State of Idaho
Department of Environmental Quality
Air Quality Division

AIR QUALITY PERMIT
STATEMENT OF BASIS

Tier I Operating Permit No. T1-2007.0072

Final

Idaho Forest Group LLC

Moyie Springs, Idaho

Facility ID No. 021-00001

May 17, 2010

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Permit Writer

The purpose of this Statement of Basis is to set forth the legal and factual basis for the Tier I operating permit terms and conditions including references to the applicable statutory or regulatory provisions for the terms and conditions as required by IDAPA 58.01.01.362

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Acronyms, Units and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BF/yr	Board feet per year
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
gr	grain (1 lb = 7,000 grains)
dscf	dry standard cubic feet
EFB	Electrified Filter Bed
EPA	U.S. Environmental Protection Agency
HAP	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
IEU	Insignificant Emissions Units
km	kilometer
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
$\mu g/m^3$	micrograms per cubic meter
MMBtu	million British thermal units
MRRR	Monitoring, Recordkeeping and Reporting Requirements
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
PC	permit condition
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	sulfur dioxide
TAP	toxic air pollutant
Tier I	Tier I operating permit
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. INTRODUCTION AND APPLICABILITY

Idaho Forest Group LLC (IFG) is a manufacturer of a stud lumber, and is located at one mile off Old Highway 2. The facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit carbon monoxide above the major source threshold of 100 tons-per-year. The facility is also classified as a major facility, as defined by Subsection 008.10.a, because it emits or has the potential to emit above the major source thresholds of 25 tons-per-year for any combination of hazardous air pollutants (HAPs). As a major facility, IFG is required to apply for a Tier I operating permit pursuant to IDAPA 58.01.01.301. The application for a Tier I operating permit must contain a certification from IFG as to its compliance status with all applicable requirements (IDAPA 58.01.01.314.09).

IDAPA 58.01.01.362 requires that as part of its review of the Tier I application, DEQ shall prepare a technical memorandum (i.e., statement of basis) that sets forth the legal and factual basis for the draft Tier I operating permit terms and conditions including reference to the applicable statutory provisions or the draft denial. This document provides the basis for the draft Tier I operating permit for IFG.

The format of this Statement of Basis follows that of the permit with the exception of the facility's information discussed first followed by the scope, the applicable requirements and permit shield, and finally the general provisions.

IFG Tier I operating permit is organized into sections. They are as follows:

Section 1 – Tier I Operating Permit Scope

This permitting action is for the renewal of the existing Tier I Operating Permit No. T1-040104, which expired on October 29, 2007. The renewed Tier I OP incorporates permit conditions found in permit to construct and Tier II operating permit (PTC/T2) No. T2-050113, issued August 31, 2009 and PTC No. P-030119, issued on August 18, 2003. This permit also includes a CAM requirements and it also removes the compliance schedule section existing in Tier I operating permit, issued on March 7, 2005. T

Tier I Operating Permit No. T1-040104 that expired on October 29, 2007 will remain in effect until the issuance of the renewed Tier I operating permit to the facility.

Section 2 – Facility-Wide Conditions

The Facility-wide Conditions section contains the applicable requirements (permit conditions) that apply facility-wide. Where required, monitoring, recordkeeping and reporting requirements sufficient to assure compliance with each permit condition follows the permit condition.

Sections 3 through 5 – Hog Fuel Boiler, Dry Kilns (Four Total), and Planer Mill

The emissions unit-specific sections of the permit contain the applicable requirements that specially apply to each regulated emissions unit. Some requirements that apply to an emissions unit (e.g. opacity limits) may be contained in the facility-wide conditions. As with the facility-wide conditions, monitoring, recordkeeping and reporting requirements sufficient to assure compliance with each applicable requirement immediately follows the applicable requirement.

Section 6 – Compliance Assurance Monitoring

The purpose of this section of the permit is to include all of the applicable requirements of the Compliance Assurance Monitoring (CAM), 40 CFR 64.

Section 7 – Insignificant Activities

This section lists those requirements that the applicant has requested as non-applicable, and DEQ proposes to grant a permit shield in accordance with IDAPA 58.01.01.325.

This section also lists emissions units and activities determined to be insignificant activities based on size or production as allowed by IDAPA 58.01.01.317.01.b.

Section 8 – General Provisions

The final section of the permit contains standard terms and conditions that apply to all major facilities subject to IDAPA 58.01.01.300. This section is the same for all Tier I sources. These conditions have been reviewed by EPA and contain all terms required by IDAPA 58.01.01 et al as well as requirements from other air quality laws and regulations. Each general provision has been paraphrased so it is more easily understood by the general public; however, there is no intent to alter the effect of the requirement. Should there be a discrepancy between a paraphrased general provision in this statement of basis and the rule or permit, the rule or permit shall govern.

2. FACILITY INFORMATION

2.1 Facility Description

Logs are delivered by truck to IFG, unloaded, and stored in the log yard. The logs are then transported from the log yard by truck and loaded into the log deck by a dedicated crane. At the log deck, an infeeder sends the logs to one of two debarkers, which are the first step in the manufacturing process. Debarked logs are then trimmed to a desired length and transferred to the studmill. Sawing operations within the studmill reduce logs to the desired dimensions, and the lumber is then transferred to one of four kilns to be dried. After drying, the lumber is transferred to one of the planers which then surface the lumber to final dimensions and trimmed to a marketable length. Lumber is then graded, waxed or inked, stacked, and banded. Finished lumber is shipped off-site, primarily by rail and also by truck.

Emissions sources at the facility include a wood-fired boiler with a rated capacity of 80,000 pounds steam per hour, four drying kilns, two planermills, and miscellaneous sources (i.e., target boxes, railcar loading, log sawing, fuel mixing bin, screens, chippers, bark hog, debarking, and cyclones). Also, emissions can be generated from traffic on unpaved roads.

2.2 Facility Permitting History

2.2.1 Tier I Operating Permit History – Previous 5-year permit term October 29, 2002 to October 29, 2007

The following information is the permitting history of this Tier I facility during the previous five-year permit term which was from October 29, 2002 to October 29, 2007. This information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

- March 7, 2005 — T1-040104, this is a significant permit modification to remove the fuel burning equipment particulate standard from the EFB disengagement chamber baghouse. This permit remains in effect until the issuance of the renewed Tier I operating permit. Permit status (A, will be S as a result of this project)

- March 17, 2004 — T1-030133, administrative amendment for facility name change, responsible official name change, and facility contact name change. Permit status (S)

- October 29, 2002 — Permit No. 021-00001, initial Tier I operating permit issued to Louisiana-Pacific Corporation, Moyie Springs facility. Permit status (S)

2.2.2 Underlying Permit History – Includes every underlying permit issued to this facility

The following information is the comprehensive permitting history of all underlying applicable permits issued to this Tier I facility. This information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

- August 31, 2009 — PTC/T2 No. T2-050113, this permit is issued to the facility to fulfill the requirements of the compliance schedule contained in the facility's Tier I operating permit, issued October 29, 2002, and modified on March 7, 2005, (A)

- August 18, 2003 — PTC No. P-030119, sawmill equipment modification (re-issuance). This PTC was issued to Louisiana-Pacific Corporation. The company requested that PTC No. 021-00001, issued on July 23, 2001, be reissued because modification of the facility had not yet commenced and the July 23, 2001 PTC was due to expire, (A)

- July 23, 2001 — PTC No. 021-00001, sawmill equipment modification. This PTC was issued to Louisiana-Pacific Corporation, (S)

3. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

3.1 Application Scope

- This permit is for the renewal of the facility's existing Tier I operating permit No. T1-040104, issued on March 7, 2005 and expired on October 29, 2007. The renewed permit will include the applicable requirements found in PTC/T2, issued to the facility on August 31, 2009.

- This permit also has a CAM requirements which include indicator ranges for parameters of the Electrified Filter Bed (EFB) and for the baghouse.

- This permit removes permit conditions associated with compliance schedule existed in Tier I Operating Permit No. T1-040104, issued on March 7, 2005.

3.2 Application Chronology

- April 27, 2007 — DEQ received a Tier I operating permit renewal application from IFG, Moyie Springs facility.

- June 18, 2007 — DEQ sent to IFG a Tier I operating permit application incompleteness determination letter.

• September 5, 2007	DEQ determined the application complete.
• December 2, 2009	DEQ requested via phone a revised CAM plan from the facility
• December 16, 2009	DEQ received unofficial revised CAM plan from the facility's consultant. The official CAM plan is expected for submittal by the company after it conducts the source test for PM/PM_{10}, which is scheduled to be performed on the week of December 21, 2009.
• January 11, 2010	DEQ received a revised CAM plan from the facility.
• February 26, 2010	DEQ provided the draft permit to the facility for its review.
• March 18, 2010	DEQ provided the Tier I operating permit for public comment and affected states review. Public comment and affected states review ended on April 19, 2010. No comments were received in response to DEQ's proposed action.
• April 22, 2010	DEQ provided the proposed permit to EPA Region 10 for review.
• May 24, 2010	DEQ issued the final permit to the facility.

4. EMISSIONS UNITS, PROCESS DESCRIPTION(S), AND EMISSIONS INVENTORY

This section lists the emissions units, describes the production or manufacturing processes, and provides the emissions inventory for this facility. The information presented was provided by the applicant in its permit application. Also listed in this section are the insignificant activities based on size or production rate.

4.1 Hog Fuel Boiler

Process Description:

The facility operates a hog fuel-fired boiler. The boiler is manufactured by Kipper and Sons, and is a spreader-stoker with a maximum rated design capacity of 80,000 pounds of steam per hour or 128 MMBtu/hr. The boiler was installed in 1972. The boiler is not subject to New Source Performance Standards (NSPS) because the construction date of the boiler predates all applicable NSPS regulations.

Table 4.1 lists the emissions units and control devices associated with the hog fuel boiler.

Table 4.1 EMISSIONS UNIT, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emission Unit ID No.	Emissions Unit Description	Control Device Description (if applicable)	Emissions Discharge Point ID No. or Description
Hog fuel boiler	Hog fuel boiler: Manufacturer: Kipper and Sons Burner type: stoker-fired unit Maximum capacity: 80,000 pounds steam per hour or 128 MMBtu/hr.	Multiclone: Manufacturer: Joy Manufacturing Electrified Filter Bed (EFB): Manufacturer: EFB, Inc. Model No.: FDC 50 particulate control system Maximum flow rate: 50,000 acfm Disengagement stack baghouse Manufacturer: Not available Control efficiency (PM_{10}): 99.8%	EFB stack: Height above ground:80 feet (ft) Exit velocity: 35.7 ft/sec Exit temperature: 298 °F Stack diameter: 3.45 ft Disengagement baghouse stack: Height above ground: 80 ft Exit velocity: 89.2 ft/sec Exit temperature: 92 °F Stack diameter: 1.0 ft

4.2 Dry Kilns – Four Total

Process Description:

The facility operates four dry kilns used to dry green lumber. The kilns were manufactured either by Moore or by Coe. The dry kilns are heated using steam supplied by the facility's hog fuel-fired boiler.

Table 4.2 lists the emissions units and control devices associated with dry kilns.

Table 4.2 EMISSIONS UNIT, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emission Unit ID No.	Emissions Unit Description	Control Device Description (if applicable)	Emissions Discharge Point ID No. or Description
Dry kilns – four total	Dry Kilns: Kilns 1-3 were manufactured by Moore; kiln No. 4 was manufactured by Coe.	None	None 32 Vents from four kilns. Height above ground: 26 ft Exit velocity: 4.92 ft/sec Exit temperature: 229.7 °F Stack diameter: 1.13 ft

4.3 Planer Mills

Process Description:

After drying in the kilns, lumber is planed to final dimensions in the planer mill in one of two high speed planers (Stetson or Newman). Shavings from each of the planers are pneumatically transferred to overhead truck bins through separate cyclonic collector, followed by a rotary air locks and baghouses.

The planed lumber is then trimmed to marketable length. Trim ends are reduced in a hog and are pneumatically transferred to the overhead truck shavings bins along with the shavings. The lumber is then graded, inked, stacked, and banded. The lumber is then stored until it is shipped off-site by rail or truck.

Table 4.3 lists the emissions units and control devices associated with planner mills.

