



WASHINGTON STATE DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
4601 NORTH MONROE
SPOKANE, WASHINGTON 99205-1295

FINAL STATEMENT OF BASIS
FOR
AIR OPERATING PERMIT NUMBER 07AQ-E198
STIMSON WASHINGTON, INC.
ARDEN SAWMILL
ARDEN, WASHINGTON

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LIST OF ABBREVIATIONS

AOP	Air Operating Permit
BACT	Best Available Control Technology
BTU	British Thermal Units
°C	Degrees Celsius
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
dscf	Dry Standard Cubic Foot
dscf/m	Dry Standard Cubic Foot per minute
Ecology	Washington State Department of Ecology
E.I.T.	Engineer in Training
EPA	United States Environmental Protection Agency
°F	Degrees Fahrenheit
FCAA	Federal Clean Air Act
ft ³	Cubic foot
gr/dscf	Grains per dry standard cubic foot
hr	Hour
lb	Pound
MMBtu	Million British Thermal Units
MRRR	Monitoring, Recordkeeping, and Reporting Requirement
NOC	Notice of Construction
NO _x	Oxides of Nitrogen
NSPS	New Source Performance Standard
O ₂	Oxygen
O&M	Operation & Maintenance
P.E.	Professional Engineer
PM	Particulate Matter
PM ₁₀	Particulate Matter with aerodynamic diameter ≤ 10 micrometers
ppm	Parts per million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RCW	Revised Code of Washington
RM	EPA Reference Method from 40 CFR Part 60, Appendix A
scfm	Standard Cubic Feet per Minute
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
T	Temperature
TAP	Toxic Air Pollutant
TPD	Tons Per Day
TPY	Tons Per Year
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
w%	Percentage by Weight
yr	Year

Selected Emission Units – Annual Potential To Emit in Tons Per Year (tpy)¹

Emission Units	PM-10 (tpy)	CO (tpy)	NO _x (tpy)	SO ₂ (tpy)	VOC (tpy)
Hogged Fuel Boiler	(3750)*				
	3.15	415.9	40.73	1.79	1.8
Natural Gas – Fired Boiler	1.05	0.43	1.23	0.06	0.58
Lumber Drying Kilns	10.73				125.5 ²
Planer and Truck Bin Baghouses (Combined)	(11250)*				
	0.68				

* Indicates pre-controlled emissions from sources to which Compliance Assurance Monitoring is applicable as reported in proposed CAM plans submitted to Ecology on November 15, 2001.

1.0 Introduction

This document sets forth the legal and factual basis for the permit conditions in a FINAL Revised AOP issued by the State of Washington Department of Ecology for a lumber mill located near Colville, Washington. This document is called a “statement of basis” and is required by Washington State regulations [chapter 173-401 WAC]. A statement of basis does not contain enforceable permit conditions. Enforceable permit conditions are contained in the AOP itself.

2.0 Facility Identifying Information

- 2.1 Company Name -----Stimson Washington, Inc. (Stimson Lumber Company)
- 2.2 Facility Name -----Arden Operation
- 2.3 Unified Business Identification Number----- 409019938
- 2.4 Facility Address -----634 Highway 395 South, Colville, Washington 99114
- 2.5 Responsible Official ----- Dan Sweeney, Vice President, Human Resources
 Mailing Address -----520 SW Yamhill, Suite 700, Portland, Oregon 97204
- 2.6 Facility Contact-----Darl Hagey, Environmental Manager
- 2.7 Facility Contact Phone Number----- (406) 258-2217

3.0 Basis for Title V Applicability

Stimson Lumber Company, Arden Operation, is subject to Title V, Air Operating Permit Regulations, due to the emissions of carbon monoxide (CO) and volatile organic compounds (VOC) in excess of 100 tons per year. WAC 173-401-200(17)(b) identifies any source that directly emits or has the potential to emit one hundred tpy or more of any air pollutant as a major source. Major sources are required to obtain Title V permits under 173-401-300(1)(a)(i).

¹ Annual potential to emit values as submitted by Spring Environmental (on behalf of Stimson Lumber) on May 31, 2006 as part of the AOP renewal application.

² Dry kiln VOC potential to emit calculated from maximum dry kiln throughput in May 31, 2006 renewal application and assuming 100% pine at 1.86 lb VOC per 1,000 board feet.

4.0 Attainment Classification

The facility is located in an area that is classified as attainment for all criteria pollutants as of January 2007.

5.0 Title V Facility Timeline

- 5.1 December 8, 1994 -----Source became subject to Title V AOP Program
- 5.2 March 14, 2003 ----- AOP No. 02AQER-4008 issued
- 5.3 June 1, 2007 ----- AOP No. 02AQER-4008 expires
- 5.4 March 16, 2007 ----- Draft AOP renewal Order No. 07AQ-E198 Issued
- 5.5 March 20, 2007 -----Public Comment Period Begins
- 5.6 April 19, 2007 ----- Public Comment Period Ends
- 5.7 May 1, 2007 ----- EPA Review Period Begins
- 5.8 June 16, 2007 -----EPA Review Period Ends
- 5.9 June 1, 2007 ----- Final Order No. 07AQ-E198 Effective
- 5.10 May 31, 2011 ----- Order No. 07AQ-E198 Expiration Date

6.0 Facility Description

6.1 Stimson Lumber Company, Arden Sawmill is located at 634 Highway 395 South, Arden, Washington, Stevens County. The facility includes process areas, a log yard, maintenance facilities, offices, and fuel storage. The mill processes raw logs into dried finished lumber before shipping. Wood residue from the sawmill and planer mill is both used onsite as fuel and shipped offsite by truck and rail. The site contains facilities for repair and maintenance of log and lumber handling equipment as well as mobile and other miscellaneous equipment and vehicles used in mill operations.

