United States Environmental Protection Agency
Region 10
Office of Air, Waste and Toxics
1200 Sixth Avenue
Seattle, Washington 98101

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Statement of Basis
Title V Air Quality Operating Permit

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Warm Springs Forest Products Industries

Warm Springs Reservation
Warm Springs, Oregon

1 Purpose of Permit and Statement of Basis

Title 40 Code of Federal Regulations Part 71 establishes a comprehensive air operating permit program under the authority of Title V of the 1990 amendments to the federal Clean Air Act. The air operating permit is an enforceable compilation of all of the applicable air pollution requirements that apply to an existing affected air emissions source. The permit is developed via a public process, may contain additional new requirements to improve monitoring of existing requirements, and contains procedural and prohibitory requirements related to the permit program itself. The permit is valid for 5 years and may be renewed.

This document, the Statement of Basis, summarizes the legal and factual basis for the permit conditions in the draft air operating permit to be issued to Warm Springs Forest Products Industries (referred to herein as WSFP, facility, source, or permittee). Unlike the air operating permit, this document is not legally enforceable. This statement of basis summarizes the emitting processes at the facility, air emissions, permitting and compliance history, the statutory or regulatory provisions that relate to the subject facility, and the steps taken to provide opportunities for public review of the permit. The permittee is obligated to follow the terms of the permit. Any errors or omissions in the summaries provided here do not excuse the permittee from the requirements of the permit.

2 EPA Authority to Issue Title V Permits

On July 1, 1996 (61 FR 34202), EPA adopted regulations codified at 40 CFR Part 71 setting forth the procedures and terms under which the Agency would administer a federal operating permit program. These regulations were updated on February 19, 1999 (64 FR 8247) to incorporate EPA's approach for issuing federal operating permits to covered stationary sources in Indian Country.

As described in 40 CFR 71.4(b), EPA will implement a Part 71 program in areas where a state, local, or Tribal agency has not developed an approved Part 70 program. Unlike states, Indian Tribes are not required to develop operating permit programs, though EPA encourages Tribes to do so. See, for example, Indian Tribes: Air Quality Planning and Management (63 FR 7253, February 12, 1998) (also known as the "Tribal Authority Rule"). Therefore, within Indian Country, EPA will administer and enforce a Part 71 federal operating permits program for stationary sources until Indian Tribes receive approval to administer their own operating permit programs.

3 The Confederated Tribes of the Warm Springs Reservation of Oregon

The Warm Springs Forest Products Industries facility is located on the Warm Springs Reservation located in north central Oregon. The reservation was established by the Treaty of June 25, 1855 (12 Stat. 963), by which the Confederated Tribes of the Warm Springs Reservation of Oregon ceded to the United States their aboriginal title to approximately 10 million acres in north-central Oregon and reserved for their own use forever the Warm Springs Reservation. The reservation is considered to be Indian Country, as defined in 40 CFR Part 71.

The Confederated Tribes of the Warm Springs Reservation of Oregon (Tribes) is a federally recognized Indian Tribe having a Constitution and By-laws and federal Corporate Charter adopted pursuant to the Indian Reorganization Act of 1934. The Reservation is governed by an eleven-member Tribal Council consisting of the hereditary Chiefs of the three tribes comprising the Confederated Tribes and eight members elected from the three districts on the reservation, which represent traditional tribal areas.

4 Facility Information

4.1 Location

The WSFP facility is a business enterprise and operating division of the Tribes, and is located on the east side of Warm Springs, Oregon on the Warm Springs Reservation, bounded by Highway 26, the Deschutes River and Shitike Creek.

4.2 Local Air Quality and Attainment Status

Central Oregon, including the Warm Springs Reservation, either attains the national ambient air quality standard for all criteria pollutants or is unclassified. An area is unclassifiable when there is insufficient monitoring data. The only monitoring data for the Warm Springs Reservation is based on PM10 and PM2.5 monitors which are operated nearby in Bend, Oregon. Data from these monitors indicates both daily and annual averages generally well below the standards for particulate. The Tribe recently began operating a PM2.5 monitor.

4.3 General Description of Operations and Products

The primary operation at the facility is the production of dimensional lumber from raw logs. The facility also manufactures green timber beams. The Warm Springs Forest Products facility has debarkers and saws, kilns for drying lumber, a planer, an emergency generator, and hog fuel fired boilers to supply steam to the kilns. The site comprises 34 acres and includes process areas, a log yard, shops, offices, open and covered storage, and warehouse areas. There are no chemical wood preservative or gluing operations. Logs are received and stored in the log yard. The process of cutting the logs into lumber includes debarking, sawing, chipping, kiln drying, planing, and packaging for shipping.

The byproducts of lumber manufacturing are sawdust, wood chips, planer shavings, and hog fuel. These byproducts may be burned in the hog fuel (wood-waste) boilers or stored in bins until the material is sold and transferred off-site..Two hog fuel boilers are used to provide steam for the drying of rough green lumber in the drying kilns; however, one boiler (PH 3) has not been operated for some years and is no longer considered an existing source. Two other hog fuel boilers provide steam to produce electricity in three steam turbine-powered 3-megawatt capacity generators. The electricity produced is primarily used on-site, but may be sold to the regional power grid. A 900 kWatt diesel-fired emergency generator is on-

site to provide electricity during power outages. A steam distillation experimental pilot plant is on-site to be used to explore the potential for WSFP to produce essential oils from waste forest materials.

At the time of permit issuance there are four wood fired boilers physically located on-site. Boiler #3 (PH 3) has not operated for some time. WSFP intends to permanently shut down the other three existing boilers (PH 1, 2 and 4) and construct a new wood-fired boiler (PH 5) during the term of this permit. This new boiler will provide steam to the kilns and to the steam turbine generating units. This permit contains requirements that apply to the new boiler.

WSFP has conducted a pilot project to recover essential oils from waste forest products utilizing a steam distillation unit. The distillation unit emits volatile organic compounds and uses steam from the WSFP power boilers. The pilot plant is on-site, but has not been operated over the last two years. The distillation unit was not included in the air operating permit application and is not authorized to operate by this permit. The operating permit must be revised to accommodate the unit before it can be operated in a production mode. Before restarting this operation, WSFP should conduct an applicability determination to determine if restarting the operation would be subject to review under the Prevention of Significant Deterioration (PSD) or other new source review program.

Another enterprise owned by the Tribes is co-located at the WSFP plant site. Warm Springs Composite Products (WSCP) manufactures "fireproof"-core (refractory) materials, fire-door components and door-jamb systems, and they perform pre-certification (fire) door testing. The manufacturing process at the WSCP facility is assigned to SIC code group 3272 (Concrete Products, Except Block and Brick) which is different than WSFP's 2421 primary SIC code. Although WSCP uses a fraction of the steam from the WSFP boilers, no other materials are transferred between the facilities. Because WSFP and WSCP have different SIC codes and are not in a support relationship, they are not considered a single source for 40 CFR part 52 PSD permitting purposes. Because, together they do not emit major source levels of hazardous air pollutants, the two operations are WSCP is not considered a single source for section 112 MACT or Title V permitting purposes. Finally, based on information available to EPA, WSCP is also not a major source under the Title V program in and of itself. This could change over time, however, if the relationship between the facilities changes.

4.4 Emission Units and Emission Generating Activities

Table 4-1 lists and describes the emission units and control devices (or techniques) at the facility. Those control devices that are required by rule or this permit are so noted. 40 CFR 71.5 (c)(11)(ii)(A) and (B) allow sources to separately list in the permit application such units or activities that qualify as "insignificant" (referred to as insignificant emission units (IEUs)). An emission unit or activity qualifies as an IEUs if it is in an identified source category or if its potential emissions are below two tons/year for all regulated pollutants that are not listed as hazardous air pollutants ("HAP") under Section 112(b) and below 1000 lbs/year or the de minimus level established under Section 112(g), whichever is lower, for HAPs. However, a Title V permit application may not omit information needed to determine the applicability of, or to impose, any applicable requirement, or to calculate the permit fee. In addition, activities or emission units that qualify as IEUs for the purpose of the Title V permit application are in no way exempt from applicable requirements or any requirements of the Title V permit.

Table 4-2 lists the units identified by WSFP in their permit application as qualifying as IEUs for permit application purposes. WSFP also listed the existing powerhouse boilers (PH 1-4) as insignificant emission units on the basis of low hazardous air pollutant emissions. This designation is not granted because the emissions inventory indicates that these boilers emit more than 1000 lbs of HAP each year.