Table 4.3 EMISSIONS UNIT, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Emission Unit ID No.	Emissions Unit Description	Control Device Description (if applicable)	Emissions Discharge Point ID No. or Description
Planermill: Stetson and Newman planermills	Planer mill: Stetson planer mill: Manufacturer: Stetson; installed in 1989; rate: 1600 ft/min. Shavings generated from the process are pneumatically transferred to a cyclone. A baghouse was added to the planer cyclone in 1994. Newman planer mill: Manufacturer: Newman; installed in 1972; rate: 1300 ft/min. Shavings generated from the process are pneumatically transferred to a cyclone/truck bin system. A baghouse was added to the planer's cyclone in 1998.	Cyclone: Manufacturer: not available Baghouse: Manufacturer: Donaldson-Day (Torit) Model: 276-RFW-10 Flow rate: 35,200 acfm Cyclone: Manufacturer: Not available Baghouse: Manufacturer: Donaldson and Company Model: 376RF8 Flow rate: 26,500 acfm	Stetson Cyclone The cyclone exhausts to baghouse Stetson Baghouse Height above ground: 80.0 ft Exit velocity: 26.9 ft/sec Exit temperature: 68 °F Stack diameter: 1.95 ft Newman Cyclone The cyclone exhausts to baghouse Newman Baghouse Height above ground: 8 ft Exit velocity: horizontal vent Exit temperature: 68 °F Stack diameter: 2 ft

4.4 Insignificant Emissions Units Based on Size or Production Rate

No emissions unit or activity subject to an applicable requirement may qualify as an insignificant emissions unit or activity. As required by IDAPA 58.01.01.317.01.b, insignificant emissions units (IEU's) based on size or production rate must be listed in the permit application. Table 4.4 lists the IEU's identified in the permit application. Also summarized is the regulatory authority or justification for each IEU.

Table 4.4 INSIGFIFICANT EMISSION UNITS AND REGULATORY AUTHORITY/JUSTIFICATION

Emissions Unit/Activity	Regulatory Authority/Justification
Storage tanks with lids or closure < 260 gallons	IDAPA 58.01.01.317.01(b)(i)(1)
Storage tanks < 1,100 gallons, no HAPs, maximum vapor pressure 550 mmHg.	IDAPA 58.01.01.317.01(b)(i)(2)
VOC storage tank < 10,000 gallons, with lid or closure, vapor pressure < 80 mmHg at 21 degrees Celsius; and gasoline storage tanks with lid or closure < 10,000 gallons.	IDAPA 58.01.01.317.01(b)(i)(3)
Butane, propane and LPG storage tank < 40,000 gallons	IDAPA 58.01.01.317.01(b)(i)(4)
Combustion source < 0.50 MMBtu/hr.	IDAPA 58.01.01.317.01(b)(i)(7)
Waste paper incinerator < 0.50 MMBtu/hr.	IDAPA 58.01.01.317.01(b)(i)(8)
Welding < 1 T/day of welding rod.	IDAPA 58.01.01.317.01(b)(i)(9)
Printing using less than 2 gallons of ink.	IDAPA 58.01.01.317.01(b)(i)(12)
Surface coating, containing less than 1% by weight VOC's.	IDAPA 58.01.01.317.01(b)(i)(25)

4.5 Non-applicable Requirements for Which a Permit Shield is Requested

This section of the permit lists the regulations for which the facility has requested, and DEQ proposes to grant, a permit shield pursuant to IDAPA 58.01.01.325. The findings on which this shield is based are presented below:

Requirements for Which a Permit Shield Will Be Granted

New Source Performance Standards, 40 CFR 60 Subpart Db

IFG requested for a determination of non-applicability of Subpart Db- Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units (NSPS) for their Kipper and Sons hog fuel-fired boiler that was constructed in 1972. Refer to Section 6.4 of this statement of basis.

Requirements for Which a Permit Shield Will Not Be Granted

None is identified.

4.6 Emissions Inventory

No physical changes have occurred at the facility that would result in increase in the facility's emissions compared to the previous Tier I operating permit term. In fact, emissions at the facility should have been reduced after the issuance of the PTC/T2 on August 31, 2009. For example, the facility had no carbon monoxide (CO) emissions limits before the issuance of the PTC/T2 on August 31, 2009. Currently, the CO emissions from the facility are limited to 391 T/yr because the steam production of the boiler is limited by the issuance of PTC/T2 No. T2-050113. Additionally, limits on VOC and PM_{10} from the hog fuel boiler and from the lumber drying kilns are currently existing in the PTC/T2 and these limits are carried over to the renewed Tier I operating permit. The PTC/T2 was issued to the facility to fulfill the requirements of the compliance schedule existed in the facility's Tier I operating permit, issued on March 7, 2005.

For details regarding the emissions inventory for this facility, refer to the Tier I operating permit renewal application, received by DEQ on April 27, 2007, which contains the emissions inventory for the sources regulated in this permit. This statement of basis contains the most recent emissions inventory from the facility, which was submitted during the development of the compliance PTC/T2 permit, which was issued on August 31, 2009.

Table 4.6 summarizes the emissions inventory for the criteria air pollutants and for the total HAP emissions for this major facility. All values are expressed in units of tons-per-year and represent the facility's potential to emit. Potential to emit is defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hour of operation or on the type or amount of material combusted, stored or processed shall be treated as part of its design if the limitation or the effect it would have on emission is state or federally enforceable.

The documentation provided by the applicant for the emissions inventory and emission factors is provided in Appendix B of this statement of basis.

Table 4.6 EMISSIONS INVENTORY – POTENTIAL TO EMIT (T/yr)

Emissions Unit Description	PM_{10}[a]	NO_X[b]	SO_2[c]	CO[d]	VOC[e]	Lead[f]	HAP[g]
Hog fuel boiler – EFB stack	28.5	60.6	2.7	391	25.4	8.4	8.06
Disengagement stack baghouse	0.8	--	--	--	--	--	--
Drying kilns	5.0	--	--	--	61.7	--	23.79
Sawdust truck bin target box	1.1					--	--
Chip bin target boxes	5.3	--	--	--	--	--	--
Chip cyclone	5.6	--	--	--	--	--	--
Fuel bin vents (2)	6.1	--	--	--	--	--	--
Fuel truck bin target box	0.1	--	--	--	--	--	--
Planer mill baghouses (2)	0.009	--	--	--	--	--	--
TOTAL EMISSIONS	**52.51**	**60.6**	**2.7**	**391**	**87.1**	**8.4**	**31.85**

[a] Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
[b] Oxides of nitrogen
[c] Sulfur dioxide
[d] Carbon monoxide
[e] Volatile organic compounds
[f] pounds per quarter
[g] Hazardous Air Pollutants

5. EMISSIONS LIMITS AND MRRR

This section contains the applicable requirements for this major facility. Where applicable, monitoring, recordkeeping and reporting requirements (MRRR) follow the applicable requirement and state how compliance with the applicable requirement is to be demonstrated.

This section is divided into several subsections. The first subsection lists the requirements that apply facility wide. The next subsection lists the emissions units- and emissions activities-specific applicable requirements. These subsections are hog fuel-fired boiler, dry kilns, planer mills, and compliance assurance monitoring. The final subsection contains the general provisions that apply to all major facilities subject to Idaho DEQ's Tier I operating permit requirements.

This section contains the following subsections:

- Facility-Wide Conditions;
- Hog fuel-fired boiler
- Dry kilns (four total);
- Planer mill;
- Compliance Assurance Monitoring; and
- Tier I Operating Permit General Provisions.

MRRR

Immediately following each applicable requirement (permit condition) is the periodic monitoring regime upon which compliance with the underlying applicable requirement is demonstrated. A periodic monitoring regime consists of monitoring, recordkeeping and reporting requirements for each applicable requirement. If an applicable requirement does not include sufficient monitoring, recordkeeping and reporting to satisfy IDAPA 58.01.01.322.06, 07, and 08, then the permit must establish adequate monitoring, recordkeeping and reporting sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. This is known as gap filling.

The discussion of each permit condition includes the legal and factual basis for the permit condition.

State Enforceability

An applicable requirement that is not required by the federal CAA and has not been approved by EPA as a SIP-approved requirement is identified as a "State-only" requirement and is enforceable only under state law. State-only requirements are not enforceable by the EPA or citizens under the CAA. State-only requirements are identified in the permit within the citation of the legal authority for the permit condition.

Federal Enforceability

Unless identified as "State-only", all applicable requirements, including MRRR, are state and federally enforceable. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying applicable requirement (e.g. emissions limit).

To minimize the length of this document, the MRRR for the facility-wide permit conditions has been paraphrased. Refer to the permit for the complete requirement.

5.1 Facility-wide Conditions

Permit Condition 2.1 – Fugitive Dust

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650-651, 3/30/07]

MRRR (Permit Conditions 2.2 through 2.4)

- Monitor and maintain records of the frequency and the methods used to control fugitive dust emissions;
- Maintain records of all fugitive dust complaints received and the corrective action taken in response to the complaint;
- Conduct a monthly facility-wide inspection of all sources of fugitive emissions. If any of the sources of fugitive dust are not being reasonably controlled, corrective action is required.
- Records of each fugitive dust inspection and corrective action taken are to be maintained at the permitted facility.

[IDAPA 58.01.01.322.06, 07, 08, 4/5/2000]

Permit Condition 2.5 – Odors

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776 (State-only), 5/1/94]

MRRR (Permit Condition 2.6)

- Maintain records of all odor complaints received and the corrective action taken in response to the complaint;
- Take appropriate corrective action if the complaint has merit, and log the date and corrective action taken.

[IDAPA 58.01.01.322.06, 07 (State-only), 5/1/94]

Permit Condition 2.7 – Visible Emissions

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/2/08T]

MRRR (Permit Condition 2.8)

- Conduct a monthly facility-wide inspection during daylight hours and under normal operating conditions for the purposes of observing points of visible emissions from all emissions units subject to the visible emissions standards.
- Sources that are monitored using a continuous opacity monitoring system (COMS) are not required to comply with this permit condition.
  - Each inspection shall be conducted as follows:
    - Initial see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either:
      - Take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions, and conduct another see/no see evaluation within 24 hours. If the visible emissions are not eliminated, the permittee shall comply with b).

  OR

    - Perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. If the measured opacity is greater than 20% for the time period specified in Section 625, the permittee shall take corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136.

- Records of each visible emission inspection and each opacity test and corrective action taken are to be maintained at the permitted facility.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

Permit Condition 2.9 – Excess Emissions

The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between Permit Condition 2.9 and the regulations of IDAPA 58.01.01.130-136.

MRRR

Monitoring, recordkeeping and reporting requirements for excess emissions are provided in Sections 131 through 136.

Permit Condition 2.10 – Performance Testing

If performance testing is required, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent decree, or by DEQ approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any performance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

- The type of method to be used
- Any extenuating or unusual circumstances regarding the proposed test
- The proposed schedule for conducting and reporting the test

The permittee shall submit a compliance test report for the respective test to DEQ within 30 days following the date in which a compliance test required by this permit is concluded. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to the following address:

Air Quality Permit Compliance
Department of Environmental Quality
Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene, Idaho 83814
Phone: (208) 769-1422 Fax: (208) 769-1404

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/94]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

However, if performance testing is required, it is to be conducted in accordance with IDAPA 58.01.01.157, including any and all monitoring, recordkeeping and reporting requirements. Emissions-unit specific MRRR will be listed within the permit condition requiring performance testing permit condition.

Permit Condition 2.11 – Monitoring and Recordkeeping

The permittee shall maintain sufficient records to assure compliance with all of the terms and conditions of this operating permit. Records of monitoring information shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.322.07, 5/1/94]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 2.12 – Reports and Certifications

All periodic reports and certifications required by this permit shall be submitted to DEQ within 30 days of the end of each specified reporting period. Excess emissions reports and notifications shall be submitted in accordance with IDAPA 58.01.01.130-136. Reports, certifications, and notifications shall be submitted to:

Air Quality Permit Compliance
Department of Environmental Quality
Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene, Idaho 83814
Phone: (208) 769-1422 Fax: (208) 769-1404

The periodic compliance certification required by General Provision 21 shall also be submitted within 30 days of the end of the specified reporting period to:

EPA Region 10
Air Operating Permits, OAQ-107
1200 Sixth Ave.
Seattle, WA 98101

[IDAPA 58.01.01.322.08, 11, 5/1/94]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 2.13 – Fuel Burning Equipment PM Standards

The permittee shall not discharge PM to the atmosphere from any fuel-burning equipment in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas, 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid, 0.050 gr/dscf of effluent gas corrected to 8% oxygen by volume for coal, and 0.080 gr/dscf of effluent gas corrected to 8% oxygen by volume for wood products.

[IDAPA 58.01.01.676-677, 5/1/94]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 2.14 – Distillate Fuel Oil Sulfur Content Limits

The permittee shall not sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:

- ASTM Grade 1 fuel oil - 0.3% by weight.
- ASTM Grade 2 fuel oil - 0.5% by weight.

[IDAPA 58.01.01.728, 5/1/94]

MRRR – (Permit Condition 2.14.1)

The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content on an as-received basis.