- 6.1.1 *Debarker* – The logs are delivered by truck to the sawmill, where they are unloaded and either sent directly to one of the two debarkers or stored in the log storage yard for future processing. The debarkers remove bark from the logs. The logs are then cut to specified lengths before they enter the sawmill. Bark and sawdust from log debarking and sawing is transferred to the hog fuel pile or to the hog fuel truck bins.
- 6.1.2 *Sawmill* – The sawmill processes raw logs into dimensional lumber. Sawn wood is transferred to the onsite lumber drying kilns. Sawdust from the sawmill is transferred to a sawdust truck bin. Cuttings from the sawmill sorter trimmer are chipped and transferred to one of two chip truck bins.
- 6.1.3 *Powerhouse* – The powerhouse boilers supply steam to the lumber drying kilns and for space heating in winter. The hogged fuel boiler is fired on bark and wood chips generated onsite, is rated at 40,000 pounds of steam per hour and was built in 1976. In 1993, a PPC Industries two-field modular electrostatic precipitator was installed to replace a water scrubber on the exhaust of the boiler. At the same time, a Zurn-type multiple cyclone was installed to replace an existing multiple cyclone. Wood fuel is supplied to the hogged fuel boiler from the hog fuel pile. The hog fuel pile is comprised primarily of debarker residue and a small amount of chips from the planer mill. The other boiler is natural gas fired, built in 1954 and rated at 20,000 pounds of

steam per hour. The boiler was moved to the Arden facility in 1993. A low-NOx burner was installed at the time.

- 6.1.4** *Lumber Drying* – Lumber handled by the facility is dried in steam kilns or by dehumidification. The facility has four double-track steam kilns, two single-track steam kilns, and one double-track kiln used for re-dry. The steam kilns are indirectly heated by powerhouse steam.
- 6.1.5** *Planer Mill* – Dried lumber from the kilns is delivered to the planer mill and fed to the planer to surface the lumber to specified sizes. The planer generates shavings that are transferred to the planer shavings truck bin. Surfaced lumber is graded for quality and sent to trim saws for removal of defect trim pieces. Trim pieces and planer ends are sent to a chipper and then transferred to a hog fuel pile or to one of two chip truck bins.
- 6.1.6** *Maintenance* – A maintenance shop provides space for repairing and maintaining production and mobile equipment used at the facility. Some of the maintenance activities are also completed remotely in the production areas.
- 6.1.7** *Miscellaneous* – Miscellaneous sources at the facility encompass a range of units (i.e., a log yard, facility roads, and process water pond) and activities (i.e., fuel storage and finished lumber storage and shipping).

7.0 Facility Emission Units/Processes

- 7.1** Facility Wide (Section 2.1 in AOP)
- 7.2** Hogged Fuel Boiler (Section 2.2 in AOP)
- 7.3** Natural Gas Boiler (Section 2.3 in AOP)
- 7.4** Lumber Drying Kilns (Section 2.4 in AOP)
- 7.5** Wood Waste Collection and Transport System (Section 2.5 in AOP)
- 7.6** Planer and Truck Bin Baghouses (Section 2.6 in AOP)
- 7.7** Cyclone #8 – Chip Surge Bin, CAM (Section 2.7 in AOP)

8.0 Insignificant Emission Units and Activities

- 8.1** The following insignificant emission units were proposed by Stimson Lumber in the Title V Renewal Application materials submitted to Ecology and have been found by Ecology to meet the requirements outlined in WAC 173-401-532 as categorically insignificant.
 - 8.1.1** Lubricating oil storage tanks (WAC 173-401-532(3))
 - 8.1.2** Storage tanks, reservoirs and pumping and handling equipment of any size, limited to soaps, lubricants, hydraulic fluid, vegetable oil, grease, animal fat, aqueous salt solutions or other materials and processes using appropriate lids and covers where there is no generation of objectionable odor or airborne particulate matter (WAC 173-401-532(4))
 - 8.1.3** Pressurized storage of oxygen, nitrogen, carbon dioxide, air, or inert gases (WAC 173-401-532(5))
 - 8.1.4** Storage of solid material, dust-free handling (WAC 173-401-532(6))
 - 8.1.5** Vehicle exhaust from auto maintenance and repair shops (WAC 173-401-532(7))

- 8.1.6** Vents from rooms, buildings and enclosures that contain permitted emissions units or activities from which local ventilation, controls and separate exhaust are provided (WAC 173-401-532(9))
- 8.1.7** Internal combustion engines for propelling or powering a vehicle (WAC 173-401-532(10))
- 8.1.8** Brazing, soldering and welding equipment and oxygen-hydrogen cutting torches for use in cutting metal where in components of the metal do not generate HAPs or HAPs precursors (WAC 173-401-532(12))
- 8.1.9** Metal melting and molten metal holding equipment and operations wherein the components of the metal do not generate HAPs or HAP precursors. Electric arc furnaces are not considered for listing as insignificant (WAC 173-401-532(21))
- 8.1.10** Plant upkeep including routine housekeeping, preparation for and painting of structures or equipment, re-tarring roofs, applying insulation to buildings in accordance with applicable environmental and health and safety requirements and paving or stripping parking lots (WAC 173-401-532(33))
- 8.1.11** Cleaning and sweeping of streets and paved surfaces (WAC 173-401-532(35))
- 8.1.12** Steam cleaning operations (WAC 173-401-532(39))
- 8.1.13** Portable drums and totes (WAC 173-401-532(42))
- 8.1.14** Lawn and landscaping activities (WAC 173-401-532(43))
- 8.1.15** General vehicle maintenance including vehicle exhaust from repair facilities (WAC 173-401-532(45))
- 8.1.16** Comfort air conditioning or air cooling systems, not used to remove air contaminants from specific equipment (WAC 173-401-532(46))
- 8.1.17** Natural draft hoods, natural draft stacks, or natural draft ventilators for sanitary and storm drains, safety valves, and storage tanks subject to size and service limitations expressed elsewhere in this section (WAC 173-401-532(47))
- 8.1.18** Natural and forced air vents and stacks for bathroom/toilet facilities (WAC 173-401-532(48))
- 8.1.19** Office activities (WAC 173-401-532(49))
- 8.1.20** Personal care activities (WAC 173-401-532(50))
- 8.1.21** Fire fighting and similar safety equipment and equipment used to train fire fighters excluding fire drill pits (WAC 173-401-532(52))
- 8.1.22** Materials and equipment used by, and activity related to operation of infirmary; infirmary is not the source's business activity (WAC 173-401-532(53))
- 8.1.23** Fuel and exhaust emissions from vehicles in parking lots (WAC 173-401-532(54))
- 8.1.24** Structural changes not having air contaminant emissions (WAC 173-401-532(67))
- 8.1.25** Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy, e.g., blueprint activity, photocopiers, mimeograph, telefax, photographic developing, and microfiche (WAC 173-401-532(70))