Table 4-1 Emission Units (EU) & Control Devices

EU ID #	Emission Unit Description	Control Device*
PH 1	Boiler #1: Babcock & Wilcox Sterling 4-drum hog fuel-fired over feed stoker boiler; 60,000 lb/hr steam output capacity, 102 mmBtu/hr heat input capacity; manufactured 1927; installed 1976; dedicated to steam turbine generating units; will be permanently removed from service not later than six months after PH-5 commences operation.	None
PH 2	Boiler #2: Babcock & Wilcox Sterling 4-drum hog fuel-fired overfeed stoker boiler; 60,000 lb/hr steam output capacity, 102 mmBtu/hr heat input capacity; manufactured 1927; installed 1976; dedicated to steam turbine generating units; will be permanently removed from service not later than six months after PH-5 commences operation.	None
PH 3	Boiler #3: Wickers model WW HS 224 hog fuel-fired overfeed stoker boiler; 30,000 lb/hr steam output capacity, 50 mmBtu/hr heat input capacity; manufactured & installed 1948; supplies process steam; this boiler has not operated for some and so, while physically located at the mill, it is no longer considered an existing source.	None
PH 4	Boiler #4: Riley Type VO hog fuel-fired spreader stoker boiler; 60,000 lb/hr steam output capacity, 100 mmBtu/hr. heat input capacity; manufactured & installed 1973; supplies process steam; will be permanently removed from service not later than six months after PH-5 commences operation.	Zurn multiclone
PH 5	Wellons Boiler: Wellons hog fuel-fired fuel overfeed stoker boiler; 80,000 lb/hr steam output capacity, 131 mmBtu/hr heat input capacity; supplies process steam and steam turbine generating units; is planned to begin construction in 2005	Multiclone and electrostatic precipitator (required)
KLN	Lumber drying kilns: Indirectly heated; annual capacity = 138.298 mmbf or 15.37 mmbf per track; 5 single-track Nardy Kilns (installed 1997) and 2 double-track Wellons Kilns (installed 2000)	None
SM	Sawmill Operations: Sawing and debarking; annual capacity = 779,635 dry tons of logs	Primarily inside buildings
CON	Pneumatic conveyors for chips, shavings and sawdust: shavings cyclone 1, dry chip cyclone 2, green chip bin vent, 2 chip cyclones, saw dust cyclone, filing room exhaust, clean up cyclone	Scrubber and baghouse on the filing rooms' exhaust
MT	Mechanical material transfer operations: Saw dust bin, chip bin, shavings bin, sawdust conveyor, chip conveyor, chip metering bin, 3 bark conveyors, fuel chains, bark handling front loader, fuel dump	None
MP	Material storage piles: Hog fuel	None

EU ID #	Emission Unit Description	Control Device*
WE	Plant traffic: Fugitive emissions including forklifts and log trucks (paved and unpaved roads)	Watering
GEN	900 kW Caterpillar Diesel Generator Unit: emergency use only.	None
LY	Log Yard: Log handling and storage activities	Watering

* Control devices column includes all techniques used to control air pollution - required techniques or devices are noted.

Table 4-2 Insignificant Emission Units (IEU)

EU ID #	Emission Unit Description
IEU-1	18 Mobile sources
IEU-2	1 Air conditioning units
IEU-3	1 Heating units used for human comfort
IEU-4	Consumer use of office equipment and products
IEU-5	Janitorial services and consumer use of janitorial products
IEU-6	1 Internal combustion engine used for landscaping purposes
IEU-7	General facility maintenance

4.5 Permitting, Construction and Compliance History

The subject facility has been operating as a wood products facility since the 1940s. The Tribes purchased the Wilson Lumber Company facility in 1967 to form Warm Springs Forest Products Industries. At that time the facility consisted of a two sawmills, a stud mill, plywood mill (veneer peeler, dryers, and presses), and two steam turbines for electricity generation. In the early 1970s the company purchased and installed an electricity generating system composed of three 3-megawatt-capacity steam turbines and two power boilers (#3 & #4) and decommissioned two existing steam turbines.

A Coe veneer dryer was installed in 1983. In 1989 the existing stud mill was shut down. In 1990 a small-log mill was constructed. In 1991 the existing plywood mill was shutdown and in 1992 the existing large-log mill was shutdown. In 1997, five Nardy single track lumber drying kilns were installed and six existing kilns were torn down. In 1998 the small log mill was modified to allow milling of large logs (up to 3 feet diameter logs). In 2000 the company installed two Wellons double track lumber drying kilns. As described above, the current facility consists of one sawmill, seven drying kilns, three steam turbines, and four power boilers (one of which no longer operates). There are no records in EPA files indicating that any applicability determinations were made by EPA or any other permitting authority for the projects described above. EPA has not drawn any conclusions regarding compliance with past permitting requirements at this facility and no enforcement shield is implied or granted.

WSFP submitted a Title V permit application to EPA on March 22, 2000. WSFP submitted additional information between August 2003 and November 2004. By letter dated January 9, 2004, WSFP submitted to EPA a PSD netting analysis for its proposed installation of a new Wellons 80,000 lb/hr steam boiler and the decommissioning of the existing power boilers and requested a PSD applicability

determination from EPA. WSFP's analysis showed that, by shutting down the three remaining existing power boilers, construction of the proposed Wellons boiler could "net out" of PSD review. WSFP supplemented the PSD information between January and August, 2004. By letter dated September 29, 2004, EPA agreed that construction of the Wellons boiler would not be subject to PSD so long as the WSFP facility was subject to enforceable requirements regarding the permanent shutdown of the boilers. To make the netting assumptions enforceable, WSFP has requested that the necessary requirements be established in the Title V permit. As explained in Section 6 of this document, the permit contains provisions that limit emissions from the WSFP facility so as to allow construction and operation of the new Wellons boiler without obtaining a PSD permit.

EPA records indicate periodic facility inspections performed by EPA staff. There is no record of any violations issued to WSFP by EPA. There are no existing PSD permits issued to WSFP.

5 Emission Inventories and Fee Payment

5.1 Emission Inventory Basics

Emission inventories serve several important functions in connection with issuance of Title V permits, including determining the applicability of regulatory requirements and calculating fees. This section explains the role of emission inventories in issuing Title V permits and how emission inventories are developed.

An emission inventory is an accounting of the air pollution emitted by a source, and can be presented as either the "actual" or "potential" emissions from the source. Actual emissions are generally based on actual operation and controls and represent a specific period of time. Potential emissions, referred to as potential to emit (PTE), generally represent the maximum capacity of a source to emit a pollutant under its physical and operational design, taking into consideration regulatory restrictions and required control devices. Regulatory programs often dictate which type of inventory is used for applicability and fee purposes, specifying which time periods, pollutants and operations must be considered.

Emissions caused by industrial facilities can be broken into two categories: point and fugitive. Fugitive emissions are those which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. Point sources of emissions include any emissions that are not fugitive. Examples of fugitive emissions are roads, piles that are not normally enclosed, wind blown dust from open areas, and those operations that are normally performed outside buildings.

Title V requires all major sources of air pollution, and some minor sources, to get operating permits. Whether a source is major for Title V is based on the PTE of the source. Only point source emissions (not fugitive) are included in the PTE under the Title V program unless the source belongs to a particular category of sources and except in the case of hazardous air pollutants (HAPs) (see "major source" in 40 CFR 70.2). See Section 5.3 for a discussion of WSFP's PTE. Title V requires sources to submit fees with their initial Title V application and annually thereafter. The amount of the fee is based on actual emissions and includes consideration of point and fugitive emissions. See Section 5.4 for a discussion of fee payments.

EPA's PSD program is a pre-construction permitting program. PTE is also used to determine the applicability of the PSD program and fugitive emissions are including in determining the PTE of a source only for certain types of sources (same categories as Title V). See Sections 4.4 and 6.4 for additional discussion of the PSD program as it relates to WSFP.

Under Section 112 of the Act, EPA has promulgated Maximum Achievable Control Technology (MACT) regulations that establish a number of requirements for certain categories of industrial sources that emit HAPs. PTE is also used to determine the applicability of MACT standards to a facility, but under Section 112, PTE includes only HAPs and counts all fugitive emissions. For more information on the MACT standards which may apply to WSFP, see section 6.3. The applicability of other requirements to a facility may also depend on the facility's actual emissions or PTE.