[IDAPA 58.01.01.322.06, 5/1/94]

Permit Condition 2.15 – Open Burning

The permittee shall comply with the *Rules for Control of Open Burning,* IDAPA 58.01.01.600-623.

[IDAPA 58.01.01.600-623, 4/2/08T]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 2.16 – Renovation/Demolition

The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

[40 CFR 61, Subpart M]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 2.17 – Regulated Substances for Accidental Release Prevention

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, shall comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.
- The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR 68.10 (a)]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 2.18 – Recycling and Emissions Reductions

The permittee shall comply with applicable standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction.

[40 CFR 82, Subpart F]

MRRR

No monitoring is required for this facility-wide condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Permit Condition 2.19 – Particulate Matter, Process Weight Limitations

- The permittee shall not emit to the atmosphere from any process or process equipment operating on or after October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour:

  a. If PW is less than 9,250 lb/hr,

  $E = 0.045(PW)^{0.60}$

  b. If PW is equal to or greater than 9,250 lb/hr,

  $E = 1.10(PW)^{0.25}$

- The permittee shall not emit to the atmosphere from any process or process equipment operating prior to October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour:

  a. If PW is less than 17,000 lb/hr,

  $E = 0.045(PW)^{0.60}$

  b. If PW is equal to or greater than 17,000 lb/hr,

  $E = 1.12(PW)^{0.27}$

[Draft][IDAPA 58.01.01.700, 5-3-03]

MRRR

Compliance with Permit Condition 2.19 can be determined by Permit Conditions 2.4 and 2.7. The affected emissions units, which Permit Condition 2.19 applies to them are listed in Table 6.1 below:

Table 5.1 AFFECTED EMISSIONS POINTS AND EMISSIONS CONTROL DEVICES

Emissions Unit / Process	Emissions Control Device
Green chip bin target box	None
Green chip bin rail car loading	None
Fuel bin target box No. 2	None
Hog fuel bin target box	None
Destoner	None
Log sawing	None
Screens	None
Hogs	None
Green chip bin truck loading	None
Fuel bin target box No. 1	None
Sawdust truck bin target box	None
Stud mill scrap chipper	None
Bark hog	None
Debarking	None
Chippers	None
Process cyclones	None
Dry kilns	None
Planer mills	Baghouses

Permit Condition 2.20 – PTC/T2 General Provision

The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[PTC/T2 General Provision, 8/31/09]

MRRR

No additional monitoring is required for this condition. As with all permit conditions, IFG must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

5.2 Emissions Unit-specific Emissions Limits and MRRR

In this section of the statement of basis all permit conditions that are associated with PTC/T2 No. T2-050113, issued on August 23, 2009 are included in the renewed Tier I operating permit. The renewed permit also contains a Compliance Assurance Monitoring (CAM), which is discussed in Section 6.7 of the statement of basis.

Hog Fuel Boiler

Permit Condition 3.1 – PM_{10} and CO Emissions Limits

- The PM_{10} and CO emissions from the boiler EFB primary stack shall not exceed any corresponding emissions rate limits listed in Table 3.3 of the permit.

- The PM_{10} emissions from the boiler's EFB disengagement chamber stack shall not exceed any corresponding emissions rate limits listed in Table 3.3 of the permit.

Table 3.3 OF THE PERMIT - HOG FUEL BOILER EMISSIONS LIMITS[1]

Source Description	PM_{10}[2]		CO
	lb/hr[3]	T/yr[4]	T/yr[4]
Boiler - EFB primary stack	6.51	28.5	391.0
Boiler – disengagement chamber stack	0.18	0.79	--

1) In absence of any other credible evidence, compliance is assured by complying with this permit's operating, monitoring and recordkeeping requirements.
2) Particulate matter with and aerodynamic diameter less than or equal to a nominal ten (10) micrometers including condensible particulate as defined in IDAPA 58.01.01.006.80.
3) Pounds per hour. As determined by source test methods prescribed by IDAPA 58.01.01.157.
4) Tons per consecutive 12-calendar month period.

[PTC/T2 No. T2-050113, 8/31/09]

MRRR

Compliance with the PM_{10} hourly emissions rate from the EFB primary stack can be determined by Permit Condition 3.12 through the performance testing at least once every five years. During the time period when performance testing is not conducted, the permittee can determine compliance with the PM_{10} emissions limits from the EFB primary stack by operating the EFB in accordance with the O&M manual. At a minimum the O&M manual must establish the following: voltage, amperage, and temperature operating ranges for the EFB filter bed including the averaging periods. The manual must also address voltage and amperage monitoring procedures to determine whether the EFB filter bed is operating as designed. The manual must also be updated after each performance test conducted in accordance with Permit Condition 3.12. Each updated manual must establish ranges with averaging periods for operating parameters consistent with those achieved during performance test, which demonstrated compliance.

Permit Condition 3.5 requires the permittee to install equipment to continuously measure the EFB's parameters (i.e., filter bed voltage, filter bed current, and filter bed temperature) to control PM_{10} from the EFB primary stack.

Compliance with the PM_{10} emissions rate of 0.18 lbs/hr from the boiler's disengagement chamber stack can be determined by Permit Condition 3.9, procedures document for the inspection and maintenance of the baghouse operation. Baghouses are expected to be highly effective in controlling particulate matter emissions from this process, provided they are operated and maintained according to manufacturer specifications and are periodically inspected.

In accordance with T2/PTC No. T2-050113, issued on August 31, 2009, compliance with CO annual emissions limits (391.0 T/yr) can be determined by monitoring the boilers' steam production on a monthly basis and by using the CO EF (2.0 $lb/10^3$ pounds steam) that is used in the T2/PTC application. Steam production from the boiler is limited in Permit Condition 3.4 and monitored continuously in accordance with Permit Condition 3.6.

Permit Condition 3.3 – PM Emissions Limits, IDAPA 58.01.01.677

In accordance with IDAPA 58.01.01.677, the permittee shall not discharge PM to the atmosphere from any fuel-burning equipment in excess of 0.2 gr/dscf of effluent gas corrected to 8% oxygen by volume when burning wood product.

[PTC/T2 No. T2-050113, 8/31/09]

MRRR

Compliance with the PM grain loading requirements is determined by a PM performance test in accordance with Permit Condition 3.12. During the time period when performance testing is not conducted, the permittee can determine compliance with the PM grain loading emissions limits from the EFB primary stack by operating the EFB in accordance with the O&M manual (see Permit Condition 3.7.)

Permit Condition 3.4 – Steam Production Limits

The boiler shall not produce more than 391 million pounds of steam per any consecutive 12-month calendar period.

[PTC/T2 No. T2-050113, 8/31/09]

MRRR

Compliance with the annual steam production from the hog fuel boiler is determined by monitoring steam production in accordance with Permit Condition 3.6. The permittee will monitor and record the boiler's steam production monthly and annually to demonstrate compliance with this permit condition and in accordance with Permit Condition 3.13. Steam production will be determined by summing the monthly steam production rates over the previous consecutive 12-calendar months period.

Permit Condition 3.8 – Baghouse Operation

The permittee shall install and operate a baghouse to control PM and PM_{10} emissions from the EFB disengagement chamber stack.

[PTC/T2 No. T2-050113, 8/31/09]

MRRR

Because the baghouse is already installed there is no MRRR for this permit condition.

Permit Condition 3.10 – EFB's Operating Parameters

The operating parameters for voltage, amperes, and filter bed temperature for the EFB shall be maintained within the O&M manual specifications.

[PTC/T2 No. T2-050113, 8/31/09]

MRRR

Permit Condition 3.7 requires the permittee to develop an O&M manual that establishes the operating ranges for the EFB operating parameters for the control of PM and PM_{10} emissions from the boiler primary stack.

Permit Condition 3.11 – Chip Surge Bin and Hog Mix Bin

This permit condition establishes a requirement to remove the chip surge bin and the hog fuel mix bin cyclones and their associated stacks, as requested by the permittee.

Permit Condition 3.12 – Performance Tests for PM and PM_{10}

This permit condition requires the permittee to conduct performance tests for PM and PM_{10} from the boiler EFB primary stack to determine compliance with the PM and PM_{10} emissions rate limits in Permit Condition 3.1.

Permit Condition 3.14 – Monitoring the EFB's Parameters

The permittee shall monitor and record continuously the EFB ionizer voltage and amperage; and the EFB filter-bed voltage, current, and temperature while the EFB is operating. This information shall be maintained in accordance with Permit Condition 2.11.

[PTC/T2 No. T2-050113, 8/31/09]

MRRR – Permit Condition 3.15

Compliance with Permit Condition 3.14 is determined through Permit Condition 3.15, which requires the permittee to maintain records of the results of the continuous EFB ionizer voltage and current; and EFB filter-bed temperature, voltage and current, in accordance with Permit Condition 2.11 (Monitoring and Recordkeeping).

MRRR – Permit Condition 3.17

Permit Condition 3.17 establishes requirement to submit to DEQ a report about the results of each of the performance tests conducted regarding PM and PM_{10} performance tests no later than 30-day after completion of the test. More frequent tests for PM/PM_{10} will be required in accordance with PM/PM_{10} performance tests hierarchy (see Permit Condition 3.12).

Dry Kilns – Four Total

Permit Condition 4.1 – PM_{10} and VOC Emissions Limits

- The combined PM_{10} emissions from the four dry kiln vents shall not exceed any corresponding emissions rate limits listed in Table 4.3 of the permit.

- The combined VOC emissions from the four dry kiln vents shall not exceed any corresponding emissions rate limits listed in Table 4.3 of the permit.

Table 4.3 OF THE PERMIT FOR DRY KILNS – FOUR TOTAL EMISSIONS LIMITS[1]

Source Description	PM_{10}[2]		VOC
	lb/day[3]	T/yr[4]	T/yr[4]
Dry kilns – four total	34.8	5.0	61.7

1) In absence of any other credible evidence, compliance is assured by complying with this permit's operating, monitoring and recordkeeping requirements.
2) Particulate matter with and aerodynamic diameter less than or equal to a nominal ten (10) micrometers including condensible particulate as defined in IDAPA 58.01.01.006.80.
3) Pounds per calendar day.
4) Tons per consecutive 12-calendar month period.

[PTC/T2 No. T2-050113, 8/31/09]

MRRR – Permit Condition 4.1

Compliance with permit condition 4.1 can be determined by Permit Condition 4.4 (throughput monitoring). The PM_{10} and VOC emissions estimates are based on the amount of green lumber that is dried in the kilns. The estimated green lumber that is allowed in PTC/T2 No.T2-050113 is 199 million BF/yr - see emissions estimates in Appendix B. The estimated VOC emissions from the kilns is 61.7 T/yr (199 $x10^6$ BF/yr * 0.62 lbs $VOC/10^3$ BF * 1 T/2,000 lbs). The emissions factor of 0.62 lbs of $VOC/10^3$ board feet which is used in the VOC emissions estimates is obtained from drying different wood species in the kilns. The following is the average five years of data of wood species mix dried in the kilns from 1996 through 2000 with the type of wood dried in IFG's kilns and the percentage of each

type: ponderosa pine (0.7%), larch (45.6%), hemlock (22.6%), lodgepole pine (29.6%), and mixed of all species (1.5%) – for more details see Table 8 of Appendix B of this statement of basis. It can be concluded from this data that the VOC emission factor of 0.62 lbs/10^3 BF is fairly representative value that can be used for the VOC emissions estimates from the dry kilns.

The PM_{10} emissions limits are included in this permit because it is an applicable requirement and it is rolled over into this permit from PTC/T2 No. T2-050113.

The dry kilns' particulate matter process weight limitations, which existed as permit conditions in the Tier I Operating Permit No.T1-040104, issued on March 7, 2005, were removed from Section 2 (Sawmill, Planer Mill, Dry Kilns, and Boiler) of that permit and are now included in the facility-wide section of the renewed permit – see section 2.19 of renewed permit.

Permit Condition 4.3 – Lumber Throughput

The maximum green lumber throughput to the four dry kilns shall not exceed 199 million board feet per any consecutive 12-calendar month period (MMBF/yr).

[PTC/T2 No. T2-050113, 8/31/09]

MRRR

Compliance with Permit Condition 4.3 is determined through Permit Condition 4.4 which contains requirement to monitor the green lumber to the four kilns not to exceed 199 MMBF/yr per any consecutive 12-month period. The permittee is required to monitor and record the monthly and annual green lumber throughput to the kilns. Annual throughput will be determined by summing each month throughput over the previous consecutive 12-calendar period.

