSUES

16.1 **Chapter 173-433 WAC.** A literal reading of WAC 173-433 and RCW 70.94.453(5) could lead to the conclusion that all solid fuel burning devices, without consideration of size, fall under the definition of this regulation/statute. The definition of solid fuel burning device is, “any device for burning wood, coal, or any other nongaseous and non-liquid fuel, including a wood stove and a fireplace.” However, this definition, when read together with the policy statement of RCW 70.94.450 clearly indicates that the concern of the Washington State Legislature was emissions from wood stoves. RCW 70.94.450 and RCW 70.94.453 are two adjacent sections in Chapter 405 of the Laws of 1987. While it might be reasonable for the policy statement of RCW 70.94.450 to lead the Legislature to regulate other solid fuel burning space heating devices similar to wood stoves, it does not seem reasonable that such a policy statement would lead to regulation of a large industrial unit such as the hog fuel boiler. Based upon this interpretation of the intention of RCW 70.94.453, WAC 173-433 was found to be inapplicable to SDS Lumber Company. WAC 173-433 would be applicable if a wood stove, fireplace, or similar device were present at the source.

16.2 **State Ambient Air Quality Standards.** The following regulations are ambient air quality standards that apply generally to all areas of the state. There are no on-going monitoring, recordkeeping, or reporting requirements specific to the source to prove compliance with the ambient air quality standards. Compliance with the ambient air quality standards is required, and

the following regulations are triggered for any source when undergoing New Source Review for Notice of Construction or Prevention of Significant Deterioration permitting and are generally reported in the permits as findings as required, or when an actual or suspected violation of an ambient air quality standard is found locally.

WAC 173-470-010, -020, -030, -100, -160, 1/3/89

WAC 173-470-110, -150, 1/3/89 (S)

WAC 173-474, 12/30/98 (S)

WAC 173-475, 2/29/80 (S)

(S) means state only requirement

17.0 COMPLIANCE SUMMARY

17.1 **Compliance Status.** A Full Compliance Evaluation (FCE)¹ was completed for SDS Lumber Company on October 24, 2007. The FCE showed that as of August 17, 2007², SDS was *in compliance*³. Documents related to this and other FCEs completed for SDS Lumber Company are available for public viewing from the Department of Ecology, Central Regional Office.

17.2 **Compliance History.** Table 8 summarizes violations for which Ecology has taken formal action:

Table 8. Identification of violations for which Ecology has taken formal action.

Date of Violation	Summary of Violation	Ecology Action Taken	Penalty Assessed	Resolution
1974	Blowing sawdust			Order #DE 74-744, 12/3/74
7/17/85	Blowing sawdust	NOV #DE 85-651, 9/6/85		
1986	Blowing sawdust	NOV #DE 86-188, 4/8/86		NOV #DE 86-523, 5/15/86
1986	Blowing sawdust	NOV #DE 86-523, 5/15/86		Appealed to PCHB 86-93 & 86-95 – Stipulation and Agreed Order of Dismissal
1986	Blowing sawdust	NOP #DE 86-544, 6/3/86	\$ 1,000	Appealed to PCHB 86-93 & 86-95 – Stipulation and Agreed Order of Dismissal
9/16/87	Excess steam production	NOV #DE 87-C392 10/6/87		Order #DE 87-C392, 11/14/88
10/26/88	Excess boiler opacity	NOP #DE 88-C455, 4/15/88	\$ 500	Penalty paid
1989	Blowing sawdust	NOP #DE 89-C104, 5/23/89; NOP #DE 89-C172 5/23/89; Order #DE89-C105, 5/23/89	\$ 2,000; \$ 1,000	Appealed to PCHB 89-77 & 89-97 –Stipulated Compliance Schedule and Order of Dismissal
8/17/89	Excess boiler opacity	NOV #DE 89-C357, 10/6/89		

¹ An FCE is a comprehensive evaluation of the compliance status of a source. It evaluates all regulated pollutants at all regulated emission units, and it addresses the compliance status of each unit, as well as the source's continuing ability to maintain compliance at each emission unit.

² This is the most recent date (i.e., end of time period covered) of a document used in making the compliance status determination.

³ Defined per HPV criteria from "The Time and Appropriate (T&A) Enforcement Response to High Priority Violations (HPVs)", EPA, December 22, 1998.