- 8.1.26** Repair and maintenance activities, not involving installation of an emission unit and not increasing potential emissions of a regulated air pollutant (WAC 173-401-532(74))
 - 8.1.27** Batteries and battery charging (WAC 173-401-532(77))
 - 8.1.28** Solid waste (as defined in the Washington Administrative Code) containers (WAC 173-401-532(79))
 - 8.1.29** Totally enclosed conveyors (WAC 173-401-532(86))
 - 8.1.30** Steam vents and safety relief valves (WAC 173-401-532(87))
 - 8.1.31** Air compressors, pneumatically operated equipment, systems and hand tools (WAC 173-401-532(88))
 - 8.1.32** Steam leaks (WAC 173-401-532(89))
 - 8.1.33** Process water and white water storage tanks (WAC 173-401-532(94))
 - 8.1.34** Demineralizer tanks (WAC 173-401-532(95))
 - 8.1.35** Clean condensate tanks (WAC 173-401-532(96))
 - 8.1.36** Chipping (WAC 173-401-532(112))
 - 8.1.37** Debarking (WAC 173-401-532(113))
 - 8.1.38** Pond dredging (WAC 173-401-532(116))
 - 8.1.39** Non-PCB oil filled circuit breakers, oil filled transformers and other equipment that is analogous to, but not considered to be, a tank (WAC 173-401-532(118))
 - 8.1.40** Electric or steam-heated drying ovens and autoclaves (WAC 173-401-532(119))
 - 8.1.41** Sewer manholes, junction boxes, sumps and lift stations associated with wastewater treatment systems (WAC 173-401-532(120))
- 8.2** The following insignificant emission units were proposed by Stimson Lumber in the Title V Renewal Application materials submitted to Ecology and have been found by Ecology to meet the requirements outlined in WAC 173-401-533 as insignificant on the basis of size or production rate.
- 8.2.1** 6,000 gallon capacity gasoline storage tank (WAC 173-401-533(2)(c), Operation, loading and unloading of VOC storage tanks (including gasoline storage tanks), ten thousand gallons capacity or less, with lids or other appropriate closure, vapor pressure not greater than 80 mm Hg at 21°C)
 - 8.2.2** One, 1,000 gallon propane storage tank (WAC 173-401-533(2)(d), Operation, loading and unloading of butane, propane, or LPG storage tanks, vessel capacity under forty-thousand gallons)
 - 8.2.3** Natural gas heaters in the planer shop and propane heater in maintenance shop (WAC 173-401-533(2)(e), Combustion sources less than five million BTU/hr exclusively using natural gas, butane, propane, or LPG)
 - 8.2.4** 20,000 gallon capacity diesel fuel storage tank (WAC 173-401-533(2)(t), Equipment used exclusively to pump, load, unload or store high boiling organic material, material with initial boiling point not less than 150°C, or vapor pressure not more than 5mm Hg at 21°C, with lids or other appropriate closure)

8.3 The following insignificant emission units were proposed by the permittee and have been found by Ecology to meet the requirements outlined in WAC 173-401-530(4) as insignificant on the basis of actual emissions.

8.3.1 The permittee has established through calculational methods acceptable to Ecology that the potential PM-10 emissions from a three part debris screener used in the log yard at the Arden sawmill is below 0.75 tons per year. Based on these calculations, the screen qualifies as an Insignificant Emission Unit based on actual emissions as allowed by WAC 173-401-530(4).

9.0 Comments and Corresponding Responses

9.1 Comments received during the public comment period and EPA review period are on file at Ecology's Eastern Region Office in Spokane, along with Ecology's response to the comments.

10.0 Applicable and Inapplicable Requirements Determinations/Explanations

10.1 Initial or one-time NOC requirements that have not been included in the AOP as ongoing applicable requirements.

10.1.1 Order No. DE92AQ-E145 2nd Amendment, Approval Condition 6, Site specific O&M manuals for all equipment that has the potential to affect emissions to the atmosphere shall be developed. O&M manual development shall be completed within 90 days of issuance of this order and a copy sent to Ecology for approval (natural gas fired boiler).

10.1.1.1 All O&M manuals and related information is included in the O&M Report file, located at Ecology's Eastern Regional Office in Spokane, Washington. The manual is dated April 19, 1993.

10.1.2 Order No. DE92AQ-E145 2nd Amendment, Approval Condition 7.1, Within 60 days of achieving the maximum production rate at which the boiler will be operated, but not later than 180 days after initial startup of the boiler, an independent testing firm shall conduct RM 7.

10.1.2.1 This testing occurred on November 3-4, 1993, and was conducted by Horizon Engineering. A copy of the Emissions Test Report is located in the source test file at Ecology's Eastern Regional Office in Spokane, Washington.

10.1.3 Order No. DE92AQ-E145 2nd Amendment, Approval Condition 8.6, Source must notify Ecology in writing at least thirty (30) days prior to construction, and thirty (30) days prior to startup of the new systems (natural gas boiler).