Planer Mill – Two Planer Mills

There are two planer mills (Stetson and Newman) existing at IFG. The Stetson planer mill was included in the Tier II operating permit No. T2-050113 that was issued to the facility on August 31, 2009. However, the Newman planer mill was not part of the compliance schedule that exited in Tier I Operating Permit No. T1-040104, issued on March 7, 2005, and was not included in the T2-050113 permit. All the applicable requirements existed in T2-050113 which are associated with the Stetson planer mill are carried over to the renewed Tier I operating permit. However, the monitoring requirements for the baghouse, which are similar to those of the Stetson, are included in the renewed permit for Newman planer mill as a gap filling in accordance with IDAPA 58.01.01.322.06.

Permit Condition 5.2 and MRRR – O&M Manual for the Baghouse

This permit condition requires the permittee to develop a baghouse procedure documents for the inspection and operation of the baghouse which control the PM and PM_{10} emissions from the Stetson and the Newman planer mill stacks – see Permit Condition 5.2 for detail information regarding the MRRR.

The Planer mill particulate matter process weight limitations, which existed as permit conditions in the Tier I Operating Permit No.T1-040104, issued on March 7, 2005, were removed from Section 2 (Sawmill, Planer Mill, Dry Kilns, and Boiler) of that permit and are now included in the facility-wide section of the renewed permit – see section 2.19 of renewed permit.

Existing Compliance Schedule in Permit No. T1-040104, issued March 7, 2005:

IFG was issued a permit to construct and Tier II operating permit No. T2-050113 in August 31, 2009 to fulfill the requirements of the compliance schedule contained in the facility's Tier I operating permit No. T1-040104, issued on March 7, 2005. Therefore, the compliance schedule that was included in the Tier I operating Permit No. T1-040104, issued March 7, 2005, is removed from the renewed permit.

Existing Permit Conditions in Permit No. T1-040104, issued March 7, 2005:

Existing Permit Conditions 2.10 and 2.11 of T1-040104, issued March 7, 2005, contains requirements for monitoring the pressure drop across the EFB's disengagement chamber baghouse stack. These permit conditions are deleted from the permit because DEQ does not use the pressure drop monitoring for the baghouse any longer. Based on DEQ's current Internal Guidance – Establishing Permit Conditions, the see-no-see visible emissions inspection from the baghouse stack is used in the renewed permit instead of monitoring the pressure drop of the baghouse.

5.3 General Provisions

Unless expressly stated, there are no MRRR for the general provisions.

General Provision 1 – General Compliance, Duty to Comply

The permittee must comply with the terms and conditions of the permit.

[IDAPA 58.01.01.322.15.a, 5/1/94; 40 CFR 70.6(a)(6)(i)]

General Provision 2 – General Compliance, Need to Halt or Reduce Activity Not a Defense

The permittee cannot use the fact that it would have been necessary to halt or reduce an activity as a defense in an enforcement action.

[IDAPA 58.01.01.322.15.b, 5/1/94; 40 CFR 70.6(a)(6)(ii)]

General Provision 3 – General Compliance, Duty to Supplement or Correct Application

The permittee must promptly submit such supplementary facts or corrected information upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application. The permittee must also provide information as necessary to address any new requirements that become applicable after the date a complete application has been filed but prior to the release of a draft permit.

[IDAPA 58.01.01.315.01, 5/1/94; 40 CFR 70.5(b)]

General Provision 4 – Reopening, Additional Requirements, Material Mistakes, Etc.

This term lists the instances when the permit must be reopened and revised, including times when additional requirements become applicable, when the permit contains mistakes, or when revision or revocation is necessary to assure compliance with applicable requirements.

[IDAPA 58.01.01.322.15.c, 5/1/94; IDAPA 58.01.01.386, 3/19/99; 40 CFR 70.7(f)(1), (2); 40 CFR 70.6(a)(6)(iii)]

General Provision 5 – Reopening, Permitting Actions

This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If IFG files a request to modify, revoke, reissue, or terminate the permit, the request does not stay any permit condition, nor does notification of planned changes or anticipated noncompliance.

[IDAPA 58.01.01.322.15.d, 5/1/94; 40 CFR 70.6(a)(6)(iii)]

General Provision 6 – Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

[IDAPA 58.01.01.322.15.e, 5/1/94; 40 CFR 70.6(a)(6)(iv)]

General Provision 7 – Information Requests

The permittee must furnish, within a reasonable time to DEQ, any information, including records required by the permit, that is requested in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.

[Idaho Code §39-108; IDAPA 58.01.01.122, 4/5/00; IDAPA 58.01.01.322.15.f, 4/5/00; 40 CFR 70.6(a)(6)(v)]

General Provision 8 – Information Requests, Confidential Business Information

Upon request, the permittee must furnish to DEQ copies of records required to be kept by this permit. For information claimed to be confidential, the permittee may furnish such records along with a claim of confidentiality in accordance with Idaho Code §9-342A and applicable implementing regulations including IDAPA 58.01.01.128.

[IDAPA 58.01.01.322.15.g, 5/1/94; IDAPA 58.01.01.128, 4/5/00; 40 CFR 70.6(a)(6)(v)]

General Provision 9 - Severability

If any provision of the permit is held to be invalid, all unaffected provisions of the permit will remain in effect and enforceable.

[IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]

General Provision 10 – Changes Requiring Permit Revision or Notice

The permittee may not commence construction or modification of any stationary source, facility, major facility, or major modification without first obtaining all necessary permits to construct or an approval under IDAPA 58.01.01.213, or complying with IDAPA 58.01.01.220 through 223. The permittee must comply with IDAPA 58.01.01.380 through 386 as applicable.

[IDAPA 58.01.01.200-223, 4/2/08; IDAPA 58.01.01.322.15.i, 3/19/99; IDAPA 58.01.01.380-386, 7/1/02; 40 CFR 70.4(b)(12), (14), (15), and 70.7(d), (e)]

General Provision 11 – Changes Requiring Permit Revision or Notice.

Changes that are not addressed or prohibited by the Tier I operating permit require a Tier I operating permit revision if such changes are subject to any requirement under Title IV of the CAA, 42 U.S.C. Section 7651 through 7651c, or are modifications under Title I of the CAA, 42 U.S.C. Section 7401 through 7515. Administrative amendments (IDAPA 58.01.01.381), minor permit modifications (IDAPA 58.01.01. 383), and significant permit modifications (IDAPA 58.01.01.382) require a revision to the Tier I operating permit. IDAPA 58.01.01.502(b)(10) changes are authorized in accordance with IDAPA 58.01.01.384. Off-permit changes and required notice are authorized in accordance with IDAPA 58.01.01.385.

[IDAPA 58.01.01.381-385, 7/1/02; IDAPA 58.01.01.209.05, 4/11/06; 40 CFR 70.4(b)(14) and (15)]

General Provisions 12 and 13 – Federal and State Enforceability

All permit conditions are federally enforceable unless specified in the permit as a state or local only requirement. State and local only requirements are not required under the CAA and are not enforceable by EPA or by citizens.

[IDAPA 58.01.01.322.15.j, 5/1/94; IDAPA 58.01.01.322.15.k, 3/23/98; Idaho Code §39-108; 40 CFR 70.6(b)(1) and (2)]

General Provision 14 – Inspection and Entry

Upon presentation of credentials, IFG shall allow DEQ or an authorized representative of DEQ to do the following:

a. Enter upon the permittee's premises where a Tier I source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;

b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

d. As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108; IDAPA 58.01.01.322.15.l, 5/1/94; 40 CFR 70.6(c)(2)]

General Provision 15 – New Requirements During Permit Term

The permittee must continue to comply with all applicable requirements and must comply with new requirements on a timely basis.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.10.a.ii, 5/1/94; 40 CFR 70.6(c)(3) citing 70.5(c)(8)]

General Provision 16 - Fees

The owner or operator of a Tier I source shall pay annual registration fees to DEQ in accordance with IDAPA 58.01.01.387 through IDAPA 58.01.01.397.

[IDAPA 58.01.01.387, 4/2/03; 40 CFR 70.6(a)(7)]

General Provision 17 – Certification

All documents submitted to DEQ shall be certified in accordance with IDAPA 58.01.01.123 and comply with IDAPA 58.01.01.124.

[IDAPA 58.01.01.322.15.o, 5/1/94; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

General Provision 18 – Renewal

a. IFG shall submit an application to DEQ for a renewal of this permit at least six months before, but no earlier than 18 months before, the expiration date of this operating permit. To ensure that the term of the operating permit does not expire before the permit is renewed, the owner or operator is encouraged to submit a renewal application nine months prior to the date of expiration.

[IDAPA 58.01.01.313.03, 4/5/00; 40 CFR 70.5(a)(1)(iii)]

b. If a timely and complete application for a Tier I operating permit renewal is submitted, but DEQ fails to issue or deny the renewal permit before the end of the term of this permit, then all the terms and conditions of this permit including any permit shield that may have been granted pursuant to IDAPA 58.01.01.325 shall remain in effect until the renewal permit has been issued or denied.

[IDAPA 58.01.01.322.15.p, 5/1/94; 40 CFR 70.7(b)]

General Provision 19 – Permit Shield

Compliance with the terms and conditions of the Tier I operating permit, including those applicable to all alternative operating scenarios and trading scenarios, shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the Tier I operating permit; or

   i. DEQ has determined that other requirements specifically identified are not applicable and all of the criteria set forth in IDAPA 58.01.01.325.01(b) have been met.

b. The permit shield shall apply to permit revisions made in accordance with IDAPA 58.01.01.381.04 (administrative amendments incorporating the terms of a permit to construct), IDAPA 58.01.01.382.04 (significant modifications), and IDAPA 58.01.01.384.03 (trading under an emissions cap).

c. Nothing in this permit shall alter or affect the following:

   i. Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;

   ii. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

   iii. The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and

   iv. The ability of EPA to obtain information from a source pursuant to Section 114 of the CAA; or the ability of DEQ to obtain information from a source pursuant to Idaho Code §39-108 and IDAPA 58.01.01.122.

[Idaho Code §39-108 and 112; IDAPA 58.01.01.122, 4/5/00; IDAPA 58.01.01.322.15.m, 325.01, 5/1/94; IDAPA 58.01.01.325.02, 3/19/99; IDAPA 58.01.01.381.04, 382.04, 383.05, 384.03, 385.03, 3/19/99; 40 CFR 70.6(f)]

General Provision 20 – Compliance Schedule and Progress Reports.

a. For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.

b. For each applicable requirement that will become effective during the term of this permit and that provides a detailed compliance schedule, the permittee shall comply with such requirements in accordance with the detailed schedule.

c. For each applicable requirement that will become effective during the term of this permit that does not contain a more detailed schedule, the permittee shall meet such requirements on a timely basis.

d. For each applicable requirement with which the permittee is in compliance, the permittee shall continue to comply with such requirements.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.9, 5/1/94; IDAPA 58.01.01.314.10, 4/5/00; 40 CFR 70.6(c)(3) and (4)]

General Provision 21 – Periodic Compliance Certification

IFG shall submit compliance certifications during the term of the permit for each emissions unit to DEQ and the EPA as follows:

a. The compliance certifications for all emissions units shall be submitted annually from January 1 to December 31 or more frequently if specified by the underlying applicable requirement or elsewhere in this permit.

b. The initial compliance certification for each emissions unit shall address all of the terms and conditions contained in the Tier I operating permit that are applicable to such emissions unit including emissions limitations, standards, and work practices;

c. The compliance certification shall be in an itemized form providing the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):

   i. The identification of each term or condition of the Tier I operating permit that is the basis of the certification;

   ii. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under Subsections 322.06, 322.07, and 322.08;

   iii. The status of compliance with the terms and conditions of the Tier I operating permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in Subsection 322.11.c.ii. above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

   iv. Such information as the Department may require to determine the compliance status of the emissions unit.

d. All original compliance certifications shall be submitted to DEQ and a copy of all compliance certifications shall be submitted to the EPA.

[IDAPA 58.01.01.322.11, 4/6/05; 40 CFR 70.6(c)(5)(iii) as amended, 62 Fed. Reg. 54900, 54946 (10/22/97); 40 CFR 70.6(c)(5)(iv)]

General Provision 22 – False Statements

IFG may not make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

General Provision 23 – No Tampering

IFG may not render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

General Provision 24 – Semiannual Monitoring Reports.

In addition to all applicable reporting requirements identified in this permit, IFG shall submit reports of any required monitoring at least every six months. IFG's semiannual reporting periods shall be from January 1 to June 30 and July 1 to December 31. All instances of deviations from this operating permit's requirements must be clearly identified in the report. The semiannual reports shall be submitted to DEQ within 30 days of the end of the specified reporting period.