Emission estimates in emission inventories rely on information gained about the emission unit in question, or about other similar emission units, through emission testing or monitoring. There are various ways to gather the information needed to develop emission factors. The more similar the tested or monitored source is to the one in question (actual tests or monitoring on the source itself is obviously the best information one can obtain), the more accurate the information is for estimating emissions. In order of preference, starting with the best, the following types of information is used to develop "emission factors" which predict the amount of pollution that may be caused by a given amount of operation (e.g. production, firing rate, operating time) and are often presented in terms of mass of emission per unit production, operation or time (e.g. lb per mlb steam produced, lb per msf of panel produced, lb per ton of material handled, and etc): continuous emission monitoring data; emission tests; mass balances; factors developed for similar sources; general emission factors; and engineering judgment. Emission factors have been published by EPA, and a number of other organizations, and are generally meant to be industry averages. Site-specific testing and development of emission factors is particularly important when emission control devices are utilized. Future testing at WSFP will provide information to develop site-specific emissions factors which will replace some "average" values currently used the emission inventory.

In any event, emission factors can only estimate emissions. For applicability and compliance purposes, it is the responsibility of the source to accurately characterize and estimate their emissions and appropriately select and use emission factors. Inaccurate characterization or estimation of the source's emissions could result in an enforcement action.

Air pollutants must be carefully defined in emission inventories, because the testing that is used as a basis for a particular emission factor may not have distinguished various forms of pollutants and chemicals. For instance, fine particulate matter (PM10 - particulate that is 10 microns or less in aerodynamic size) is not always a subset of particulate matter (PM - generally includes particulate in the 35 to 70 micron size range), because PM10 and PM are measured using different techniques. The measurement (test method) of PM10 includes condensable particulate matter (those particulates which are often gaseous in stacks but condense and react to become particulate matter which is measured in ambient air monitors some distance away from the stack and source), while the measurement of PM does not. In some cases, PM10 is a fraction of the PM, while in other cases, the PM10 emissions may be greater than the PM emissions. While the measurement techniques for lead can vary as well, the accounting of lead is complicated by the fact that it is both a "criteria pollutant" and a HAP. Some, but not all, VOC are also HAP, but not all volatile HAP are counted as VOC, due to their limited reactivity in the atmosphere. Likewise, many HAP are in the form of particulate and counted as such in a PM or PM10 measurement. Therefore, while it is important to estimate all of the pollutants as accurately as possible, individual emission estimates, particularly for PM, PM10, HAP, lead and VOC, should be understood and carefully reviewed to avoid double counting the emissions for fee purposes. For fee payment, EPA does not require PM to be summed, thus avoiding some of the potential double counting.

5.2 Emission Inventory for WSFP

WSFP submitted emission inventories of actual and PTE emissions with its original Title V permit application. WSFP has since supplemented and revised the emission inventory in several subsequent submittals to reflect planned operations and to respond to EPA's initial feedback. WSFP also submitted an actual emission inventory to support its annual fee payments. EPA reviewed WSFP's source lists and emission inventory in connection with drafting the permit. In some instances, EPA revised the emission estimates provided by WSFP in their application and subsequent submittals to more accurately reflect the emissions from the facility. This section describes emission estimating techniques for the WSFP facility relied on by EPA in preparing the draft permit.

It is EPA's expectation that WSFP will use the emission estimating techniques set forth in this section unless WSFP has other information showing why another technique more accurately represents its emissions. It is important to emphasize that to the extent WSFP relies on any type of emission control technique (e.g. road watering or sweeping, pile enclosures, etc) to estimate emissions used to determine annual fees or the applicability of a regulatory program, use of the technique must be fully documented and verifiable. Note that some boiler emission factors will be revised after emission testing is performed as required in this permit.

Equation 5-1 represents the basic technique for estimating emissions (in tons per year) from all emission units at the facility. The equation relies on an emission factor and an operational parameter that is multiplied by the emission factor. WSFP will need to track the relevant operational parameters in order to derive its actual and potential emissions. The emission factors used in the estimates are presented for each pollutant emitted and each emission unit in Table 5-1. HAP emission factors are presented as a sum of all HAPs emitted (or known to be emitted) from each emissions unit other than HCl which, as the largest individual HAP emitted, is listed for the boilers. Individual HAP emission factors are listed in Table 5-2. Note that these emission factors may be improved over time. Note also that the techniques presented are generally appropriate for estimating actual as well as potential emissions; however, actual emissions reflect actual operational data whereas potential emissions reflect the maximum operations or capacity of the emission unit.[1]

$$E = EF \times OP \times K \qquad \text{(Equation 5-1)}$$

Where:

E = pollutant emissions in tons/year
EF = emission factor (Table 4-1 and Table 4-2)
OP = recorded actual annual operational parameter
K = 1 ton/2000 lbs for conversion from pounds per year to tons per year

The emission factors for paved and unpaved roads (PR and UR) must be calculated using site-specific information. See the reference documents for those estimation techniques (cited in Table 5-1) for a more complete description. For those estimation techniques that require substantial site-specific parameter tracking, such as piles and roads, emissions associated with a defined operational rate (amount of logs processed or plywood produced in a year) can be estimated to establish a set ratio that can be used to multiply by the actual operational rate in future years, significantly simplifying the annual inventory effort. All of the techniques and site-specific parameters and assumptions should be reviewed each year before estimating emissions to be sure they remain appropriate.

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[1]As discussed above, actual emissions form the basis for calculating fees initially and annually while potential emissions are generally used to determine the applicability of air pollution control requirements and programs.

Note that the Wellons Boiler particulate emission factors listed correspond to the NSPS particulate matter emission limit that applies to the boiler. The emission factor will be revised after emission testing is performed as required in this permit. Emission factors for the boilers are based on heat input (fuel) to the boiler. If steam production records are used to calculate boiler heat input (firing rate) for the purposes of emission inventory, then the conversion factor applied to convert steam production to heat input must be based on the latest site specific boiler tuning data or a default efficiency factor that is acceptable to EPA. The permit establishes limits on hazardous air pollutant (HAP) emissions and requires fuel analysis to derive a site specific hydrogen chloride emission factor.

Table 5-1 Emission Factors (EF) for Use in Emission Inventories

EU ID #	Pollutant	EF	Units	Reference (Source of Emission Factor)
PH 1 & 2 (Boilers 1 and 2)	NOx	0.34	lb/mmBtu	Actual test data from 2000
	VOC	0.017	lb/mmBtu	AP-42 (3/02) Table 1.6-3
	SO2	0.025	lb/mmBtu	AP-42 (3/02) Table 1.6-2
	PM	0.82	lb/mmBtu	Actual test data from 2000
	PM10	0.33	lb/mmBtu	Actual test data from 2000
	CO	10.9	lb/mmBtu	Actual test data from 2000
	Pb	4.80E-5	lb/mmBtu	AP-42 (3/02) Table 1.6-4
	HAP (total)	3.1E-2	lb/mmBtu	AP-42 (3/02) Tables 1.6-3 and 1.6-4 and using actual HCl data; sum of 35 HAPs emitted (Table 5-2)
	HCL	1.2E-2	lb/mmBtu	Actual fuel sampling 2004
PH 4 (Boiler 4)	NOx	0.31	lb/mmBtu	Actual test data from 2000
	VOC	0.017	lb/mmBtu	AP-42 (3/02) Table 1.6-3
	SO2	0.025	lb/mmBtu	AP-42 (3/02) Table 1.6-2
	PM	0.49	lb/mmBtu	Actual test data from 2000
	PM10	0.28	lb/mmBtu	Actual test data from 2000
	CO	4.74	lb/mmBtu	Actual test data from 2000
	Pb	4.80E-5	lb/mmBtu	AP-42 (3/02) Table 1.6-4
	HAP (total)	3.1E-2	lb/mmBtu	AP-42 (3/02) Tables 1.6-3 and 1.6-4 and using actual HCl data; sum of 35 HAPs emitted (Table 5-2)
	HCL	1.2E-2	lb/mmBtu	Actual fuel sampling 2004
PH 5 (Wellons Boiler)	NOx	0.22	lb/mmBtu	AP-42 (3/02) Table 1.6-2
	VOC	0.017	lb/mmBtu	AP-42 (3/02) Table 1.6-3
	SO2	0.025	lb/mmBtu	AP-42 (3/02) Table 1.6-2
	PM	0.1	lb/mmBtu	For PTE purposes only: NSPS 60.43b(c)(1); for actual emissions, use emission factor from test required by permit