10.1.3.1 While no correspondence was located which explicitly states compliance with this permit condition, it is clear from the exchange of correspondence during the permitting process that Ecology personnel were kept informed as to the state of the boiler.

10.2 The following NOC requirements clarified miscellaneous issues with regard to the applicable emission unit and were not, in actuality, approval conditions. These NOC requirements therefore have not been included in the AOP as ongoing applicable requirements.

10.2.1 Order No. DE92AQ-E145 2nd Amendment – Approval Condition 3, Interlocks.

10.2.1.1 This approval condition stated that no interlocks were required as part of this Order.

10.2.2 Order No. DE92AQ-E145 2nd Amendment – Approval Condition 4, Fugitive Dust.

10.2.2.1 This approval condition stated that fugitive dust problems are not associated with steam production.

10.2.3 Order No. DE93AQ-E113 1st Amendment – Approval Condition 3, Interlocks.

10.2.3.1 This approval condition stated that no interlocks were required as part of this Order.

10.3 The following requirements were listed as applicable (procedural) in the renewal application. No action on the part of the source is required. These regulations have therefore not been included in the AOP as ongoing applicable requirements.

- 10.3.1** WAC 173-400-010 -----Policy and purpose
- 10.3.2** WAC 173-400-020 ----- Applicability
- 10.3.3** WAC 173-400-030 ----- Definitions
- 10.3.4** WAC 173-400-081 ----- Startup and Shutdown
- 10.3.5** WAC 173-400-091 -----Voluntary limits on emissions
- 10.3.6** WAC 173-401-161 ----- Compliance Schedules
- 10.3.7** WAC 173-400-230 ----- Regulatory actions
- 10.3.8** WAC 173-400-240 -----Criminal penalties
- 10.3.9** WAC 173-400-250 ----- Appeals
- 10.3.10** 40 CFR 52 Subpart WW (52.2470-52.2498) ----- Washington SIP Approval

10.4 The following requirements were listed as applicable to the source in the AOP Renewal application, but have been determined to be inapplicable by Ecology.

- 10.4.1** WAC 173-400-099 Registration – AOP sources are exempt from registration per WAC 173-400-101(7), this exemption would fail should the source’s AOP status change.
- 10.4.2** WAC 173-400-101 Registration Issuance – AOP sources are exempt from registration per WAC 173-400-101(7), this exemption would fail should the source’s AOP status change.
- 10.4.3** WAC 173-400-102 Scope of registration and reporting requirements – AOP sources are exempt from registration per WAC 173-400-101(7), this exemption would fail should the source’s AOP status change.
- 10.4.4** WAC 173-400-103 Emission estimates – AOP sources are exempt from registration per WAC 173-400-101(7), this exemption would fail should the source’s AOP status change.
- 10.4.5** WAC 173-400-104 Registration fees – AOP sources are exempt from registration per WAC 173-400-101(7), this exemption would fail should the source’s AOP status change.
- 10.4.6** WAC 173-400-105(5)(d) Continuous opacity monitors required for hogged fuel boilers with a steam generation capacity over 100 MMBtu/hr – The hogged fuel boiler operated by the permittee has a steam production capacity of 40,000 lb/hr

(as reported in the AOP Renewal Application). An Ecology inspection performed on February 2, 2000 recorded the pressure of the steam produced by the boiler as 129 pounds per square inch (psi). This pressure is assumed to be gage pressure. Using the saturated steam pressure tables included in Cameron's Hydraulic Data handbook published by Ingersoll-Rand Company, the heating value of steam at 145 psi (absolute, 129 gage + 14.7 atmospheric) is 1193.5 Btu/lb. This works out to a steam production capacity of 47.74 MMBtu/hr, which is significantly below the 100 MMBtu/hr trigger necessary for WAC 173-400-105(5)(d) to be applicable.

- 10.4.7** WAC 173-400-112 Requirements for new sources in nonattainment areas – Source is not currently located in a nonattainment area.
- 10.4.8** WAC 173-400-120 Bubble rules – Source is not currently utilizing the option provided by these rules. This requirement will become applicable upon the permittee's request to utilize the provisions provided by bubble rules.
- 10.4.9** WAC 173-400-131 Issuance of emission reduction credits – The permittee is not currently utilizing the option provided by these rules. This requirement will become applicable upon the permittee's request for emission reduction credit.
- 10.4.10** WAC 173-400-136 Use of emission reduction credits – The permittee is not currently utilizing the option provided by these rules. This requirement will become applicable upon the permittee's request for emission reduction credit.
- 10.4.11** WAC 173-400-180 Variance – The permittee is not currently utilizing the option provided by these rules. This requirement will become applicable upon request for a variance by the permittee.
- 10.4.12** WAC 173-400-190 Requirements for nonattainment areas – Source is not located in a nonattainment area.
- 10.4.13** 40 CFR 52.21(b-w) Prevention of Significant Deterioration of Air Quality – The permittee is not currently subject to PSD.
- 10.5** The following requirements were listed as inapplicable by the source, but have been found to be applicable by Ecology.
- 10.5.1** WAC 173-400-115 Standards of performance for new sources – Since some sections of 40 CFR 60 (Standards of Performance for New Sources, 40 CFR 60.7(a), (b), (f), 60.8, 60.11(d), 60.48c(g), (i)) do apply to the permittee, this Washington State regulation, which incorporates 40 CFR 60 by reference, is applicable to the permittee for those specific sections of 40 CFR 60 which apply.
- 10.5.2** WAC 173-425 Outdoor Burning – General limitations on outdoor burning apply state wide.