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.322.08.c, 4/5/00; 40 CFR 70.6(a)(3)(iii)]

General Provision 25 – Reporting Deviations and Excess Emissions

Each and every applicable requirement, including MRRR, is subject to prompt deviation reporting. Deviations due to excess emissions must be reported in accordance Sections 130-136. All instances of deviation from Tier I operating permit requirements must be included in the deviation reports. The reports must describe the probable cause of the deviation and any corrective action or preventative measures taken. Deviation reports must be submitted at least every six months unless the permit specifies a different time period as required by IDAPA 58.01.01.322.08.c. Examples of deviations include, but are not limited to, the following:

- Any situation in which an emissions unit fails to meet a permit term or condition
- Emission control device does not meet a required operating condition
- Observations or collected data that demonstrate noncompliance with an emissions standard
- Failure to comply with a permit term that requires a report

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.135, 4/11/06; 40 CFR 70.6(a)(3)(iii)]

General Provision 26 – Permit Revision Not Required, Emissions Trading

No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit.

[IDAPA 58.01.01.322.05.b, 4/5/00; 40 CFR 70.6(a)(8)]

General Provision 27 - Emergency

In accordance with IDAPA 58.01.01.332, an "emergency" as defined in IDAPA 58.01.01.008, constitutes an affirmative defense to an action brought for noncompliance with such technology-based emissions limitation if the conditions of IDAPA 58.01.01.332.02 are met.

[IDAPA 58.01.01.332.01, 4/5/00; 40 CFR 70.6(g)]

6. REGULATORY REVIEW

6.1 Attainment Designation (40 CFR 81.313)

The facility is located in Boundary County which is designated as attainment or unclassifiable for PM_{10}, $PM_{2.5}$, CO, NO_2, SO_X, and Ozone. Reference 40 CFR 81.313. There are no class areas within 10 km of the facility.

6.2 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

This facility is a major facility as defined by IDAPA 58.01.01.008.10 because it emits or has the potential to emit CO in amounts greater than or equal to major facility threshold(s) listed in Subsection 008.10. The AIRS facility classification is A.

6.3 PSD Classification (40 CFR 52.21)

From the emission inventory that was provided by the applicant (see Appendix B), the potential to emit (PTE) for the CO emission rates from the boiler is greater than 250 T/yr. Therefore, the IFG is considered a major stationary source (greater than 250 tons/year), as defined in IDAPA 58.01.01.205.01 and in 40 CFR 52.21(b). Because the facility is a PSD major, any construction or modification of a new source at the facility is subject to PSD review.

For more information about the PSD classification for this facility, please refer to the statement of basis of the PTC/T2 No. T2-050113, issued August 31, 2009. The permit and the statement of basis are provided in DEQ Web site "www.deq.idaho.gov/air/permits_forms/permitting/t2-permits_final.

6.4 NSPS Applicability (40 CFR 60)

40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

The Kipper and Sons hog fuel fired boiler at the facility has a capacity of 128 MMBtu/hr and was installed in 1972, before the promulgated construction date (June 19, 1984) of the NSPS, subpart Db. Therefore, in accordance with 40 CFR 60.40b, the NSPS does not apply to the boiler. According to the Tier II OP application (received by DEQ on May 12, 2005), the boiler was never modified to trigger the NSPS requirements. DEQ issued to the facility the PTC/T2 No. T2-050113 on August 31, 2009, to fulfill the requirements of the compliance schedule contained in the IFG's Tier I Operating Permit No. T1-040104, issued March 7, 2005. The increase in steam demand of the boiler due to the modifications of the lumber kilns in 1985, 1988, and the 1989 Stetson planer mill installation did not trigger NSPS requirements to the boiler. There is no physical or operating change to the boiler that triggers NSPS. The increase of hours of operations of the boiler to meet the steam demand to the kilns is not considered a modification. In accordance with 40 CFR 60.14(e), the following shall not, by themselves, be considered modifications: "(1) maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of 40 CFR 60.14(c) and 40 CFR 60.15; (2) an increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility; (3) an increase in the hours of operations." The boiler was included in the PTC/T2 No. T2-050113 issued on August 31, 2009 because the boiler is part of the facility, which produced steam that was largely used during the modification/construction that occurred at the facility in 1985 (4^{th} kiln addition), 1988 (expansions of four kilns), and in 1989 (planer mill addition.)

6.5 NESHAP Applicability (40 CFR 61)

No NESHAP applies to this facility

6.6 MACT Applicability (40 CFR 63)

40 CFR 63 Subpart DDDD, National Emission Standards for Hazardous Air Pollutant: Plywood and Composite Wood Products (PCWP)

The "Plywood" MACT, 40 CFR 63.2230 *et seq.*, applies to lumber kilns located at any facility that is a major source of HAP emissions. The facility is major for HAP; therefore, this subpart applies to the facility. In accordance with 40 CFR 63.2280 (What notifications must I submit and when?), the only applicable requirement that applies to IFG is the initial notifications, as specified in 40 CFR 63.9(b)(2). On January 28, 2005, Idaho DEQ received the initial notifications for this subpart from the IFG, and it was in accordance with 40 CFR 63.2280(b); therefore, the requirement for this subpart is fulfilled. Thus, no requirements regarding this subpart is included in the modified Tier I operating permit.

40 CFR 63 Subpart DDDDD, NESHAPS for Industrial, Commercial, and Institutional Boilers and Process Heaters

The "Boiler" MACT, 40 CFR 63.7485 specifies that the facility is subject to this subpart if the facility owns an industrial, commercial, or institutional boiler or process heater that is located at, or is part of, a major source of HAP. IFG , Moyie Springs facility is a major source of HAP; therefore, this subpart applies to the facility. Note that on June 8, 2007, the United States Court of Appeals for the District of Columbia Circuit issued a decision vacating this MACT in its entirety and remanding this rule back to EPA. As a result, this MACT rule is no longer in force.

6.7 CAM Applicability (40 CFR 64)

The CAM rule under 40 CFR part 64 requires monitoring for specific emissions units at a facility that is subject to the Title V regulations (required to obtain a Tier I operating permit from the State of Idaho). The CAM rule applies to a specific subset of emissions units at Clean Air Act, Title V facilities that meet the following requirements: (1) located at a major source that is required to obtain a Title V permit (40 CFR part 70 or 71), (2) subject to an emission limit or standard for the applicable pollutant, (3) uses a control device to achieve compliance, (4) has potential precontrol emissions of the applicable pollutant from the unit that are at least at the major source level, and (5) is not otherwise exempt (i.e., units subject to New Source Performance Standards (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAP) that were proposed after November 1990 are not subject to the CAM rule, units subject to Acid Rain requirements are not being subject to the CAM rule. Emissions equipped with a continuous compliance determination method that is required by a rule or permit, such a continuous emissions monitors, are also exempt from CAM (40 CFR 64.2(b)(vi)). Basically, CAM monitoring is specific to large emissions units at Title V facilities that use add-on control devices to achieve compliance with emissions limits.

The emissions units that meet the applicability criteria are detailed in the IFG's letter received by DEQ on January 11, 2010. Table 6.1 of this statement of basis provides a summary of the CAM affected emissions units, control equipment used for compliance, indicator and indicator ranges monitoring per 40 CFR 64.6 , performance criteria, and devices to measure indicators per 40 CFR 64.6 and CAM reporting and recordkeeping per 40 CFR 64.9.

The pollutants that are emitted by the facility and is affected by the CAM rule are PM and PM_{10}. CAM is included in Section 6 of the Tier I permit for all affected emissions unit (i.e., hog fuel-fired boiler).

Table 6.1 SUMMARY OF COMPLIANCE ASSURANCE MONITORING

Emission Unit/ Pollutant	40 CFR 64.2(a)(1), Emissions Limits and Standards	40 CFR 64.2(a)(2), control used for compliance	40 CFR 64.6(c)(1)(i), Indicator and indicator ranges	40 CFR 64.3(b)(1), (2), (3), (4), Performance criteria	40 CFR 64.6 (Devices to measure indicators) and 40 CFR 64.9 (CAM Reporting and Recordkeeping)
Hog fuel boiler PM/PM_{10}	PM Grain loading, 0.200 gr/dscf at 8% O_2, IDAPA 58.01.01.677 PM_{10} PTC No. T2-050113, 6.51 lb/hr and 28.5 T/yr	EFB	EFB Operating parameters: - ionizer current, ionizer voltage, filter bed voltage, and filter bed current - filter bed temperature Ranges: - Ionizer current: 1.0-2.5 milliamperes (mA) - Ionizer voltage: 10-40 kilovolts (kV) - Filter bed voltage: 4-9.5 kV - Filter bed current: 0-0.35 mA - Filter bed temperature: greater than 150 °F If filter bed temperature drops below 150 °F, an alarm sounds and the EFB shuts down.	EFB parameters and measurement location: - ionizer current and ionizer voltage are measured at the ionizer electrode - filter bed current and filter bed voltage are measured at the filter bed electrode - filter bed temperature is measured with a thermocouple at the beginning of the outlet plenum, where the gas streams from the two towers combine. QA/QC: EFB annual maintenance or per manufacturer recommendations. Monitoring frequency: Continuous and recorded hourly (20 minimum of 24 hourly readings recorded.)	EFB Devices to measure: - Ionizer current and filter bed current: ammeters - ionizer voltage and filter bed voltage: voltmeter - filter bed temperature: thermostat control in filter bed; thermocouple in the combined gas streams exiting the filter beds - Averaging period: instantaneous CAM Recordkeeping The recordkeeping shall include the following: - Number, duration, and cause of excursions and exceedances. - Number, duration, and cause of monitor downtime - Description of actions to implement at QIP-see permit condition 6.7
Boiler's disengagement chamber stack PM_{10}	PM_{10} PTC No. T2-050113, 0.18 lb/hr and 0.79 T/yr	Baghouse	Baghouse Operating parameters: Permittee shall conduct a see/no see VE observation from boiler's disengagement chamber stack	Parameters and measurement location: Baghouse stack QA/QC: Baghouse annual maintenance or per manufacturer recommendations Monitoring frequency: At least once per day for VE observation	Baghouse - visible emissions (VE) - average period: once per day Devices to measure: - see/no see for VE observation - an excursion is defined as any VE observed from the disengagement chamber stack CAM Recordkeeping The recordkeeping shall include the following: - Number, duration, and cause of excursions and exceedances. - Number, duration, and cause of monitor

					downtime - Description of actions to implement at QIP-see permit condition 6.7

Monitoring Design Criteria §64.3 & Approved Monitoring *§64.6*

The monitoring design criteria of CAM is summarized as follows:

General Criteria

Monitoring Shall:

- Obtain data for one or more indicators. §64.3(a)(1)
- Provide a range of the indicators such that operation within those range(s) provides a reasonable assurance of compliance. §64.3(a)(2)&((3)

Performance Criteria

The monitoring methods shall:

- Provide for obtaining data that are representative of the emissions parameters being monitored. §64.3(b)(1)
- Quality assurance and control to assure continuing validity of the data collected. §64.3(b)(3)
- Specifications for the frequency of conducting the monitoring. For units with after control emissions of 100 tons per year or greater frequency shall not be less than every 15 minutes. For other units frequency shall not be less than once per 24-hours. §64.3(b)(4)
- Continuous opacity monitoring (COMS) that is already required by MACT (40 CFR 63) or NSPS (40 CFR 60) standard shall be deemed to satisfy the CAM monitoring Design Criteria. Provided that a COMS may be subject to the criteria for establishing an indicator range. §64.3(d)(2)

Approved Monitoring *§64.6*

At a minimum, the permit shall specify the following for the approved monitoring:

(1) The approved monitoring approach that includes all of the following:

- The indicator(s) to be monitored (such as temperature, pressure drop, emissions, or similar parameter);
- (ii) The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS); and
- (iii) The monitoring performance requirements established to satisfy §64.3(b) or (d), as applicable.

(2) The means by which the owner or operator will define an exceedance or excursion for purposes of responding to and reporting exceedances or excursions under §§64.7 and 64.8 of this part. The permit shall specify the level at which an excursion or exceedance will be deemed to occur, including the appropriate averaging period associated with such exceedance or excursion. For defining an excursion from an indicator range or designated condition, the permit may either include the specific

value(s) or condition(s) at which an excursion shall occur, or the specific procedures that will be used to establish that value or condition. If the latter, the permit shall specify appropriate notice procedures for the owner or operator to notify the permitting authority upon any establishment or reestablishment of the value.

Following are discussions on the CAM monitoring requirements for each affected emissions unit. The requirements are included in Tier I permit conditions 7.1 through 7.3.