Date of Violation	Summary of Violation	Ecology Action Taken	Penalty Assessed	Resolution
2/21/90	Excess boiler opacity	NOP #DE 90-C149, 3/30/90	\$ 400	Penalty paid
2/21/90	Excess veneer dryer opacity	NOP #de 90-C150, 3/30/90	\$ 400	Penalty appealed to PCHB - Penalty rescinded
9/8/92	Excess veneer dryer opacity	NOV #DE 92AQ-C430, 9/17/92		WESP installed on veneer dryers September 1998
12/15/93	Excess veneer dryer opacity	NOV #DE 94AQ-C163, 4/5/94	\$ 3,000	Penalty paid - WESP installed on veneer dryers September 1998
2/10/98	Excess boiler opacity	NOV #DE 98AQ-C112, 3/10/98	\$ 3,000	Penalty paid - DESP installed on boiler August 1998
3/24/98	Excess boiler opacity	NOV #DE 98AQ-C137, 5/7/98	None	DESP installed on boiler August 1998
Fall 1998	No COMS on boiler	NOV #DE 98AQ-C167, 10/5/98	None	COMS installed 10/9/98

Additional violations have occurred for which Ecology has not been compelled to issue a Notice of Violation, or for more recent events, has not yet concluded evaluation of whether a Notice of Violation will be issued. It should be noted that under this permit, and the preceding Air Operating Permit, SDS Lumber Company submits Semi-Annual Monitoring Reports and Annual Compliance Certifications. These documents, along with Ecology inspection records, do identify violations of various air quality requirements which have occurred at SDS Lumber Company. While a majority of these violations have not caused adverse environmental impacts, the underlying requirements are necessary for determining SDS' compliance status with applicable requirements that do limit environmental impacts.

In addition to Ecology's duty to evaluate SDS Lumber Company's compliance status, it should be noted that a majority of the Air Operating Permit is federally enforceable which means that it is enforceable by EPA and citizens. Citizens interested in evaluating SDS's compliance with their Air Operating Permit, may wish to become familiar with the conditions of the Air Operating Permit and make a habit of reviewing the submittals required by their Air Operating Permit (i.e., Semi-Annual Monitoring Report and Annual Compliance Certification). Obtaining a copy of the permit and/or viewing our files (including the submittals) may be arranged by contacting Ecology's Public Disclosure Coordinator at (509) 575-2490.

Complaints may be filed with the Department of Ecology's Central Regional Office in Yakima by calling (509) 575-2490 and asking for the complaint tracker. Times, dates, and circumstances of alleged violations are important information to have available when placing the call. Ecology generally attempts to investigate complaints received from the public.

- 17.3 **Violation Remedies.** Air Quality violations, including violations of the Air Operating Permit, may be subject to any of the remedies provided in Chapter 70.94 RCW, the Washington Clean Air Act. These remedies include notice of violation, order, civil penalty up to \$10,000 per day per violation, and criminal sanctions. Ecology has signed an agreement with the U.S. Environmental Protection Agency wherein we commit to responding to violations according to EPA guidance. That commitment includes taking enforcement actions in response to violations within certain timeframes. For example, Ecology has committed to issuing a Notice of Violation for "High priority violations," (as defined in the guidance) within 45 days of determining that a violation occurred. We have also agreed to assess penalties in accordance with EPA guidance for significant violations. According to that guidance, penalties must consider the economic benefit to a company as a result of the violation.

APPENDIX A. ACCEPTABLE EMISSION FACTORS (AS OF PERMIT ISSUANCE)