- 10.5.3** Order No. DE92AQ-E145 Condition 7.2
Opacity Readings – Ecology has the right to conduct Method 9 opacity readings at any time.
- 10.5.4** Order No. DE92AQ-E145, Condition 8.4
Approval void if operations discontinued – This is an ongoing requirement
- 10.5.5** Order No. DE93AQ-E113, 1st Amendment, Condition 8.4
Approval void if operations discontinued – This is an ongoing requirement
- 10.5.6** Order No. 00AQER-1615, 2nd Amendment, Condition 1
Report modifications to baghouse – This is an ongoing requirement.
- 10.5.7** Order No. 00AQER-1615, 2nd Amendment, Condition 9.6
Activities inconsistent with the approval order – This requires the source to maintain ongoing compliance with permit conditions.
- 10.6** The permittee included in their application a list of requirements for which they requested Ecology to determine inapplicability and grant the permit shield to the Arden sawmill. Except for the requirements listed in section 4 of the AOP, Ecology has not included any of the other requirements in the permit either as applicable or inapplicable. The intent of the permit shield is to address situations where there is a question of applicability. The requirements in section 4 of the AOP are good examples of requirements that reasonably might apply and for which an inapplicability determination is both useful and appropriate to document for the public record. Other requirements listed in the application either don't meet the definition of applicable requirement because they are requirements on Ecology, EPA, or a local regulatory agency rather than on the source or because they are obviously not relevant to the operations of a lumber mill. Including this long list in the permit as inapplicable would serve no purpose and could make it difficult for the public, EPA, and even the permittee to identify and evaluate those few standards which could truly be in question. Instead, each submitted requirement has been included below, with a brief explanation of it's inapplicability to the permittee.
- 10.6.1** 40 CFR 61 Emission Standards for Hazardous Air Pollutants – The Arden facility is not a major source of hazardous air pollutants
- 10.6.2** 40 CFR 63 National Emission Standards for Hazardous Air Pollutants for Source Categories – The Arden facility is not a major source of hazardous air pollutants.
- 10.6.3** 40 CFR 82 Protection of Stratospheric Ozone – The majority of the requirements included in this part do not apply to the permittee. However, subparts E (Labeling of Products using Ozone Depleting Substances) and F (Recycling and Emissions Reduction) apply generally nationwide.
- 10.6.4** WAC 173-260 Ecology Board Member Conflict of Interest Requirements – This regulation inherently does not apply to this source
- 10.6.5** WAC 173-400-050(2) Incineration units standards – Facility does not operate an incinerator.

- | | | |
|----------------|-----------------|---|
| 10.6.6 | WAC 173-400-075 | <u>Emission Standards for Sources Emitting Hazardous Air Pollutants</u> – The source does not emit significant amounts of any hazardous air pollutant. |
| 10.6.7 | WAC 173-400-100 | <u>Source Registration Program</u> – AOP sources are exempt from registration (WAC 173-400-101(7)). |
| 10.6.8 | WAC 173-400-151 | <u>Retrofit Requirements for Visibility Protection</u> – The facility is not an “existing stationary facility”. |
| 10.6.9 | WAC 173-400-220 | <u>Ecology Board Member Salary Derivation Requirements</u> – This regulation inherently does not apply to this source. |
| 10.6.10 | WAC 173-405 | <u>Kraft Pulping mills</u> – The permittee is not in this source category. |
| 10.6.11 | WAC 173-410 | <u>Sulfite Pulping mills</u> – The permittee is not in this source category. |
| 10.6.12 | WAC 173-415 | <u>Primary Aluminum plants</u> – The permittee is not in this source category. |
| 10.6.13 | WAC 173-420 | <u>Conformity of Transportation Plans with SIP</u> – This regulation inherently does not apply to this source. |
| 10.6.14 | WAC173-421 | <u>Motor Vehicle Emission Control Systems</u> – This regulation inherently does not apply to this source. |
| 10.6.15 | WAC 173-422 | <u>Motor Vehicle Emission Inspection</u> – This regulation inherently does not apply to this source. |
| 10.6.16 | WAC 173-430 | <u>Agricultural Burning</u> – The permittee does not perform agricultural activities. |
| 10.6.17 | WAC 173-434 | <u>Solid Waste Incineration</u> – The permittee is not in this source category. |
| 10.6.18 | WAC 173-435 | <u>Emergency Episode Plans</u> – The permittee is not currently required to take any action under this regulation. |
| 10.6.19 | WAC 173-450 | <u>Financial Aid to authorities</u> – This regulation inherently does not apply to this source. |
| 10.6.20 | WAC 173-470 | <u>Ambient Air Quality Standards for Particulate Matter</u> - The permittee is not currently required to take any action under this regulation. |
| 10.6.21 | WAC 173-474 | <u>Ambient Air Quality Standards for Sulfur Oxides</u> - The permittee is not currently required to take any action under this regulation. |
| 10.6.22 | WAC 173-475 | <u>Ambient Air Quality Standards for Carbon Monoxide, Ozone, and Nitrogen Dioxide</u> - The permittee is not currently required to take any action under this regulation. |
| 10.6.23 | WAC 173-480 | <u>Ambient Air Quality Standards and Emission Limits for Radionuclides</u> - The permittee is not currently required to take any action under this regulation. |

10.6.24	WAC 173-481	<u>Ambient Air Quality and Environmental Standards for Fluorides</u> - The permittee is not currently required to take any action under this regulation.
10.6.25	WAC 173-490	<u>Emission Standards and Controls for Sources Emitting VOC's</u> - The permittee is not located in an ozone nonattainment area or included in the WAC 173-490-030 listing.
10.6.26	WAC 173-491	<u>Emissions Standards and Controls for sources emitting gasoline vapors</u> – The permittee does not operate any gasoline marketing operations.
10.6.27	WAC 173-492	<u>Motor fuel specifications for oxygenated gasoline</u> – The permittee does not blend or sell gasoline.
10.6.28	WAC 173-495	<u>Weather Control</u> – The permittee does not operate any weather controlling equipment.
10.6.29	WAC 246-247	<u>DOH: Radioactive Air Emissions</u> - The permittee is not currently required to take any action under this regulation.