CAM for the Hog Boiler

In satisfying monitoring design criteria for PM_{10} and the PM grain loading emissions from the boiler per 40 CFR 64.3(d)(2), indicators and indicator ranges for the EFB are the filter bed voltage, filter bed current, and filter bed temperature for the boiler were selected by the IFG based on performance testing for the boiler which assured compliance with the applicable emissions standards. The following indicators and indicator ranges were determined to be used to reasonably assure compliance with the applicable CAM PM_{10} and grain loading standards:

- For the EFB, ranges are as follows: ionizer current: 1.0-2.5 mA; ionizer voltage: 10-40 kV; filter bed voltage: 4-9.5 kV; filter bed current: 0-0.35 mA; and filter bed temperature: > or = 150 °F.
- For the baghouses, see-no-see visible emissions inspections.

The CAM plan is detailed in IFG's supplemental information received by DEQ on January 11, 2010. The plan includes a listing of all standards applicable to the hog fuel boiler which shows the selected indicator ranges provide reasonable assurance compliance. Monitoring the EFB's parameters listed in bullet 2 above, and the see-no-see visible emissions inspections are presumptively acceptable monitoring approach and DEQ approves that proposed monitoring method for CAM purposes. The see-no-see approach for the baghouse at the disengagement chamber stack is considered reasonable because the particulate emissions from the source are relatively small (i.e., 0.79 T/yr).

No indicator of excursions were submitted by the IFG in accordance with 40 CFR 64.8(a). However, in accordance with Permit Condition 6.7 DEQ may require the owner or operator of the hog fuel boiler to develop and implement a quality improvements plan (QIP) in accordance with 40 CFR 64.8(a) if an accumulation of exceedances or excursions exceeding 5% duration of a pollutant-specific emissions unit's operating time for a reporting period occurs.

The CAM plan that was received by IFG on January 11, 2010 is included in Appendix C of this statement of basis.

Permit Condition 6.9 states that if there is a conflict between the CAM requirements of the permit, the CAM shall govern. These permit conditions do not include any requirements beyond those of the CAM.

6.8 Acid Rain Permit (40 CFR 72-75)

This facility is not an affected facility as defined in 40 CFR 72 through 75; therefore, acid rain permit requirements do not apply.

7. PUBLIC COMMENT

As required by IDAPA 58.01.01.364, a public comment period was made available to the public from March 18, 2010 to April 19, 2010. During this time, comments were not submitted in response to DEQ's proposed action.

8. EPA REVIEW OF PROPOSED PERMIT

As required by IDAPA 58.01.01.366, DEQ provided the proposed permit to EPA Region 10 for its review and comment on April 22, 2010 via email. On May 13, 2010, EPA notified DEQ in a letter that they will not be reviewing the proposed permit action and will not object to its issuance. EPA stated the following in the letter: "the permit is now eligible for issuance."

Appendix A – AIRS Information

AIRS/AFS Facility-wide Classification – Data Form

Facility Name: Idaho Forest Group LLC - Moyie Springs

Facility Location: Moyie Springs, Idaho

Facility ID: 021-00001 **Date:** 5/11/2009

Project/Permit No.: T2-050113 **Completed By:** Harbi Elshafei

☒ Check if there are no changes to the facility-wide classification resulting from this action. (compare to form with last permit)
Comments:

☐ Yes, this facility is an SM80 source.

Identify the facility's area classification as A (attainment), N (nonattainment), or U (unclassified) for the following pollutants:

	SO2	PM10	VOC
Area Classification:	U	U	U

DO NOT LEAVE ANY BLANK

Check one of the following:

☐ **SIP** [0] - Yes, this facility is subject to SIP requirements. (do not use if facility is Title V)

OR

☒ **Title V** [V] - Yes, this facility is subject to Title V requirements. (If yes, do not also use SIP listed above.)

For SIP or TV, identify the classification (A, SM, B, C, or ND) for the pollutants listed below. Leave box blank if pollutant is not applicable to facility.

	SO2	NOx	CO	PM10	PT (PM)	VOC	THAP
Classification:	B	B	A	B	B	B	A

☐ **PSD** [6] - Yes, this facility has a PSD permit.

If yes, identify the pollutant(s) listed below that apply to PSD. Leave box blank if pollutant does not apply to PSD.

	SO2	NOx	CO	PM10	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☐	☐

☐ **NSR - NAA** [7] - Yes, this facility is subject to NSR nonattainment area (IDAPA 58.01.01.204) requirements.

Note: As of 9/12/08, Idaho has no facility in this category.

If yes, identify the pollutant(s) listed below that apply to NSR-NAA. Leave box blank if pollutant does not apply to NSR - NAA.

	SO2	NOx	CO	PM10	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☐	☐

☐ **NESHAP** [8] - Yes, this facility is subject to NESHAP (Part 61) requirements. (THAP only)

If yes, what CFR Subpart(s) is applicable?

☐ **NSPS** [9] - Yes, this facility is subject to NSPS (Part 60) requirements.

If yes, what CFR Subpart(s) is applicable?

If yes, identify the pollutant(s) regulated by the subpart(s) listed above. Leave box blank if pollutant does not apply to the NSPS.

	SO2	NOx	CO	PM10	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☐	☐

☐ **MACT** [M] - Yes, this facility is subject to MACT (Part 63) requirements. (THAP only)

If yes, what CFR Subpart(s) is applicable? 40 CFR 63, Subpart DDDD

Appendix B – Emissions Inventory

Table 1
Riley Creek Moyie Springs Facility
Estimated Historic Annual Emissions

Production			1983	1984	4th Kiln 1985	1986	1987	Kiln Extension 1988	Statson Planer 1989	1990	1991	1992	1993	1994	Six Month Shutdown 1995	Stacker Increase 1996	PSD Avoidance Limits	
	Boiler	(Mlb stm/yr)	322,538	291,852	258,456	293,304	288,948	340,494	340,494	326,942	338,800	353,320	332,024	315,084	168,432	339,570	391,000	Maximum to not exceed CO increase
		(MMBtu/yr)	516,060	466,963	413,530	469,286	462,317	544,790	544,790	523,107	542,080	565,312	531,238	504,134	269,491	543,312	625,600	
	Sawmill	(MMBF/yr)	58.79	63.39	67.77	88.88	95.07	106.16	109.80	103.24	108.45	106.85	97.32	90.47	57.42	104.24	199.00	Same as Kiln
	Planemill	(MMBF/yr)	58.65	63.59	67.75	88.63	95.29	125.43	168.16	162.03	141.53	145.34	115.89	129.31	56.45	100.50	199.00	Same as Kiln
	Kilns	(MMBF/yr)	58.65	63.59	67.75	88.63	95.29	125.43	168.16	162.03	141.53	145.34	115.89	129.31	56.45	100.50	199.00	Maximum to not exceed VOC increase
	Sawdust	(gr tons/yr)	12,863	13,870	14,828	19,447	20,801	23,227	24,024	22,589	23,728	23,378	21,293	19,795	12,563	22,807	43,540	Ratio to Sawmill Production
	Chips	(gr tons/yr)	62,326	67,202	71,846	94,225	100,787	112,544	116,403	109,449	114,972	113,276	103,173	95,911	60,873	110,509	210,968	Ratio to Sawmill Production
	Chips to Chip Surge	(gr tons/yr)	9,349	10,080	10,777	14,134	15,118	16,882	17,461	16,417	17,246	16,991	15,476	14,387	9,131	16,576	31,645	15% or Chips
	Planer Shavings	(gr tons/yr)	10,275	11,141	11,870	15,528	16,694	21,975	29,461	28,387	24,796	25,463	20,304	22,655	9,890	17,607	34,864	Ratio to Planer Production
	Fuel	(gr tons/yr)	43,723	39,563	35,036	39,760	39,170	46,157	46,157	44,320	45,928	47,896	45,009	42,713	22,833	45,032	53,004	Ratio to Boiler Production

PM Estimated Annual Emissions

Source	PM Emission Factor	1983 PM	1984 PM	1985 PM	1986 PM	1987 PM	1988 PM	1989 PM	1990 PM	1991 PM	1992 PM	1993 PM	1994 PM	1995 PM	1996 PM	Future	
Boiler (Uncontrolled)	0.4 lb/Mlb stm	64.5	58.4	51.7	58.7	57.8	68.1	68.1	65.4	67.8	70.7						
(EFB)	0.117 lb/MMBtu											31.1	29.5	15.8	31.8	36.6	
EFB Baghouse	0.18 lb/hr											0.8	0.8	0.8	0.8	0.8	
Sawdust Truck Bin Target Box	0.1 lb/ton	0.6	0.7	0.7	1.0	1.0	1.2	1.2	1.1	1.2	1.2	1.1	1.0	0.6	1.1	2.2	
Chip Bin Target Boxes	0.1 lb/ton	3.1	3.4	3.6	4.7	5.0	5.6	5.8	5.5	5.7	5.7	5.2	4.8	3.0	5.5	10.5	
Chip Cyclone (10% of Chips)	0.5 lb/ton															5.3	Added 2006
Chip Surge Bin Cyclone	0.5 lb/ton	2.3	2.5	2.7	3.5	3.8	4.2	4.4	4.1	4.3	4.2	3.9	3.6	2.3	4.1		Removed 2006
Chip Surge Bin Vent	0.4 lb/ton	1.9	2.0	2.2	2.8	3.0	3.4	3.5	3.3	3.4	3.4	3.1	2.9	1.8	3.3		Removed 2006
Hog Fuel Mix Bin Cyclone	0.5 lb/ton	10.9	9.9	8.8	9.9	9.8	11.5	11.5	11.1	11.5	12.0	11.3	10.7	5.7	11.5		Removed 2006
Hog Fuel Mix Bin Vent	0.4 lb/ton	8.7	7.9	7.0	8.0	7.8	9.2	9.2	8.9	9.2	9.6	9.0	8.5	4.6	9.2		Removed 2006
Fuel Bin Vents	0.4 lb/ton	8.7	7.9	7.0	8.0	7.8	9.2	9.2	8.9	9.2	9.6	9.0	8.5	4.6	9.2	10.6	
Fuel Truck Bin Target Box	0.1 lb/ton														0.2	0.3	
Planer Cyclone(s)	0.5 lb/ton	2.6	2.8	3.0	3.9	4.2	5.5	7.4	7.1	6.2	6.4	2.5	2.8	1.2	2.2		
Planer Baghouse(s)	0.001 lb/ton											0.01	0.01	0.00	0.00	0.009	
Dry Kilns	0.05 lb/Mbf	1.5	1.6	1.7	2.2	2.4	3.1	4.2	4.1	3.5	3.6	2.9	3.2	1.4	2.5	5.0	
PM Annual Emissions, Ton/yr		104.9	97.1	88.3	102.6	102.7	121.1	124.5	119.3	122.0	126.3	79.7	76.4	41.8	81.6	71.2	
				Average 1986 & 1987		102.7							Average 1986 & 1987 + 24.9			127.6	

Table 1

PM10 Estimated Annual Emissions

Source	PM10 Emission Factor	1983 PM10	1984 PM10	1985 PM10	1986 PM10	1987 PM10	1988 PM10	1989 PM10	1990 PM10	1991 PM10	1992 PM10	1993 PM10	1994 PM10	1995 PM10	1996 PM10	Future	
Boiler (Uncontrolled)	0.2 lb/Mlb stm	32.3	29.2	25.8	29.3	28.9	34.0	34.0	32.7	33.9	35.3						
(EFB)	0.091 lb/MMBtu											24.2	22.9	12.3	24.7	28.5	
EFB Baghouse	0.18 lb/hr											0.8	0.8	0.8	0.8	0.8	
Sawdust Truck Bin Target Box	0.05 lb/ton	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.3	0.6	1.1	
Chip Bin Target Boxes	0.05 lb/ton	1.6	1.7	1.8	2.4	2.5	2.8	2.9	2.7	2.9	2.8	2.6	2.4	1.5	2.8	5.3	
Chip Cyclone (10% of Chips)	0.25 lb/ton															2.6	Added 2006
Chip Surge Bin Cyclone	0.25 lb/ton	1.2	1.3	1.3	1.8	1.9	2.1	2.2	2.1	2.2	2.1	1.9	1.8	1.1	2.1		Removed 2006
Chip Surge Bin Vent	0.23 lb/ton	1.1	1.2	1.3	1.6	1.8	2.0	2.0	1.9	2.0	2.0	1.8	1.7	1.1	1.9		Removed 2006
Hog Fuel Mix Bin Cyclone	0.25 lb/ton	5.5	4.9	4.4	5.0	4.9	5.8	5.8	5.5	5.7	6.0	5.6	5.3	2.9	5.8		Removed 2006
Hog Fuel Mix Bin Vent	0.23 lb/ton	5.1	4.6	4.1	4.6	4.5	5.4	5.4	5.1	5.3	5.6	5.2	5.0	2.6	5.3		Removed 2006
Fuel Bin Vents	0.23 lb/ton	5.1	4.6	4.1	4.6	4.5	5.4	5.4	5.1	5.3	5.6	5.2	5.0	2.6	5.3	6.1	
Fuel Truck Bin Target Box	0.05 lb/ton														0.1	0.1	
Planer Cyclone(s)	0.25 lb/ton	1.3	1.4	1.5	1.9	2.1	2.7	3.7	3.5	3.1	3.2	1.3	1.4	0.6	1.1		
Planer Baghouse(s)	0.001 lb/ton											0.01	0.01	0.00	0.00	0.009	
Dry Kilns	0.05 lb/Mbf	1.5	1.6	1.7	2.2	2.4	3.1	4.2	4.1	3.5	3.6	2.9	3.2	1.4	2.5	5.0	
PM10 Annual Emissions, Ton/yr		**54.7**	**50.7**	**46.3**	**53.9**	**54.0**	**63.9**	**66.1**	**63.4**	**64.5**	**66.8**	**52.0**	**50.0**	**27.3**	**53.0**	**49.5**	
				Average 1986 & 1987		**54.0**							**Average 1986 & 1987 + 14.9**			**68.9**	