Table A1. Wood Waste-Fired Boilers Emission Factors⁽¹⁾

Compound	Emission Factor⁽²⁾ (lb/MMBtu unless specified)	Compound	Emission Factor⁽¹⁾ (lb/MMBtu)
Acetaldehyde	8.30E-04	Tetrachloroethene	3.80E-05
Acetophenone	3.20E-09	1,1,1-Trichloroethane (methyl chloroform)	3.10E-05
Acrolein	Not Detected ⁽³⁾	Trichloroethene	3.00E-05
Benzene	1.0E-02 ⁽³⁾	Toluene	9.20E-04
bis(2-Ethylhexyl) phthalate (DEHP)	4.70E-08	2,4,6-Trichlorophenol	2.20E-08
Bromomethane (methyl bromide)	1.50E-05	Vinyl Chloride	1.80E-05
Carbon tetrachloride	4.50E-05	o-Xylene	2.50E-05
Chlorine	7.90E-04	Polycyclic Organic Matter (POM)	
Chlorobenzene	3.30E-05	Benzo(a)anthracene	6.50E-08
Chloroform	2.80E-05	Benzo(a)pyrene	2.60E-06
Chloromethane (methyl chloride)	2.30E-05	Benzo(b)fluoranthene	1.00E-07
Dibenzo furans		Chrysene	3.80E-08
Heptachlorodibenzo-p-furans	2.40E-10	Benzo(k)fluoranthene	3.60E-08
Hexachlorodibenzo-p-furans	2.80E-10	Dibenzo(a,h)anthracene	9.10E-09
Octachlorodibenzo-p-furans	8.80E-11	Indeno(1,2,3,c,d)pyrene	8.70E-08
Pentachlorodibenzo-p-furans	4.20E-10	Acenaphthene	9.10E-07
2,3,7,8-Tetrachlorodibenzo-p-furans	9.00E-11	Fluorene	3.40E-06
Tetrachlorodibenzo-p-furans	7.50E-10	Anthracene	3.00E-06
1,2-Dichloroethane (ethylene dichloride)	2.90E-05	Phenanthrene	7.00E-06
Dichloromethane (methylene chloride)	2.90E-04	Fluoranthene	1.60E-06
1,2-Dichloropropane (propylene dichloride)	3.30E-05	Pyrene	3.70E-06
2,4-Dinitrophenol	1.80E-07	Perylene	5.20E-10
Ethylbenzene	3.10E-05	Benzo(g,h,i)perylene	9.30E-08
Formaldehyde	6.0E-03 ⁽³⁾	Acenaphthylene	5.00E-06
Hydrogen chloride	4.0E-04 ⁽³⁾	Benzo(e)pyrene	2.60E-09
Naphthalene	9.70E-05	2-Methylnaphthalene	1.60E-07
Pentachlorophenol	5.10E-08	Benzo(j,k)fluoranthene	1.60E-07
4-Nitrophenol	1.10E-07	2-Chloronaphthalene	2.40E-09
Phenol	5.10E-05	Antimony	7.90E-06
Polychlorinated biphenyls		Arsenic	2.20E-05
Decachlorobiphenyl	2.70E-10	Beryllium	1.10E-06
Dichlorobiphenyl	7.40E-10	Cadmium	4.10E-06
Heptachlorobiphenyl	6.60E-11	Chromium (Total)	2.10E-05
Hexachlorobiphenyl	5.50E-10	Chromium (VI)	3.50E-06
Pentachlorobiphenyl	1.20E-09	Cobalt	6.50E-06
Trichlorobiphenyl	2.60E-09	Lead	4.80E-05
Tetrachlorobiphenyl	2.50E-09	Manganese	1.60E-03
Propionaldehyde	6.10E-05	Mercury	3.50E-06
Styrene	Not Detected ⁽³⁾	Nickel	3.30E-05
2,3,7,8-Tetrachlorodibenzo-p-dioxins	8.60E-12	Selenium	2.80E-06

⁽¹⁾ SDS may use site-specific emission factors from an approved source test in place of any of these generic emission factors.

⁽²⁾ AP-42, September 2003, Tables 1.6-3 and 1.6-4, unless otherwise specified.

⁽³⁾ Source test emission factors in lb/1,000 lb Steam. "Hogged Fuel Boiler Determination of HCl, Formaldehyde, Acrolein, Benzene, Styrene, and Visible Emissions" at SDS Lumber Company, July 15-16, 2003.

Table A2. Dry Kiln HAP Emission Factors (lb/MMBF)

Species	Max Kiln Temp (°F)	Total HAP	Methanol	Formaldehyde	Acetaldehyde	Propionaldehyde	Acrolein
Hemlock	≤200	199	82	1.24	113	1	1.6
Hemlock	>200	305	186	3.8	113 ⁽¹⁾	1 ⁽¹⁾	1.6 ⁽¹⁾
Douglas Fir	≤200	97	38	1	57	0.55	0.65
Douglas Fir	>200	116	57	1 ⁽¹⁾	57 ⁽¹⁾	0.55 ⁽¹⁾	0.65 ⁽¹⁾
White Fir	≤200	240	122	2.8	113 ⁽²⁾	1 ⁽¹⁾⁽²⁾	1.6 ⁽¹⁾⁽²⁾
White Fir	>200	301	183	2.8 ⁽¹⁾	113 ⁽¹⁾⁽²⁾	1 ⁽¹⁾⁽²⁾	1.6 ⁽¹⁾⁽²⁾
Ponderosa Pine ⁽³⁾	≤200	184	65	2.9	113 ⁽¹⁾⁽²⁾	1 ⁽¹⁾⁽²⁾	1.6 ⁽¹⁾⁽²⁾
Lodgepole Pine ⁽³⁾	≤200	73.6	55	4	12	1 ⁽¹⁾⁽²⁾	1.6 ⁽¹⁾⁽²⁾
Lodgepole Pine ⁽³⁾	>200	78.6	60	4 ⁽⁶⁾	12 ⁽⁶⁾	1 ⁽¹⁾⁽²⁾	1.6 ⁽¹⁾⁽²⁾
Slash Pine	>200	215	164	4 ⁽⁵⁾	44.7	1 ⁽¹⁾⁽²⁾	1.6 ⁽¹⁾⁽²⁾

⁽¹⁾ Assumes emissions of this HAP not temperature dependent. There is insufficient data to know for sure.

⁽²⁾ Assumes emissions are the same as hemlock.

⁽³⁾ Pine is not normally dried at temperatures > 200 °F.

⁽⁴⁾ No data for Slash Pine dried ≤ 200 °F.

⁽⁵⁾ Assumed to be the same as for Lodgepole Pine.

⁽⁶⁾ Assumes emissions the same as for Lodgepole Pine dried at ≤ 200 °F.