EU ID #	Pollutant	EF	Units	Reference (Source of Emission Factor)
	PM10	0.1	lb/mmBtu	For PTE purposes only: NSPS 60.43b(c)(1); for actual emissions, use emission factor from test required by permit
	CO	0.6	lb/mmBtu	AP-42 (3/02) Table 1.6-2
	Pb	4.80E-5	lb/mmBtu	AP-42 (3/02) Table 1.6-4
	HAP (total)	3.1E-2	lb/mmBtu	AP-42 (3/02) Tables 1.6-3 and 1.6-4 and using actual HCl data; sum of 35 HAPs emitted (Table 5-2)
	HCL	1.2E-2	lb/mmBtu	Actual fuel sampling 2004
KLN (Lumber Kilns)	PM	0.02	lb/mbf	4/25/00 ODEQ ACDP Application Guidance
	PM10	0.02	lb/mbf	4/25/00 ODEQ ACDP Application Guidance; assumes PM10 = 100% PM.
	VOC (Douglas fir)	0.59	lb/mbf	NCASI Technical Bulletin 718 and 9/29/00 OSU small kiln study, adjusted to propane basis with formaldehyde and methanol added – ponderosa pine
	HAP (douglas fir total)	0.024	lb/mbf	9/29/00 OSU small kiln study
	VOC (ponderosa pine)	1.62	lb/mbf	NCASI Technical Bulletin 718 and 9/29/00 OSU small kiln study, adjusted to propane basis with formaldehyde and methanol added – ponderosa pine
	HAP (ponderosa pine total)	0.0679	lb/mbf	9/29/00 OSU small kiln study
SM (Sawmill)	PM (debarking)	0.02	lb/(wet ton)	Fire 6.23 (1985 AP42)
	PM10 (debarking)	0.011	lb/(wet ton)	Fire 6.23 (1985 AP42); assumes PM10 =50% PM
	PM (sawing)	0.35	lb/(wet ton)	AP42 (2/80) 10.3
	PM10 (sawing)	0.175	lb/(wet ton)	AP42 (2/80) 10.3; assumes PM10 = 50% PM
	PM (yard cleanup)	0.1	lb/(dry ton)	Engineering judgment; assumed to be similar to target box
	PM10 (yard cleanup)	0.05	lb/(dry ton)	Engineering judgment; assumed to be similar to target box; assumes PM10 = 50% PM
CON (Pneu. Conveyors)	PM (CY1, CY2, CY3, CY4, CY5, CY6)	0.50	lb/dry ton	Oregon DEQ Permitting & Inspection Manual (11/15/93) page VII.E.1-1

EU ID #	Pollutant	EF	Units	Reference (Source of Emission Factor)
	PM10 (CY1, CY2, CY3, CY4, CY5, CY6)	0.25	lb/dry ton	Oregon DEQ Permitting & Inspection Manual (11/15/93) page VII.E.1-1; assumes PM10 = 50% PM for medium efficiency cyclone
	PM (T1)	0.1	lb/dry ton	Oregon DEQ Permitting & Inspection Manual (11/15/93) page VII.E.1-1
	PM10 (T1)	0.05	lb/dry ton	Oregon DEQ Permitting & Inspection Manual (11/15/93) page VII.E.1-1; assumes PM10 = 50% PM for medium efficiency cyclone
	PM (P1)	0.01	gr/dscf	Assumed room concentration; for actual emissions apply control efficiency
	PM10 (P1)	0.01	gr/dscf	Assumed room concentration; for actual emissions apply control efficiency
MT (Material Handling)	PM (bins A, B, C, C, E, F, MB, bark loader, yard dump)	0.10	lb/dry ton	Assumed same as target box; Oregon DEQ Permitting & Inspection Manual (11/15/93) page VII.E.1-1
	PM10 (bins A, B, C, C, E, F, MB; bark loader; yard dump)	0.05	lb/dry ton	Assumed same as target box; Oregon DEQ Permitting & Inspection Manual (11/15/93) page VII.E.1-1; assumes PM10 = 50% PM
	PM (Conveyors vib 1-4; CC 1-16)	0.05	lb/dry ton	Assumed half target box; Oregon DEQ Permitting & Inspection Manual (11/15/93) page VII.E.1-1
	PM10 (Conveyors vib 1-4; CC 1-16)	0.025	lb/dry ton	Assumed half target box; Oregon DEQ Permitting & Inspection Manual (11/15/93) page VII.E.1-1; assumes PM10 = 50% PM
MP (Material Piles)	PM	760	lb/(acre-yr)	Assumes same as open area wind erosion; AP42 (10/98) Section 11.9, Equation (1); converted to lb from tons by multiplying by 2000
	PM10	380	lb/(acre-yr)	Assumes same as open area wind erosion; AP42 (10/98) Section 11.9, Equation (1); converted to lb from tons by multiplying by 2000; assume PM10 = 50% PM
WE (Plant Traffic – paved)	PM	Calc-ulated	lb/vmt	AP42 (10/02) Section 13.2.1, Equation (2)
	PM10	Calc-ulated	lb/vmt	AP42 (10/02) Section 13.2.1, Equation (2)
WE (Plant Traffic –	PM	Calc-ulated	lb/vmt	AP42 (9/98) Section 13.2.2, Equation (2); includes unpaved roads and log yard traffic

EU ID #	Pollutant	EF	Units	Reference (Source of Emission Factor)
unpaved)	PM10	Calc-ulated	lb/vmt	AP42 (9/98) Section 13.2.2, Equation (2); includes unpaved roads and log yard traffic
GEN (Diesel engine)	NOx	0.031	lb/(hp-hr)	AP42 (10/96) Table 3.3-1
	VOC	0.00251	lb/(hp-hr)	AP42 (10/96) Table 3.3
	SO2	0.00205	lb/(hp-hr)	AP42 (10/96) Table 3.3
	PM	0.0022	lb/(hp-hr)	AP42 (10/96) Table 3.3
	PM10	0.0022	lb/(hp-hr)	AP42 (10/96) Table 3.3
	CO	0.00668	lb/(hp-hr)	AP42 (10/96) Table 3.3
	HAP (total)	4.46E-5	lb/(hp-hr)	AP42 (10/96) Table 3.3-1; sum of 9 HAPs emitted (Table 5-2)
LY (log yards)	PM	760	lb/(acre-yr)	AP42 (10/98) Section 11.9, Equation (1); converted to lb from tons by multiplying by 2000
	PM10	380	lb/(acre-yr)	AP42 (10/98) Section 11.9, Equation (1); converted to lb from tons by multiplying by 2000; assume PM10 = 50% PM

Table 5-2 Emission Factors for Individual Hazardous Air Pollutants (HAPs)

EU ID #	Pollutant	EF	Units
PH 1 - 5 (Boilers 1, 2, 4 and Wellons)	Acetaldehyde	8.3E-04	lb/mmBtu
	Acetophenone	3.2E-09	lb/mmBtu
	Acrolein	4.0E-03	lb/mmBtu
	Benzene	4.2E-03	lb/mmBtu
	bis(2-Ethylhexyl)phthalate	4.7E-08	lb/mmBtu
	Carbon tetrachloride	4.5E-05	lb/mmBtu
	Chlorine	7.9E-04	lb/mmBtu
	Chlorobenzene	3.3E-05	lb/mmBtu
	Chloroform	2.8E-05	lb/mmBtu
	2,4-Dinitrophenol	1.8E-07	lb/mmBtu
	Ethylbenzene	3.1E-05	lb/mmBtu
	Formaldehyde	4.4E-03	lb/mmBtu
	Hydrogen chloride	1.2E-02	lb/mmBtu
	Naphthalene	9.7E-05	lb/mmBtu
	4-Nitrophenol	1.1E-07	lb/mmBtu
	Pentachlorophenol	5.1E-08	lb/mmBtu
	Phenol	5.1E-05	lb/mmBtu
	Propionaldehyde	6.1E-05	lb/mmBtu
	Styrene	1.9E-03	lb/mmBtu
	2,3,7,8-Tetrachlorodibenzo-p-dioxins	8.6E-12	lb/mmBtu
	Toluene	9.2E-04	lb/mmBtu
	2,4,6-Trichlorophenol	2.2E-08	lb/mmBtu
	Vinyl Chloride	1.8E-05	lb/mmBtu
	o-Xylene	2.5E-05	lb/mmBtu
	Antimony	7.9E-06	lb/mmBtu
	Arsenic	2.2E-05	lb/mmBtu
	Beryllium	1.1E-06	lb/mmBtu