VOC Estimated Annual Emissions

Source	VOC Emission Factor	1983 VOC	1984 VOC	1985 VOC	1986 VOC	1987 VOC	1988 VOC	1989 VOC	1990 VOC	1991 VOC	1992 VOC	1993 VOC	1994 VOC	1995 VOC	1996 VOC	Future
Boiler	0.13 lb/Mlb stm	21.0	19.0	16.8	19.1	18.8	22.1	22.1	21.3	22.0	23.0	21.6	20.5	10.9	22.1	25.4
Dry Kilns	0.62 lb/Mbf	18.2	19.7	21.0	27.5	29.5	38.9	52.1	50.2	43.9	45.1	35.9	40.1	17.5	31.2	61.7
VOC Annual Emissions, Ton/yr		**39.1**	**38.7**	**37.8**	**46.5**	**48.3**	**61.0**	**74.3**	**71.5**	**65.9**	**68.0**	**57.5**	**60.6**	**28.4**	**53.2**	**87.1**
				Average 1986 & 1987		**47.4**							**Average 1986 & 1987 + 39.9**			**87.3**

CO Estimated Annual Emissions

Source	CO Emission Factor	1983 CO	1984 CO	1985 CO	1986 CO	1987 CO	1988 CO	1989 CO	1990 CO	1991 CO	1992 CO	1993 CO	1994 CO	1995 CO	1996 CO	Future
Boiler	2.0 lb/Mlb stm	322.5	291.9	258.5	293.3	288.9	340.5	340.5	326.9	338.8	353.3	332.0	315.1	168.4	339.6	391.0
				Average 1986 & 1987		**291.1**							**Average 1986 & 1987 + 99.9**			**391.0**

NOX Estimated Annual Emissions

Source	NOX Emission Factor	1983 NOX	1984 NOX	1985 NOX	1986NOX	1987 NOX	1988NOX	1989NOX	1990 NOX	1991 NOX	1992 NOX	1993 NOX	1994 NOX	1995 NOX	1996 NOX	Future
Boiler	0.31 lb/Mlb stm	50.0	45.2	40.1	45.5	44.8	52.8	52.8	50.7	52.5	54.8	51.5	48.8	26.1	52.6	60.6
						45.1							**Average 1986 & 1987 + 39.9**			**85.0**

SO2 Estimated Annual Emissions

Source	SO2 Emission Factor	1983 SO2	1984 SO2	1985 SO2	1986SO2	1987 SO2	1988SO2	1989SO2	1990 SO2	1991 SO2	1992 SO2	1993 SO2	1994 SO2	1995 SO2	1996 SO2	Future
Boiler	0.014 lb/Mlb stm	2.3	2.0	1.8	2.1	2.0	2.4	2.4	2.3	2.4	2.5	2.3	2.2	1.2	2.4	2.7
				Average 1986 & 1987		**2.0**							**Average 1986 & 1987 + 39.9**			**41.9**

Table 1a
Riley Creek Moyie Springs Facility
Estimated Historic Annual Emissions

Production			1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Requested Limits Production	Basis and Notes
Boiler	(Mlb stm/yr)		376,110	376,110	383,670	272,510	266,700	298,130	335,340	335,220	335,459	260,126	235,327	246,748	391,000	
	(MMBtu/yr)		601,776	601,776	613,872	436,016	426,720	477,008	536,543	536,352	536,735	416,202	376,522	394,797	625,600	
Sawmill	(MMBF/yr)		129.23	129.55	146.24	154.04	150.05	155.09	195.46	199.93	190.99	123.71	104.67	115.89	199.00	
Planermill	(MMBF/yr)		126.50	125.86	141.56	147.46	144.28	149.12	183.91	187.97	179.84	115.93	98.54	108.58	199.00	
Kilns	(MMBF/yr)		126.50	125.86	141.56	147.46	144.28	149.12	183.91	187.97	179.84	115.93	98.54	108.58	199.00	
Sawdust	(gr tons/yr)		28,275	28,345	31,997	33,703	32,830	33,933	42,766	43,743	41,788	27,067	22,902	25,356	43,540	
Chips	(gr tons/yr)		137,002	137,341	155,035	163,304	159,073	164,416	207,215	211,951	202,478	131,149	110,967	122,858	210,968	
Chips to Chip Surge	(gr tons/yr)		20,550	20,601	23,255	24,496	23,861	24,662	31,082	31,793	30,372	19,672	16,645	18,429	31,645	
Planer Shavings	(gr tons/yr)		22,163	22,050	24,801	25,835	25,277	26,126	32,220	32,931	31,508	20,310	17,265	19,024	34,864	
Fuel	(gr tons/yr)		50,985	50,985	52,010	36,941	36,154	40,414	45,458	45,442	45,475	35,263	31,901	33,449	53,004	

PM Estimated Annual Emissions

Source	PM Emission Factor		1997 PM	1998 PM	1999 PM	2000 PM	2001 PM	2002 PM	2003 PM	2004 PM	2005 PM	2006 PM	2007 PM	2008 PM		
Boiler (Uncontrolled)	0.4	lb/Mlb stm														
(EFB)	0.117	lb/MMBtu	35.2	35.2	35.9	25.5	25.0	27.9	31.4	31.4	31.4	24.3	22.0	23.1	36.6	
EFB Baghouse	0.18	lb/hr	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Sawdust Truck Bin Target Box	0.1	lb/ton	1.4	1.4	1.6	1.7	1.6	1.7	2.1	2.2	2.1	1.4	1.1	1.3	2.2	
Chip Bin Target Boxes	0.1	lb/ton	6.9	6.9	7.8	8.2	8.0	8.2	10.4	10.6	10.1	6.6	5.5	6.1	10.5	
Chip Cyclone (10% of Chips)	0.5	lb/ton										3.3	2.8	3.1	5.3	Added 2006
Chip Surge Bin Cyclone	0.5	lb/ton	5.1	5.2	5.8	6.1	6.0	6.2	7.8	7.9	7.6					Removed 2006
Chip Surge Bin Vent	0.4	lb/ton	4.1	4.1	4.7	4.9	4.8	4.9	6.2	6.4	6.1					Removed 2006
Hog Fuel Mix Bin Cyclone	0.5	lb/ton	12.7	12.7	13.0	9.2	9.0	10.1	11.4	11.4	11.4					Removed 2006
Hog Fuel Mix Bin Vent	0.4	lb/ton	10.2	10.2	10.4	7.4	7.2	8.1	9.1	9.1	9.1					Removed 2006
Fuel Bin Vents	0.4	lb/ton	10.2	10.2	10.4	7.4	7.2	8.1	9.1	9.1	9.1	7.1	6.4	6.7	10.6	
Fuel Truck Bin Target Box	0.1	lb/ton	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	
Planer Cyclone(s)	0.5	lb/ton	2.8													
Planer Baghouse(s)	0.001	lb/ton	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.009	
Dry Kilns	0.05	lb/Mbf	3.2	3.1	3.5	3.7	3.6	3.7	4.6	4.7	4.5	2.9	2.5	2.7	5.0	
PM Annual Emissions, Ton/yr			**92.8**	**90.1**	**94.1**	**75.1**	**73.4**	**79.9**	**93.1**	**93.7**	**92.4**	**46.5**	**41.3**	**43.9**	71.2	

Table 1a

PM10 Estimated Annual Emissions

Source	PM10 Emission Factor		1997 PM10	1998 PM10	1999 PM10	2000 PM10	2001 PM10	2002 PM10	2003 PM10	2004 PM10	2005 PM10	2006 PM10	2007 PM10	2008 PM10		
Boiler (Uncontrolled)	0.2	lb/Mlb stm														
(EFB)	0.091	lb/MMBtu	27.4	27.4	27.9	19.8	19.4	21.7	24.4	24.4	24.4	18.9	17.1	18.0	28.5	
EFB Baghouse	0.18	lb/hr	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Sawdust Truck Bin Target Box	0.05	lb/ton	0.7	0.7	0.8	0.8	0.8	0.8	1.1	1.1	1.0	0.7	0.6	0.6	1.1	
Chip Bin Target Boxes	0.05	lb/ton	3.4	3.4	3.9	4.1	4.0	4.1	5.2	5.3	5.1	3.3	2.8	3.1	5.3	
Chip Cyclone (10% of Chips)	0.25	lb/ton										1.6	1.4	1.5	2.6	Added 2006
Chip Surge Bin Cyclone	0.25	lb/ton	2.6	2.6	2.9	3.1	3.0	3.1	3.9	4.0	3.8					Removed 2006
Chip Surge Bin Vent	0.23	lb/ton	2.4	2.4	2.7	2.8	2.8	2.9	3.6	3.7	3.5					Removed 2006
Hog Fuel Mix Bin Cyclone	0.25	lb/ton	6.4	6.4	6.5	4.6	4.5	5.1	5.7	5.7	5.7					Removed 2006
Hog Fuel Mix Bin Vent	0.23	lb/ton	5.9	5.9	6.0	4.3	4.2	4.7	5.3	5.3	5.3					Removed 2006
Fuel Bin Vents	0.23	lb/ton	5.9	5.9	6.0	4.3	4.2	4.7	5.3	5.3	5.3	4.1	3.7	3.9	6.1	
Fuel Truck Bin Target Box	0.05	lb/ton	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Planer Cyclone(s)	0.25	lb/ton	1.4													
Planer Baghouse(s)	0.001	lb/ton	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.009	
Dry Kilns	0.05	lb/Mbf	3.2	3.1	3.5	3.7	3.6	3.7	4.6	4.7	4.5	2.9	2.5	2.7	5.0	
PM10 Annual Emissions, Ton/yr			60.1	58.8	61.2	48.4	47.4	51.7	59.9	60.3	59.5	32.4	28.9	30.7	49.5	

VOC Estimated Annual Emissions

Source	VOC Emission Factor		1997 VOC	1998 VOC	1999 VOC	2000 VOC	2001 VOC	2002 VOC	2003 VOC	2004 VOC	2005 VOC	2006 VOC	2007 VOC	2008 VOC	
Boiler	0.13	lb/Mlb stm	24.4	24.4	24.9	17.7	17.3	19.4	21.8	21.8	21.8	16.9	15.3	16.0	25.4
Dry Kilns	0.62	lb/Mbf	39.2	39.0	43.9	45.7	44.7	46.2	57.0	58.3	55.8	35.9	30.5	33.7	61.7
VOC Annual Emissions, Ton/yr			63.7	63.5	68.8	63.4	62.1	65.6	78.8	80.1	77.6	52.8	45.8	49.7	87.1

CO Estimated Annual Emissions

Source	CO Emission Factor		1997 CO	1998 CO	1999 CO	2000 CO	2001 CO	2002 CO	2003 CO	2004 CO	2005 CO	2006 CO	2007 CO	2008 CO	
Boiler	2.0	lb/Mlb stm	376.1	376.1	383.7	272.5	266.7	298.1	335.3	335.2	335.5	260.1	235.3	246.7	391.0

NOX Estimated Annual Emissions

Source	NOX Emission Factor		1997 NOX	1998 NOX	1999 NOX	2000 NOX	2001 NOX	2002 NOX	2003 NOX	2004 NOX	2005 NOX	2006 NOX	2007 NOX	2008 NOX	
Boiler	0.31	lb/Mlb stm	58.3	58.3	59.5	42.2	41.3	46.2	52.0	52.0	52.0	40.3	36.5	38.2	60.6

SO2 Estimated Annual Emissions

Source	SO2 Emission Factor		1997 SO2	1998 SO2	1999 SO2	2000 SO2	2001 SO2	2002 SO2	2003 SO2	2004 SO2	2005 SO2	2006 SO2	2007 SO2	2008 SO2	
Boiler	0.014	lb/Mlb stm	2.6	2.6	2.7	1.9	1.9	2.1	2.3	2.3	2.3	1.8	1.6	1.7	2.7

Table 1b
Riley Creek Moyie Springs Facility
Kiln Production Data and Estimated Boiler Load

Assumptions

1977-1995	In 1994 Kiln steam load was calculated at 44,000 lbs per hour.
	Kilns receive steam 22 hours per operating day to allow for loading and unloading.
	All estimated steam production is sent to the kilns.
1977-1983	Mill ran 2 shifts, 5 days/ wk, 8 hr shifts, kilns needed 2 days/ wk to catchup. Kilns ran 7 days for every 5 days of mill operatio
1983-1987	Mill ran 2 shifts, 4 days/ wk, 10 hrs/ shift, kilns needed 2 more days/ wk to catch up. Kilns ran 6 days for every 4 days of mill
1988-1994	Moyie Mill ran 2 shifts, 4 days/ wk, 10 hrs/ shift, kilns needed 3 more days/ wk to catch up.
	Kilns ran 7 days for every 4 days of mill operation. Libby Mill startup, green lumber to Moyie to be dried & planed
1994	Libby mill shutdown aprox. end of year
1995	Plant down aprox. 6 months
1996-1999	Kiln Steam load calculated at 45,000 lbs per hour.
1996-2002	Mill running 20 hrs/day, 5 days/ wk. & 10 hrs/ day Sat & Sun.
2000-2002	Actual kiln operating hours recorded. Estimated Kiln Steam Load calculated at 35,000 lbs per hour.