11.0 Monitoring, Recordkeeping, and Reporting Requirement (MRRR) Sufficiency Explanations – The following section provides brief discussions regarding the reasoning behind the MRRR's included as part of the AOP. The criteria is that each MRRR must be sufficient to assure compliance with the associated condition, emission standard or work practice.

- 11.1 MRRR 1M** – No specific monitoring can reasonably be required for these requirements. The nature of the requirements makes it necessary to rely on the good faith of the permittee to conscientiously monitor site operations and to promptly report any deviations.
- 11.2 MRRR 2M** – This monitoring is used for conditions that require the source to maintain a certain status quo (e.g., O&M manual accessible to employees in operation of the equipment; maintaining replacement parts for routine repairs to monitoring equipment). To assure compliance with these provisions, the permittee is simply required to check that there has been no change in the status quo. Since such a change is unlikely, an annual inspection was deemed adequate.
- 11.3 MRRR 3M** – This MRRR was designed to provide sufficient response to complaints regarding facility emissions affecting the landowners neighboring or in the affected vicinity of the facility. Timeframes were chosen to provide the permittee with adequate time to respond appropriately as well as ensuring that complaints not go unnoticed.
- 11.4 MRRR 4M** – A monthly visible emission observation is considered to be sufficient monitoring for general process units with regard to the opacity standard. The specifics of the monitoring described have been designed to provide relatively frequent evaluation of each potential emission point, while requiring visible emission testing using EPA RM 9 only when visible emissions are observed. The monitoring was designed with the goal of providing the permittee with sufficient opportunity to respond to upsets appropriately while at the same time avoiding significant, prolonged environmental degradation. With regard to the use of visible emission evaluation surveys as a monitoring technique related to particulate matter standards, the method was chosen due to the fact that most of the general process units to which this is applicable are not large enough to justify performance testing using EPA RM's 5 and/or 202. Visible emission

observations provide a convenient alternative method to source testing for the purpose of evaluating the performance of such units.

- 11.5 **MRRR 5M** – The monitoring has been designed to require periodic reviews of Operation and Maintenance manuals, the Ash Handling and Disposal Plan, and the original Notice of Construction application materials in order to evaluate whether current operational practices are being conducted in a manner consistent with the information upon which permitting has been based. The recordkeeping and reporting required ensure that practices which are not consistent with the submitted information will be addressed in a timely manner.
- 11.6 **MRRR 6M** – The monitoring has been designed to require periodic walk-around surveys as the most simple and direct method to determine the presence of such emissions. These surveys, in conjunction with a good faith effort on the part of the permittee to operate in accordance with the conditions of the AOP, are considered sufficient monitoring.
- 11.7 **MRRR 7M** – The monitoring as specified has been designed based on the condition that all associated equipment is maintained in proper working condition. Using emission factors in conjunction with operational parameters is a feasible method of estimating emissions from an emission unit for which performance testing may not be feasible. The monitoring was designed with the goal of providing the permittee with sufficient opportunity to respond to upsets appropriately while at the same time avoiding significant environmental degradation.
- 11.8 **MRRR 8M** – This monitoring has been specified to include the estimation of emissions based on the use of emission factors, as described in 11.7 above. In addition, periodic source testing has been added to the monitoring due to the size of the emission unit and the increased importance of nitrogen oxide emissions from natural gas fired boilers in relation to emissions of other pollutants.
- 11.9 **MRRR 9M** – This monitoring has been specified to include the estimation of emissions based on the use of emission factors as described above. In addition, periodic source testing has been added to the monitoring due to the size of the emission unit.
- 11.10 **MRRR 10M** – This monitoring has been specified to apply generally to units subject to Compliance Assurance Monitoring (CAM). The monitoring is included specifically as required by 40 CFR 64.
- 11.11 **MRRR 11M** – A Continuous Opacity Monitor provides real time opacity information. The monitor must be calibrated and maintained in accordance with the quality assurance procedures in order to ensure that the data produced is valid. Because of its nature, this type of monitoring is sufficient.
- 11.12 **MRRR 12M** – Because the MRRR enables direct comparison between records and the operational limits, it is considered to be sufficient.
- 11.13 **MRRR 13M** – The required response time and information required to be submitted as part of the reporting are in accordance with the permit condition and include the necessary information.
- 11.14 **MRRR 14M** – The recordkeeping information required is considered to be sufficient.
- 11.15 **MRRR 15M** – The monitoring described is specifically applicable to the hogged fuel boiler for the purposes of Compliance Assurance Monitoring (CAM). Compliance Assurance Monitoring must be designed to provide reasonable assurance of compliance with emission limitations or standards for the pollutant specific emission unit. In order for a pollutant specific emission unit (PSEU) to be subject to CAM, the three (3) conditions described below must be met. The manner in which they are met by the hogged fuel boiler is discussed below.

- 11.15.1** The PSEU must be subject to an emission limit for the applicable pollutant. In the case of the hogged fuel boiler, the PSEU is subject to multiple emission limits specific to particulate matter. These applicable requirements are included in Section 2.2 Hogged Fuel Boiler of the AOP.
- 11.15.2** The PSEU must utilize air pollution control equipment to reduce emissions of the applicable pollutant to a level that meets the established emission limit(s). In the case of the hogged fuel boiler, the particulate emissions of the PSEU are controlled by a multiple cyclone and a dry electrostatic precipitator (ESP).
- 11.15.3** The PSEU must have pre-controlled emissions of the specific pollutant that meet or exceed the major source thresholds established in WAC 173-401-200(17). In the case of the hogged fuel boiler, the pre-controlled emissions of particulate matter have been calculated to be 3750 tons per year (tpy). This exceeds the major source threshold of 100 tpy established in WAC 173-401-200(17).