	Cadmium	4.1E-06	lb/mmBtu
	Chromium, total	2.1E-05	lb/mmBtu
	Cobalt	6.5E-06	lb/mmBtu
	Lead	4.8E-05	lb/mmBtu
	Manganese	1.6E-03	lb/mmBtu
	Mercury	3.5E-06	lb/mmBtu
	Nickel	3.3E-05	lb/mmBtu
	Selenium	2.8E-06	lb/mmBtu
	TOTAL	3.1E-02	lb/mmBtu
KLN (Lumber Kilns) – douglas fir	Formaldehyde	0.001	lb/mbf
	Methanol	0.023	lb/mbf
	TOTAL	0.024	lb/mbf
KLN (Lumber Kilns) – ponderosa pine	Formaldehyde	0.0029	lb/mbf
	Methanol	0.065	lb/mbf
	TOTAL	0.0679	lb/mbf
GEN (Diesel engine)	Acetaldehyde	5.37E-06	lb/hp-hr
	Acrolein	6.48E-07	lb/hp-hr
	Benzene	6.53E-06	lb/hp-hr
	1, 3-Butadiene	2.74E-07	lb/hp-hr
	Formaldehyde	8.26E-06	lb/hp-hr
	Naphthalene	5.94E-07	lb/hp-hr
	Propylene	1.81E-05	lb/hp-hr
	Toluene	2.86E-06	lb/hp-hr
	Xylenes	2.00E-06	lb/hp-hr
	TOTAL	4.464E-05	lb/hp-hr

5.3 Potential to Emit (PTE) for WSFP

The potential to emit (PTE) air pollutants for a facility is used to determine applicability to several EPA programs, including Title V, PSD and Section 112. WSFP's PTE is based on information in their original application (and in several revised submittals) and on EPA's review of WSFP's emission inventories. WSFP's PTE is presented below in Table 5-3 and reflects the emission factors presented in Tables 5-1 and 5-2. PTE means the maximum capacity of WSFP to emit any air pollutant (criteria or HAPs) under its physical and operational design. Any physical or operational limitation on the maximum capacity of WSFP to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, may be treated as part of its design if the limitation or the effect it would have on emissions is enforceable by EPA. PTE is meant to be a worst case emissions calculation and is used in many, though not all, cases to determine the applicability of federal requirements.

Actual emissions may be much lower than PTE. For example, all of the emission estimates in Table 5-3 are based on 24-hours per day operation of the facility whereas the WSFP facility does not normally operate 24 hours per day. The only exception to that is the fire water pump (DP), which is only operated when needed for a fire or during periodic testing, much less than 500 hours per year. Consistent with EPA policy, the fire water pump PTE was estimated assuming 500 hours of operation (Seitz, Calculating Potential to Emit (PTE) for Emergency Generators, September 6, 1995).

WSFP PTE estimates for the kilns are based on reported maximum kiln throughput of 138 million board feet per year. PTE point source estimates for the pneumatic conveying systems are based on maximum mill throughput of 1.478 million wet tons of logs processed per year. PTE estimates for the boilers are based on maximum design heat input capacity. To address the planned shut down of the existing boilers

with the operation of the new boiler, the PTE table reflects the "existing" and "future" scenarios – the "existing" case includes the old boilers, but not the new one; the "future" case includes the new boiler, but not the old ones. The PTE table shows the total HAPs as well the HCl emissions because HCl is clearly the largest individual HAP. Showing both values is helpful because major HAP source applicability thresholds exist for both total HAPs and total single HAP emitted.

Table 5-3 Facility Potential to Emit for PSD, Title V, and Section 112 in Tons Per Year

	Air Pollutants N0x - oxides of nitrogen; VOC - volatile organic compounds; SO2 - sulfur dioxide; PM - particulate matter; PM10 - particulate matter with diameter 10 microns or less; CO - carbon monoxide; Pb - lead; HAP - hazardous air pollutants [see Clean Air Act, Section 112(b)]								
EU ID #	**NOx**	**VOC**	**SO2**	**PM**	**PM10**	**CO**	**Pb**	**HAP**	**HCL**
PH 1	146	7	11	351	141	4667	<1	13	5
PH 2	121	6	9	293	118	3888	<1	11	4
PH 4	120	7	10	190	109	1839	<1	12	5
PH 5	126	10	14	57	57	344	<1	18	7
KLN		91		1	1			4.7	
SM				274	156				
CON				64	33				
MT				69	30				
MP				<1	<1				
WE				919	183				
GEN	9	<1	<1	<1	<1	2	<1	<1	
LY				7	3				
TOTAL (existing)	397	112	30	2169	776	10396	<1	41	14
TOTAL (future)	136	102	15	1393	465	346	<1	23	7

5.4 Fee Payments Based on Actual Annual Emissions

WSFP is required to pay fees annually based on an emissions inventory of its actual emissions for the preceding calendar year (see permit terms 3 and 4). As discussed above, EPA has documented methods, techniques, and assumptions that EPA believes provide the most accurate basis for estimating emissions from the facility, including actual emissions for fee purposes. The techniques in Section 5.2 above should be used to calculate annual emissions for fee purposes, unless WSFP has other information showing why another technique more accurately represents its emissions. Note that the emission estimates that form the basis for fees differs from the plant PTE first because estimates for fee purposes reflect actual operations and emissions for a particular year and are determined in accordance with 40 CFR 71.9(c).

EPA notes that WSFP has an ongoing obligation to assure that all data in its application is correct and to notify EPA of any errors or omissions. Moreover, WSFP is required to certify to the accuracy and completeness of all data submitted to EPA, including the accuracy of its annual emission inventory for fee purposes.

6 Regulatory Analysis and Permit Content

EPA is required by 40 CFR Part 71 to include in this Title V permit all emission limitations and standards that apply to the facility, including operational, monitoring, testing, recordkeeping and reporting requirements necessary to assure compliance. This section explains which air quality regulations apply to this facility and how those requirements are addressed in the permit.

A facility, or source, located in Indian Country may be subject to federal or tribal air quality regulations, but generally is not subject to state air quality regulations. The Warm Springs Tribes have not gone through the process of obtaining authorization to be treated in the same manner as States under 40 CFR §§ 49.6 and 49.7 (the Tribal Authority Rule) and obtaining approval of air quality regulations as a "Tribal Implementation Plan." Therefore, any Tribal regulations are not federally enforceable, do not meet the definition of "applicable requirement" under 40 CFR Part 71, and are not included in WSFP's Title V permit.

EPA recognizes that, in some cases, sources of air pollution located in Indian Country are subject to fewer requirements than similar sources located on land under the jurisdiction of a state or local air pollution control agency. To address this regulatory gap, EPA is in the process of developing national regulatory programs for preconstruction review of major sources in non-attainment areas and of minor sources in both attainment and non-attainment areas. These programs will establish, where appropriate, control requirements for sources that will be incorporated into Title V permits. To establish additional applicable, federally-enforceable emission limits, EPA Region 10, in consultation with Tribes and other stakeholders, has proposed a Federal Implementation Plan (FIP) that will establish federal requirements for sources in Indian Country within Region 10. See 67 Federal Register 51802 (August 9, 2002); 67 Federal Register 11748 (March 15, 2002). EPA hopes to take final action on the proposal within the next year. EPA intends that its federal regulations created through a FIP will apply only in those situations in which a tribe does not have an approved Tribal Implementation Plan. WSFP will be required to comply with the requirements of the FIP when they become effective. Applicable requirements in the FIP will be incorporated into this permit within 18 months of their effective date.

EPA relied on information provided in WSFP's Title V permit application, information provided during telephone communications in 2003-2004, and the PSD netting analysis provided initially on January 9, 2004 to determine the requirements that are applicable to the WSFP facility. Each section of the permit is discussed below, providing the legal and factual basis for the applicable requirements that apply. The permit is organized into 14 sections as follows:

1 Source Information
2 Compliance Requirements
3 Payment of Fees
4 Annual Emissions Inventory
5 Permit Changes
6 Permit Shield
7 Standard Terms and Conditions
8 General Testing Requirements
9 General Recordkeeeping Requirements

10 General Reporting Requirements
11 Facility Wide Requirements
12 Emission Unit PH 5 – Wellons Boiler #5
13 Emission Units PH 1, 2, 3, 4 and 5 – Powerhouse Boilers
14 Emission Unit KLN – Lumber Kilns

6.1 Section 1 – Source Information

This section includes the main contacts for the company, the plant and the tribe. Note that while two SIC codes are listed, the sawmills and planing mills SIC code of 2421 is considered the primary code. The electric power generation activities, SIC code 4911, most of which is used for powering the facility, are considered to be support activities to the sawmill.