The proposed CAM monitoring has been designed to rely on electrostatic precipitator (ESP) secondary voltage. Through published information and consultation with the ESP manufacturer, secondary voltage was identified as the primary indicator of ESP particulate matter removal efficiency. The particular trigger limits were set based on data obtained during the most recent source test as well as manufacturer advice and engineering judgment. Specifically, the trigger limits were proposed by the manufacturer as sufficient to ensure that the ESP is operating at design efficiency. These proposed trigger limits were evaluated with respect to the values recorded during source testing and the values recorded by the source over the past few years. It was generally agreed that the trigger limits proposed by the manufacturer were sufficient to ensure high efficiency ESP performance.

- 11.16** MRRR 16M – Because the MRRR enables direct comparison between records and the operational limits, it is considered to be sufficient.
- 11.17** MRRR 17M – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the requirement to keep the O&M manual for the natural gas boiler updated.
- 11.18** MRRR 18M – The monitoring is included specifically as required by 40 CFR 60.
- 11.19** MRRR 19M – This MRRR establishes the minimum monitoring, recordkeeping and reporting information necessary for reasonable assurance of compliance with the appropriate requirements applicable to the baghouses.
- 11.20** MRRR 20M – This MRRR establishes the minimum recordkeeping information necessary for reasonable assurance of compliance with the requirement to keep the O&M manual(s) for the baghouses updated.
- 11.21** MRRR 21M – The monitoring described is specifically applicable to the wood waste conveyance and transport system control devices (two baghouses and the chip surge bin cyclone) for the purposes of Compliance Assurance Monitoring (CAM). Compliance Assurance Monitoring must be designed to provide reasonable assurance of compliance with emission limitations or standards for the pollutant specific emission unit. In order for a pollutant specific emission unit (PSEU) to be subject to CAM, the three (3) conditions described below must be met. The manner in which they are met by the wood waste conveyance and transport system is discussed below.
 - 11.21.1** The PSEU must be subject to an emission limit for the applicable pollutant. In the case of the wood waste system, each PSEU that is part of the system is subject to the

WAC 173-400-060, which limits particulate matter emissions to 0.1 gr/dscf. In addition, the baghouses are subject to a particulate matter emission rate of 0.010 gr/dscf. These applicable requirements are included in Section 2.6 Planer and Truck Bin Baghouses and Section 2.7 Cyclone #8, Chip Surge Bin of the AOP.

- 11.21.2** The PSEU must utilize air pollution control equipment to reduce emissions of the applicable pollutant to a level that meets the emission limit(s). In the case of the wood waste system, the particulate emissions from each PSEU that is part of the system are controlled by cyclone #8 and/or the baghouses.
- 11.21.3** The PSEU must have pre-controlled emissions of the specific pollutant that meet or exceed the major source thresholds established in WAC 173-401-200(17). In the case of the PSEU's that make up the wood waste system, the pre-controlled emissions of particulate matter have been calculated to be 14400 tons per year (tpy), which exceeds the major source threshold of 100 tpy established in WAC 173-401-200(17). This is the pre-controlled emissions as estimated from the combined operation of several PSEU's that are part of the wood waste system. As part of the permitting process, the permittee elected not to pursue pre-controlled emissions estimations for each PSEU that is controlled as part of the wood waste system. Due to the fact that pre-controlled emission information was not available for each PSEU, CAM has been determined to be applicable to the system as a whole, since it has not been shown to be inapplicable to each individual PSEU that is part of the system.

The proposed CAM monitoring has been designed to rely solely on visible emission observations. Observation to determine the presence of visible emissions is justified due to the fact that none of the facility processes whose emissions are controlled by the baghouses or cyclone involves combustion (emissions from combustion can exhibit stack opacity caused by incomplete combustion, soot, or sulfur oxides). Due to this fact, it can be assumed that any opacity observed at the emission points of the baghouses or cyclone is due solely to the presence of particulate matter.

12.0 Streamlining Explanations

- 12.1** WAC 173-400-050(1), (3) – Emissions of particulate matter from the hogged fuel boiler – This section of the WAC applies to the hogged fuel boiler by limiting emissions of particulate matter to 0.2 grains per dry standard cubic foot corrected to seven percent oxygen. This applicable requirement has not been included in the AOP due to the fact that Order No. DE93AQ-E113 1st Amendment includes a condition (Approval Condition 2.1) that limits particulate matter emissions from the hogged fuel boiler to 0.030 grains per dry standard cubic foot corrected to seven percent oxygen. Since the condition included in the NOC order is clearly more stringent and is expressed in the same units as WAC 173-400-050(1), (3), it is appropriate to apply streamlining to this requirement.
- 12.2** WAC 173-400-070(2)(a) – Opacity from the hogged fuel boiler – This section of the WAC applies to the hogged fuel boiler by limiting opacity to twenty percent (20%) except for fifteen (15) minutes every eight (8) hours to allow for soot blowing and grate cleaning. This applicable requirement has not been included in the AOP due to the fact that Order No. DE93AQ-E113 1st Amendment includes conditions (Approval Conditions 2.2 and 2.3) that limit opacity to ten percent (10%) and do not include an exception for soot blowing or grate cleaning. Since the conditions included in the NOC order are clearly more stringent than the standard included in this section of the WAC, it is appropriate to apply streamlining to this requirement.