6.2 Section 2 – Compliance Requirements

This section includes generic compliance terms that are required in all Title V permits. The ability to use credible evidence to establish whether or not a source is in compliance with a permit term is addressed in condition 2.1.3. The legal basis for this requirement is found in 40 CFR Part 71, which applies to the entire facility, as well as in the NSPS of 40 CFR Part 60 which applies only to the new Wellons boiler. Condition 2.5 relieves a permittee from operating operational or emissions monitors on emission units that are not operational, provided certain stipulations are met. This will be particularly important for the shut down of the old boilers. Forms for compliance certifications may be obtained on the internet at: http://www.epa.gov/air/oaqps/permits/p71forms.html.

6.3 Section 3 – Payment of Fees

Fee payment requirements have been included, along with the specific date by which WSFP must pay their fees each year. Note that the per-ton fee rate varies each year so the permittee should contact EPA to obtain the current rate.

6.4 Section 4 - Annual Emission Inventory

This section includes the requirement to submit an inventory of WSFP's actual emissions each year. The submittal of emission inventories is timed to coincide with the payment of fees because the annual fees are based on the actual emissions emitted each year.

6.5 Section 5 - Permit Changes

This section includes procedures that must be followed when making changes to the facility or the Title V permit and when the permit is to be renewed. Condition 5.9 addresses the expiration of the permit and the actions by WSFP that are necessary to keep the permit from expiring.

6.6 Section 6 - Permit Shield

This section includes a general permit shield in condition 6.1 that states that compliance with the permit is deemed compliance with the applicable requirements listed in the permit. WSFP did not request a specific permit shield for any specific requirement excluded from this permit and none is being granted. WSFP is responsible for complying with any applicable requirements that exist but have not been included in the permit. General shield language is also included in condition 6.2.

6.7 Section 7 - Standard Terms and Conditions

This section includes general language that is required in any Title V permit. Note the obligation for the permittee to provide information to EPA when requested and to correct inaccuracies and omissions in the operating permit application.

6.8 Section 8 - General Testing Requirements

This section describes procedures that must be followed whenever the permit requires emissions testing or sampling in an emission unit-specific section of the permit. If there is a conflict between this section and an emission unit-specific section, the specific section should be followed. Specific sampling is required in section 11 and specific testing is required in section 12. When performing the sampling/testing required by specific sections, a test plan is required as specified in condition 8.1.

6.9 Section 9 - General Recordkeeeping Requirements

This section describes general recordkeeping that must be performed in addition to the recordkeeping required in any emission unit-specific section of the permit. If there is a conflict between this section and an emission unit-specific section, the specific section should be followed.

6.10 Section 10 – General Reporting Requirements

This section describes general reporting that must be performed in addition to the reporting required in any emission unit-specific section of the permit. If there is a conflict between this section and an emission unit-specific section, the specific section should be followed. Note that Title V requires records be retained for 5 years, while NSPS only requires 2 years. Those two requirements have been combined (streamlined) here with the most strict requirement (5 years) as the permit term. Two important requirements are found in this section: deviation and semiannual reporting and document certifications. Note that failure to meet any permit term or condition, including emission standards, is considered a deviation. Determinations of deviations, continuous or intermittent compliance status, or violations of the permit are not limited to the testing or monitoring methods required by the underlying regulations or this permit; other credible evidence (including any evidence admissible under the Federal Rules of Evidence) must be considered by the source and EPA in such determinations. The timing for reporting deviations, as well as other data collected, depends on the circumstances, as explained in this section. All documents submitted or reported to EPA must be certified to be truthful, accurate and complete by the facility responsible official. Forms for deviation reporting, semiannual reporting and document certification may be obtained on the internet at: http://www.epa.gov/air/oaqps/permits/p71forms.html.

6.11 Section 11 – Facility Wide Requirements

6.11.1 Chemical Accident Prevention Program - 40 CFR Part 68. The Chemical Accident Prevention Program requires sources that use or store regulated substances above a certain threshold to develop plans to prevent accidental releases. Based on information in their application, WSFP has no regulated substances above the threshold quantities in this rule and therefore is not currently subject to the requirement to develop and submit a risk management plan. However, this requirement is included in the permit as an applicable requirement because WSFP has an ongoing responsibility to submit a risk management plan if a substance is listed that WSFP has in quantities over the threshold amount or if WSFP ever increases the amount of any regulated substance above the threshold quantity. Including this term in the permit minimizes the need to reopen the permit if WSFP becomes subject to the requirement

to submit a risk management plan. Distillate fuel stored on-site is not subject to Part 68 risk management plan requirements (See 40 CFR § 68.126).

6.11.2 Stratospheric Ozone and Climate Protection - 40 CFR Part 82. The stratospheric ozone and climate protection program requires sources that handle regulated materials to meet certain procedural and certification requirements. WSFP has equipment that use or contain chlorofluorocarbons (CFCs) and other materials regulated under this program. All air conditioning and refrigeration units must be maintained by certified individuals, and according to their application, WSFP uses certified contractors.

6.11.3 NESHAP - 40 CFR Part 61, Subpart M - Demolition or Renovation Activity. The asbestos demolition and renovation program requires sources that handle asbestos-containing materials to follow specific procedures. WSFP is not currently engaged in the activities regulated under this provision; however, if WSFP conducts any demolition or renovation activity, WSFP must assure that the project is in compliance with the federal rules governing asbestos including the requirement to conduct an inspection for the presence of asbestos. This requirement is in the permit to address any demolition or renovation activity at the facility.

6.11.4 NESHAP – MACT Standards - 40 CFR Part 63. With a few exceptions, MACT standards promulgated under 40 CFR Part 63 apply to "major sources" of HAP. Section 112(a)(1) and 40 CFR 63.2 define a "major source" as a stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls in the aggregate, 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAP. Because WSFP and WSCP are both owned and operated by the Tribes and because they are located on contiguous properties, the HAP emissions of WSFP and WSCP must be added together to determine if emissions exceed 25 tons per year for all HAP combined or 10 tons per year for any single HAP. There are at least three MACT standards that might be applicable to the Warm Springs operations if major for HAP: Subparts DDDDD (Industrial, Commercial and Institutional Boilers and Process Heaters), DDDD (Plywood Mills including lumber kilns), and SSSSS (Refractory Products Manufacturing). The first two would apply to the WSFP operation and the latter would apply to the WSCP operation. The compliance dates for the three MACT standards are 9/13/2007, 10/1/2007 and 4/17/2006, respectively.

Based on information provided by the Tribes, EPA estimates that potential HAP emissions from WSCP are less than 1 ton per year, whereas potential HAP emissions from the existing WSFP operation (before the boiler replacement) are approximately 41 tons per year. Thus, WSFP and WSCP are currently a major source of HAP with respect to combined HAPs emissions, although there are no MACT standards in effect that apply to them at this time. Because EPA missed the scheduled promulgation date for 40 CFR Part 63, Subparts DDDDD and DDDD by 18 months or more, however, WSFP, as a major source of HAP, was required to submit a Part 1 MACT Application. WSFP submitted its Part 1 MACT Application on March 31, 2003. Submittal of the Part 2 MACT Application is no longer required because EPA has finalized all MACT standards that might apply to the relevant source categories present at the WSFP and WSCP facilities.

Once the new Wellons boiler is installed and the three remaining boilers are permanently shutdown, the PTE for HAP from WSFP and WSCP is estimated to be 22.5 tons per year, which is less than the major source threshold for HAP. EPA notes, however, that techniques for estimating HAP emissions are changing over time with improvements to measurement and estimation techniques. In addition, HAP emissions can vary with changing fuels, raw materials and operating conditions.

To ensure that the combined HAP emissions of WSFP and WSCP are less than the major source thresholds on the effective date of the MACT standards discussed above, the permit includes enforceable

limits on HAP emissions from the WSFP facility. Conditions 11.1.5 and 11.1.6 of the permit establish enforceable emission limits for total HAP and HCl emissions from WSFP based on assumptions about the level of those pollutants emitted by WSFP. With enforceable limits on HAP emissions from WSFP in place, WSFP and WSCP collectively will be considered a minor HAP source, thereby avoiding MACT standards that might otherwise apply to either facility.

Testing, monitoring, recordkeeping and reporting requirements are included in the permit to verify that the current assumptions regarding HAP emissions are correct and to ensure compliance with the HAP limits. WSFP is required to determine the chlorine content of the boiler fuel and a boiler HCl emission factor every quarter. Using emission factors (including the most recent boiler HCl value) and measured operational parameters (e.g. amount of fuel burned, amount of lumber dried, etc), WSFP is required to calculate HAP emissions every month. Semiannual reports will include the HCl and HAP data. Assuming that the fuel sampling is representative, estimating emissions based on chlorine content is conservative as it assumes all of the chlorine is converted to HCl via combustion in the boilers. Other HAP emission factors for the facility are not considered to be as reliable. WSFP has been advised that if better data becomes available which indicates the facility is a major HAP source, WSFP will be subject to the applicable MACT standards and WSCP will be subject to Title V permitting.

6.11.5 Modification Exempt from PSD Review via 40 CFR § 52.21(a)(2)(iv)(c) Actual to Projected Actual Test. The PSD regulation applicability test for modifications was changed in December 2002. The rule change resulted in a new applicable requirement for PSD major sources. Since WSFP is a PSD major source, this term is included in the operating permit. In summary, when the permittee considers a plant modification project to be exempt from PSD via the method specified in 40 CFR § 52.21(b)(41)(ii)(a-c) and there is a reasonable possibility that there will be a significant emissions increase resulting from the project, then the permittee must fulfill specified requirements related to documentation, monitoring, and notification. This term will be relevant to WSFP only when the permittee is contemplating making physical or operational changes to the facility. In those instances it is strongly recommended that the permittee contact EPA to discuss their plans and verify their assumptions.

6.12 Section 12 - Emission Unit PH 5 – Wellons Boiler

The new Wellons boiler will be subject to two types of applicable requirements: (1) NSPS and (2) PSD avoidance limits for NOx and VOC. The NSPS requirements are lengthy and are included in the appropriate conditions such as emission limits, testing, monitoring/recordkeeping and reporting. Periodic monitoring requirements have been added to ensure compliance with the NSPS particulate emissions limit and the NOx and VOC emission limits. These requirements are described below.

6.12.1 NSPS – 40 CFR Part 60, Subpart Db and A. NSPS Subpart Db applies to industrial-commercial-institutional steam generating units greater than 100 mmBtu/hr design heat input capacity that were built or modified after June 19, 1984. The four existing boilers on-site were built before June 19, 1984 and have not been modified, so they are not affected by Subpart Db. The Wellons boiler has a maximum design heat input capacity of 131 mmBtu/hr and will be built after this initial operating permit is issued; it is therefore subject to Subpart Db. NSPS Subpart Db has emission standards for particulate matter (PM), visible emissions (opacity), nitrogen oxides, and sulfur dioxide. Under Subpart Db, boilers that burn only wood are subject only to PM and opacity limits. The Wellons boiler is designed and will be operated to burn only wood (i.e., wood waste, hog fuel, bark). Process units that are subject to NSPS standards are also subject to the NSPS subpart A (general provisions).

The NSPS Subparts Db and A requirements applicable to the Wellons boiler are addressed mainly in Section 12 of the permit. The Wellons boiler is subject to a 0.1 lb/mmBtu PM emission limit and a 20%

opacity limit. NSPS requires the boiler to be tested for compliance with the PM emission and opacity standards within 60 days after reaching maximum firing rate or 180 days after initial startup whichever comes sooner. The test results must be provided to EPA by those deadlines. The NSPS require the facility to provide EPA with certain notices, such as the date of construction, initial startup, and required source testing. Prior to testing, WSFP must submit to EPA a test plan which addresses the specific test methods and monitoring that must occur during each test. WSFP has the option to use opacity data from a certified monitor or to perform an EPA Reference Method 9 test when fulfilling the initial opacity performance testing requirements. If selected, the COMS would then become the compliance determination method in place of RM 9.

Under NSPS, WSFP must install and operate a COMS that complies with 40 CFR Part 60 Subpart A and Appendix B. NSPS requires the COMS performance to be checked prior to the initial compliance particulate and opacity emission tests. The permit adds additional performance checks every two years. The COMS is used to "indicate" exceedences of the NSPS opacity limit, but EPA Reference Method 9 readings are used to "determine" compliance with the opacity limit unless WSFP requests that the COMS be the compliance determination method as explained above.

NSPS Subpart Db does not have any periodic monitoring requirements for the particulate standard. Periodic testing for PM and opacity is required in condition 12.2.3. All testing must be performed while operating at 90% or higher firing rate per condition 8.1.3. The frequency for retesting is based on the initial test results. If the initial PM test result is less than 60% of the NSPS emission limit, then the test must only be repeated 6 months before permit expiration. If the initial PM test is between 60% and 90 percent of the NSPS limit, then testing must be repeated every 24 months. If the initial PM test is 90% or more than the NSPS limit, testing must be repeated every 12 months. Opacity testing is required to occur simultaneous with the PM testing as opacity is used as a surrogate parameter for PM monitoring.

Periodic monitoring and recordkeeping is required in condition 12.3.3 and 12.3.4. Devices must be installed for monitoring steam production, pressure and temperature; boiler excess oxygen; and ESP operational parameters. Specifically, the ESP power per steam value is used to indicate acceptable ESP operation. Again, the initial compliance test will determine the acceptable ranges each operational parameter must meet on an ongoing basis. If a periodic monitoring device or COMS indicates that the boiler or ESP is operating outside of the acceptable range, the permittee must investigate the situation, take prompt corrective action, and report the excursion as a deviation. All of these parameters must be monitored during the initial compliance tests to establish the acceptable ranges for operation, and then again during each subsequent test to confirm the range or adjust the range as needed. Certain fuel characteristics must also be monitored and recorded during emission testing. Finally, the ESP internals must be inspected every year to confirm good condition. All of the monitored information can be used as credible evidence when determining compliance.

Subpart Db requires that the fuel firing rate be recorded each day such that the annual capacity factor can be calculated monthly (12-month rolling factor). The operating permit can not relieve WSFP of this monitoring and recordkeeping requirement. WSFP has indicated a preference to use measured steam rate as their indicator of ongoing boiler operations and so steam monitoring has been added to the permit, such that now they must monitor both fuel feed and steam production. The fuel feed data should be used for emission inventory purposes because all of the emissions factors are in terms of boiler firing rate. WSFP can request to remove the steam monitoring requirement; although, it is a convenient parameter for the transitional limits in condition 13.1.1.

Additional NSPS recordkeeping requirements are addressed in the permit, as well as additional NSPS and other notice and reporting requirements.

6.12.2 PSD Avoidance Emission Limits for Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC). The new Wellons boiler will avoid PSD permitting by "netting out" of the PSD program using the emission reduction resulting from the shutdown of the three existing boilers, after considering contemporaneous increases (Wellons kilns and related steam demand increase). The netting results are shown in Table 6-1. NOx and VOC emissions are the only pollutants predicted to increase (net change), but by less then the significant emission rate (SER) threshold for PSD applicability. Based on that and the fact that the netting analysis relied upon general AP-42 emission factors for estimating NOx and VOC emissions from the Wellons boiler, NOx and VOC emission limits and testing requirements are necessary to ensure compliance with PSD.

Table 6-1 Wellons Boiler Netting Analysis Results

Pollutant	New Boiler	Wellons Kilns	Steam Demand	Old Boilers	Net Change	SER	PSD?
PM	57.4	0.6	144.8	340.2	-137.4	25	No
PM10	57.4	0.6	82.8	166.9	-26.2	15	No
NOx	126.2		91.6	179.8	38.1	40	No
CO	344.3		1400.9	3880.4	-2135.3	100	No
SO2	14.3		7.4	14.0	7.7	40	No
VOC	9.8	18.0	5.0	9.5	23.2	40	No

To make the netting analysis enforceable, NOx and VOC emission limits have been established in permit conditions 12.1.3 and 12.1.4. To ensure compliance with the NOx and VOC emission limits (and thereby PSD), testing, monitoring, recordkeeping and reporting requirements have been added to the permit. The boiler NOx and VOC emissions must be tested using EPA Reference Methods on the same time frame as the initial tests for PM and opacity (see 6.12.1 above). Emission factors will be developed from the testing for use in monthly rolling annual emissions inventories. If the emissions are higher than expected, such that the netting would not have adequately kept the boiler out of PSD, then the Wellons boiler could become subject to PSD.