- 12.3** WAC 173-400-050(1), (3) – Emissions of particulate matter from the natural gas boiler – This section of the WAC applies to the hogged fuel boiler by limiting emissions of particulate matter to 0.1 grains per dry standard cubic foot corrected to seven percent oxygen. This applicable requirement has not been included in the AOP due to the fact that Order No. DE92AQ-E145, 1st and 2nd Amendments includes a condition (Approval Condition 2.3) that limits particulate matter emissions from the natural gas boiler to 0.01 grains per dry standard cubic foot corrected to seven percent oxygen. Since the condition included in the NOC order is clearly more stringent and is expressed in the same units as WAC 173-400-050(1), (3), it is appropriate to apply streamlining to this requirement.
- 12.4** WAC 173-400-040(6) – Emissions of sulfur dioxide from the natural gas boiler – This section of the WAC applies to the hogged fuel boiler by limiting emissions of sulfur dioxide to 1000 ppm corrected to seven percent oxygen and based on an average of any sixty consecutive minutes. This applicable requirement has not been included in the AOP due to the fact that Order No. DE92AQ-E145 1st and 2nd Amendments includes a condition (Approval Condition 2.2) that limits sulfur dioxide to 1 ppm corrected to seven percent oxygen and based on an average of any sixty consecutive minutes. (It is important to point out that in this case, the oxygen content and averaging period have been added to the NOC requirement under the authority of 173-401-630(1) as gapfilling.) Since the condition included in the NOC order is clearly more stringent and is expressed in the same units and averaging times as WAC 173-400-040(6), it is appropriate to apply streamlining to this requirement.

13.0 Clarifications and Interpretations

- 13.1** Section 1 - Standard Conditions – For permit conditions required by Washington State regulations that have been included in the SIP, two dates are given. The first date is the date for the regulation that was adopted into the SIP. The second date is for the most up-to-date version of the regulation. State-only enforceable permit conditions are identified with the symbol (S).
- 13.2** Recordkeeping retention time – Two of the NOC permits that apply to Stimson Lumber (Order No. DE92AQ-E145 1st and 2nd Amendments and Order No. DE93AQ-E113 1st Amendment) include conditions which require applicable recordkeeping/reporting to be maintained for a period of two years. However, Standard Condition 1.27.3 of the AOP requires that the permittee retain all records or information of this type for a period of at least five (5) years. Due to the fact that the five (5) year requirement included in the standard condition is more stringent, this is the requirement that has been included in the appropriate MRRR's. However, the conditions included in the NOC permits still apply to the permittee and therefore have been included in the AOP under the column labeled Condition, Emission Standard, or Work Practice. The specific NOC conditions that this applies to are listed below.
- 13.2.1** Order No. DE92AQ-E145 1st and 2nd Amendments – Approval Condition(s) 1, 6, and 7.4
- 13.2.2** Order No. DE93AQ-E113 1st Amendment – Approval Condition(s) 1, 5.1, 6, and 7.3
- 13.3** WAC 173-401-620(1) – Acid Rain Provisions. The permittee is not an affected source as specified in the referenced section of the WAC. Due to this, no permit conditions relating to the acid rain provisions of the FCAA have been included in the AOP.
- 13.4** WAC 173-401-510(2)(h)(i) – Compliance Plan. At the time of permit issuance, no ongoing applicable requirements have been identified with which the permittee is not currently in compliance. However, this does not preclude Ecology from taking future action on past non-compliance.

- 13.5** Chapter 173-425 WAC, Open Burning – The requirements restricting open burning in the State of Washington apply to the source, and therefore Chapter 173-425 has been included as an applicable requirement under Section 2.1 Facility Wide Requirements. However, both Order No. DE92AQ-E145 1st and 2nd Amendments and Order No. DE93AQ-E113 1st Amendment include permit conditions that prohibit open burning on the facility site. The purpose of this statement is to clarify that while Chapter 173-425 WAC does apply to the permittee, the specific conditions in the Orders cited are more restrictive and thus take precedence over Chapter 173-425 WAC.
- 13.6** 40 CFR 60, Subpart Dc, Natural Gas Fired Boiler – A requirement in the Natural Gas Fired Boiler Order Number DE 92AQ-E145 1st and 2nd Amendments, states that the project shall comply with all requirements of 40 CFR 60, Subpart Dc. There are only two requirements in Subpart Dc that apply, 60.48c(g) which requires recording and maintaining records of amount of fuel used each day and 60.48c(i), which requires records to be kept for two years following the date of such record. The five-year recordkeeping requirement included in Standard Condition 1.27 of this AOP takes precedence over the two-year requirement.
- 13.7** Notice of Violation No. DE96AQ-E141 – On November 25, 1996, Stimson Lumber Company was issued Notice of Violation No. DE 96AQ-E141 for the Wood Waste Boiler opacity violations. Follow-up actions by Stimson Lumber Company included a compliance plan and schedule. All required actions have been completed and do not represent ongoing requirements. No changes to the AOP were made.
- 13.8** Ecology Approved Emission Factors – Some of the MRRR’s in the AOP require emissions calculations to be performed using emission factors that have been approved by Ecology. The determination as to whether emission factors are approvable is made in accordance with the guidance found in WAC 173-400-103(1), specifically that each emission factor must be a “published, verifiable emission factor that is applicable to the source.” With regards to the emission factors utilized by the permittee, the emission factors included in the AOP renewal application have been found to be Ecology approvable with the exception of emission factors obtained from NCASI with regard to emissions of TAP’s from the boilers. However, this does not preclude Ecology from requiring a modification in emission factors used as better information becomes available.
- 13.9** Condition 2.1.1 of AOP, Visible Emissions – WAC 173-400-040(1), (1)(a), and (1)(b) restrict visible emissions from all sources of air emissions throughout the source to 20% opacity for no longer than three (3) minutes in any one hour. While it is clear from the time periods contained within the regulation that Ecology Method 9A (“Source Test Manual – Procedures for Compliance Testing”, State of Washington, Department of Ecology, 07/12/90) was the test method intended to be used to verify compliance, this permit has specified EPA Reference Method 9 as the test method utilized as part of MRRR **4M**. Ecology has determined that reasonable assurance of compliance with the regulation may be obtained by conducting RM 9 upon observance of visible emissions, as specified within **4M**.

14.0 Appendix A – Site Plan of Stimson Lumber, Arden Operation

15.0 Appendix B – Process Flow and Site Layout Diagrams

- 15.1** General Process Flow Diagram
- 15.2** Sawmill Process Flow Diagram
- 15.3** Planer Process Flow Diagram