The frequency for periodic testing is based on the initial test results. If the initial NOx test is less than 60% of the emission factor used in the netting analysis (0.22 lb/mmBtu), then NOx testing must be repeated 6 months before the permit expires. If the initial NOx test is between 60% and 90% of the standard, then NOx testing must be repeated every 12 months. Due to how close the predicted NOx emission increase is to the PSD applicability threshold, if the initial NOx test indicates that emissions are 90% or more than the emission factor used for the netting analysis, then a NOx continuous emission rate monitoring system (CERMS) must be installed within 6 months after the initial NOx test. In that case, data from the NOx CERMS would be used in the monthly rolling annual emission inventory in place of an emission factor. The permit requires periodic performance checks if a CERMS is installed. If initial VOC testing is higher than the emission factor used in the netting analysis (0.017 lb/mmBtu), VOC testing must be repeated 6 months prior to the expiration of the permit. Note that VOC emissions must be more than 170% of the emission factor used for there to be a concern that the net increase in VOC emissions would exceed the PSD applicability threshold.

Verification of other emissions factors (PM, PM10, CO and SO2) used in the netting analysis is not as critical. PM is limited required by NSPS and will be tested. The periodic monitoring requirements for PM should ensure PM10 emissions do not exceed the PSD applicability threshold as long as monitoring shows the boiler complies with the PM limit. CO emissions from the three existing boilers were so high that it is unlikely that the Wellons boiler CO would trigger PSD. Finally, the SO2 emissions are generated by the presence of elemental sulfur in the fuel. Experience has shown that the sulfur content of

wood waste does not vary greatly. Emissions of SO2 would have to be 225% of the emission factor used in the netting analysis for SO2 emissions to trigger PSD.

6.12.3 Compliance Assurance Monitoring (CAM) – 40 CFR Part 64. CAM applies to emission units subject to an emission limit with a pre-control potential to emit greater than the major source threshold defined in Title V (generally, 100 tons per year) and that use a control device to comply with the limit. However, only units with post-control potential to emit greater than the major source thresholds (100 tpy in this case) must comply with CAM at initial permit issuance. All other units that meet the CAM applicability criteria must be in compliance at permit renewal and may also be required to submit a CAM plan if a significant change is made to the unit prior to renewal. The Wellons boiler is subject PM limits and uses an ESP for control; but the post-control emissions are not greater than the major source threshold. The Wellons boiler is therefore not subject to CAM at this time, but will be subject to CAM at permit renewal. No other pollutants emitted by the Wellons boiler are controlled by a control device, so CAM does not apply to the boiler for any other pollutants.

6.12.4 Endangered Species Act (ESA) Impacts - Section 7, 16 U.S.C. §1531. EPA is obligated to consider the impact that a federal project may have on listed species or critical habitats. Based on the fact that the new Wellons Boiler will fully replace the existing power boilers, it is EPA's conclusion that the issuance of this Title V permit for WSFP, which allows the construction of the new boiler, will not affect a listed specie or critical habitat. Therefore, no additional requirements will be added to this permit for ESA reasons. EPA's no effect determination concludes EPA's obligations under Section 7 of the ESA. (See Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act, FWS and NMFS, March 1998, at Figure 1).

6.13 Section 13 - Emission Unit PH 1, 2, 4 and 5 – Powerhouse Boilers

As discussed above, the new Wellons boiler is being constructed to replace four existing boilers, one of which (PH 3) has not operated for some time. The three existing boilers will continue to operate during the start-up phase of the new Wellons boiler. Therefore, an operational limit is necessary to ensure that emissions from the powerhouse do not increase during the startup phase of the new Wellons boiler. In addition, to use the emission reductions credited to the shut down of the existing boilers in the new Wellons boiler netting analysis, their shut down must be enforceable. These requirements are described below.

6.13.1 PSD Avoidance Transitional Emission Limit. The permit limits the total amount of steam produced by the 3 existing boilers plus the new Wellons boiler to 80,000 pph, which is the maximum amount that the new Wellons boiler can produce. This limit ensures that emissions during the 6-month startup phase of the new Wellons boiler will not be more than the future emissions will be with just the new Wellons boiler.

The 24-hour average hourly steam production will be monitored in each of the four (three existing plus the Wellons) operating boilers. Steam production rate, rather than fuel consumption rate, is chosen as the limiting parameter, because it is a convenient and accurate parameter to measure and is representative of operations and emissions. The cap on steam production and requirement to monitor steam for transitional purposes goes away after the existing boilers are shut down and rendered inoperable; however, if steam is used for tracking operations for future emission inventory purposes, the steam produced by the Wellons boiler will continue to be monitored (see section 12 for more Wellons boiler requirements).

6.13.2 PSD Avoidance Shutdown Requirement. The permit requires the existing boilers to be rendered inoperable within 6 months after the startup of the Wellons boiler. This ensures that credits claimed in the Wellons boiler netting analysis actually occur and are enforceable. Notice to EPA of boiler shut down is also required.

6.13.3 Compliance Assurance Monitoring (CAM) – 40 CFR Part 64. CAM applies to emission units subject to an emission limit that use control devices to comply with the limit and have pre-control potential to emit greater than the major source threshold. The existing boilers at WSFP are subject to owner-requested emission limitations established in the operating permit via caps on steam production (see section 13), but no control device is used to comply with this limit. CAM does not apply to the existing boilers. CAM applicability for the new Wellons boiler is discussed in section 6.12.3 above.

6.14 Section 14 - Emission Unit KLN – Lumber Kilns

As a part of the new Wellons boiler project, VOC emissions are limited from the new boiler and the two Wellons kilns. This condition is explained below.

6.14.1 PSD Avoidance VOC Emission Limit. The emission increase caused by the 2000 installation of the two Wellons kilns was within the contemporaneous time period for the new Wellons boiler project. Therefore, the PTE of the two Wellons kilns was estimated and included in the Wellons boiler netting analysis. That analysis assumed no ponderosa pine lumber would be dried in the Wellons kilns. Ponderosa pine generally emits more VOC than Douglas Fir (or other species that WSFP may dry) when dried. WSFP has clarified that when they get logs from various future forest salvage projects, ponderosa pine logs may be included. This permit condition limits the VOC emissions from the two Wellons kilns, effectively limiting the amount of ponderosa pine (or any other specie that emits more VOC) that can be dried in the two Wellons kilns. This emission limit does not restrict the amount of ponderosa pine WSFP can dry in the other five lumber kilns. Kiln dry lumber production must be tracked for use in monthly emission estimates using the appropriate emission factors in order to assure compliance with the VOC emission limit.

7 Public Participation

7.1 Public Notice.

As described in 40 CFR 71.11(a)(5), all draft operating permits must be publicly noticed and made available for public comment. The public notice of permit actions and public comment period is described in 40 CFR 71.11(d). There is a 30 day public comment period for actions pertaining to a draft permit.

Public notice for the draft permit was given by mailing a copy of the public notice, draft permit, and statement of basis for the draft permit to the applicant and the Colville Tribe; by mailing a copy of the notice to affected states, the Tribal, city and county executives, and the local emergency planning authorities which have jurisdiction over the area where the source is located; by mailing a copy of the notice to all persons who submitted a written request to be included on EPA Region 10's mailing list for Title V permitting actions; and by publishing the notice in a daily or weekly newspaper of general circulation in the area affected by this source.

7.2 Opportunity for Comment

A copy of the draft permit, statement of basis for the draft permit, the application, and all supporting materials submitted by the source were made available for public review at the libraries listed in the public notice.

Copies of the permit and statement of basis were also made available at no cost on EPA's web site **[www.epa.gov/r10earth/ (once there, click on "Air")]** and by contacting EPA Region 10. All documents were also made available for review at the EPA Region 10 Office during regular business hours.

7.3 Response to Public Comments Received

The public notice stated that all public comments and requests for public hearing must be received by EPA by April 30, 2005, which was a Saturday. No public comments or requests for public hearing were received by EPA by the close of business on Monday, May 2, 2005, the first business day after the close of the comment period.