1977-1999	22 Hrs/day drying
1977-1995	44 Mlb-stm per hour kiln load
1996-1999	45 Mlb-stm per hour kiln load
2000-2002	35 Mlb-stm per hour kiln load

Year	Sawmill MMBF	Kilns MMBF	Mill Days Oper.	Estimated Kilns Days Oper.	Estimated Kiln Hours	Estimated Boiler Hours at Load	Estimated Boiler Annual Mlbs-stm	
1977		50.31	244	342	7,515	7,515	330,669	
1978		47.51	227	318	6,992	6,992	307,630	
1979		32.32	188	263	5,790	5,790	254,778	
1980		-	0	0	0	-	-	Plant Shutdown
1981		22.03	129	181	3,973	3,973	174,821	
1982		49.16	196	274	6,037	6,037	265,619	
1983	58.79	58.65	238	333	7,330	7,330	322,536	
1984	63.39	63.59	201	302	6,633	6,633	291,852	
1985	67.77	67.75	178	267	5,874	5,874	258,456	
1986	88.88	88.63	202	303	6,666	6,666	293,304	
1987	95.07	95.29	199	299	6,567	6,567	288,948	
1988	106.16	125.43	201	352	7,739	7,739	340,494	
1989	109.80	168.16	201	352	7,739	7,739	340,494	
1990	103.24	162.03	193	338	7,431	7,431	326,942	
1991	108.45	141.53	200	350	7,700	7,700	338,800	
1992	106.65	145.34	220	365	8,030	8,030	353,320	
1993	97.32	115.89	196	343	7,546	7,546	332,024	
1994	90.47	129.31	186	326	7,161	7,161	315,084	
1995	57.42	56.45	116	174	3,828	3,828	168,432	
1996	104.24	100.50	196	343	7,546	7,546	339,570	
1997	129.23	126.50	199	348	8,358	8,358	376,110	
1998	129.55	125.86	199	348	8,358	8,358	376,110	
1999	146.24	141.56	203	355	8,526	8,526	383,670	
2000	154.04	147.46	202	303	7,786	7,786	272,510	
2001	150.05	144.28	203	305	7,620	7,620	266,700	
2002	155.09	149.12	191	287	8,518	8,518	298,130	
2003	195.46	183.91					335,340	2003 Estimated Records not available
2004	199.93	187.97					335,220	
2005	190.99	179.84					335,459	Recorded steam, sawmill and kiln production
2006	123.71	115.93					260,126	
2007	104.67	98.54					235,327	
2008	115.89	108.58					246,748	

Table 2
Riley Creek Moyie Springs Facility
Current Hourly and Annual PTE

Production			Hourly (PTE)	Annual (PTE)	Basis	
	Boiler	Mlb stm	80	700,800	100%	Average Annual Boiler Load
		MMBtu	128	1,121,280		
	Sawmill	MMBF	0.029	254.0	Kiln Capacity	
	Planermill	MMBF	0.029	254.04	Kiln Capacity	
	Kilns	MBF	29.00	254,040	Kiln Capacity	
	Chips	gr ton	30.7	269,316		
	Sawdust	gr ton	6.3	55,583		
	Shavings	gr ton	5.1	44,507		
	Fuel	gr ton	10.8	95,000	Average Annual Boiler Load	

PM Emissions Source	Throughput Hourly	Throughput Annual	Units	PM Emission Factor		Hourly (lb)	Annual (tons)	Notes
Boiler (EFB Control)	128.0	1,121,280	MMBtu	0.117	lb/MMBtu	15.0	65.6	
EFB Baghouse				0.13	lb/hr	0.2	0.6	
Sawdust Truck Bin Target Box	6.35	55,583	gr ton	0.1	lb/ton	0.6	2.8	
Chip Bin Target Box	30.7	269,316	gr ton	0.1	lb/ton	3.1	13.5	
Chip Cyclone	3.1	26,932	gr ton	0.5	lb/ton	1.5	6.7	10% of chips
Fuel Bin Vents (2)	10.8	95,000	gr ton	0.4	lb/ton	4.3	19.0	
Fuel Truck Bin Target Box	1.08	9,500	gr ton	0.1	lb/ton	0.11	0.48	10% of fuel
Planer Baghouses 2	5.1	44,507	gr ton	0.001	lb/ton	0.0051	0.022	Shavings
Dry Kilns	29.00	254,040	MBF	0.05	lb/Mbf	1.5	6.4	
					Total	26.3	115.2	

PM10 Emissions Source	Throughput Hourly	Throughput Annual	Units	PM10 Emission Factor		Hourly (lb)	Annual (tons)	Notes
Boiler (EFB Control)	128.0	1,121,280	MMBtu	0.091	lb/Mlb stm	11.6	51.0	
EFB Baghouse				0.13	lb/hr	0.2	0.6	
Sawdust Truck Bin Target Box	6.35	55,583	gr ton	0.05	lb/ton	0.3	1.4	
Chip Bin Target Box	30.7	269,316	gr ton	0.05	lb/ton	1.5	6.7	
Chip Cyclone	3.1	26,932	gr ton	0.25	lb/ton	0.8	3.4	10% of chips
Fuel Bin Vents (2)	10.8	95,000	gr ton	0.232	lb/ton	2.5	11.0	
Fuel Truck Bin Target Box	1.08	9,500	gr ton	0.05	lb/ton	0.05	0.24	10% of fuel
Planer Baghouses 2	5.1	44,507	gr ton	0.001	lb/ton	0.0051	0.022	Shavings
Dry Kilns	29.00	254,040	MBF	0.05	lb/Mbf	1.5	6.4	
					Total	18.5	80.9	

VOC Emissions Source	Throughput Hourly	Throughput Annual	Units	VOC Emission Factor		Hourly (lb)	Annual (tons)
Boiler	80.0	700,800	Mlb stm	0.13	lb/Mlb stm	10.4	45.6
Dry Kilns	29.00	254,040	MBF	0.62	lb/Mbf	17.8	78.1
					Total	28.2	123.7

CO Emissions Source	Throughput Hourly	Throughput Annual	Units	CO Emission Factor		Hourly (lb)	Annual (tons)
Boiler	80.0	700,800	Mlb stm	2.0	lb/Mlb stm	160.0	700.8
					Total	160.0	700.8

NOX Emissions Source	Throughput Hourly	Throughput Annual	Units	NOX Emission Factor		Hourly (lb)	Annual (tons)
Boiler	80.0	700,800	Mlb stm	0.3	lb/Mlb stm	24.8	108.6
					Total	24.8	108.6

SO2 Emissions Source				SO2 Emission Factor		Hourly (lb)	Annual (tons)
Boiler	80.0	700,800	Mlb stm	0.014	lb/Mlb stm	1.1	4.9
					Total	1.1	4.9

Lead Emissions Source				Lead Emission Factor		Hourly (lb)	Annual (lbs)	Quarterly (lbs)
Boiler	80.0	700,800	Mlb stm	4.6E-05	lb/Mlb stm	3.8E-03	33.6	8.4
					Total	0.0038	33.6	8.4

Table 2a
Riley Creek Moyie Springs Facility
No Control Emissions

Production			Hourly (PTE)	Annual (PTE)	Basis
	Boiler	Mlb stm	80	700,800	100%
		MMBtu	128	1,121,280	
	Sawmill	MMBF	0.045	420.5	Sawmill Capacity
	Planermill	MMBF	0.029	254.0	Kiln Capacity
	Kilns	MBF	29.00	254,040	Kiln Capacity
	Chips	gr ton	50.9	445,766	
	Sawdust	gr ton	10.5	92,000	
	Shavings	gr ton	5.1	44,507	
	Fuel	gr ton	10.8	95,000	

PM Emissions	Throughput						
Source	Hourly	Annual	Units	PM Emission Factor		Hourly (lb)	Annual (tons)	Notes
Boiler	80.0	700,800	Mlb stm	0.4	lb/Mlb stm	32.0	140.2	
EFB Baghouse				0.18	lb/hr	0.2	0.8	
Sawdust Truck Bin Target Box	10.50	92,000	gr ton	0.1	lb/ton	1.1	4.6	
Chip Bin Target Box	50.9	445,766	gr ton	0.1	lb/ton	5.1	22.3	
Chip Cyclone	5.1	44,577	gr ton	2.0	lb/ton	10.2	44.6	10% of chips
Fuel Bin Vents (2)	10.8	95,000	gr ton	0.4	lb/ton	4.3	19.0	
Fuel Truck Bin Target Box	1.08	9,500	gr ton	0.1	lb/ton	0.11	0.48	10% of fuel
Planer Baghouses 2	5.1	44,507	gr ton	2.0	lb/ton	10.1614	44.507	Shavings
Dry Kilns	29.00	254,040	MBF	0.05	lb/Mbf	1.5	6.4	
					Total	64.6	282.7	

PM10 Emissions	Throughput						
Source	Hourly	Annual	Units	PM10 Emission Factor		Hourly (lb)	Annual (tons)	Notes
Boiler	80.0	700,800	Mlb stm	0.2	lb/Mlb stm	16.0	70.1	
EFB Baghouse				0.18	lb/hr	0.2	0.8	
Sawdust Truck Bin Target Box	10.50	92,000	gr ton	0.05	lb/ton	0.5	2.3	
Chip Bin Target Box	50.9	445,766	gr ton	0.05	lb/ton	2.5	11.1	
Chip Cyclone	5.1	44,577	gr ton	1.0	lb/ton	5.1	22.3	10% of chips
Fuel Bin Vents (2)	10.8	95,000	gr ton	0.232	lb/ton	2.5	11.0	
Fuel Truck Bin Target Box	1.08	9,500	gr ton	0.05	lb/ton	0.05	0.24	10% of fuel
Planer Baghouses 2	5.1	44,507	gr ton	1.0	lb/ton	5.0807	22.253	Shavings
Dry Kilns	29.00	254,040	MBF	0.05	lb/Mbf	1.5	6.4	
					Total	33.4	146.5	

VOC Emissions	Throughput						
Source	Hourly	Annual	Units	VOC Emission Factor		Hourly (lb)	Annual (tons)
Boiler	80.0	700,800	Mlb stm	0.13	lb/Mlb stm	10.4	45.6
Dry Kilns	29.00	254,040	MBF	0.62	lb/Mbf	17.8	78.1
					Total	28.2	123.7

CO Emissions	Throughput						
Source	Hourly	Annual	Units	CO Emission Factor		Hourly (lb)	Annual (tons)
Boiler	80.0	700,800	Mlb stm	2.0	lb/Mlb stm	160.0	700.8
					Total	160.0	700.8

NOX Emissions	Throughput						
Source	Hourly	Annual	Units	NOX Emission Factor		Hourly (lb)	Annual (tons)
Boiler	80.0	700,800	Mlb stm	0.3	lb/Mlb stm	24.8	105.6
					Total	24.8	105.6

SO2 Emissions							
Source				SO2 Emission Factor		Hourly (lb)	Annual (tons)
Boiler	80.0	700,800	Mlb stm	0.014	lb/Mlb stm	1.1	4.9
					Total	1.1	4.9

Lead Emissions								
Source				Lead Emission Factor		Hourly (lb)	Annual (lbs)	Quarterly (lbs)
Boiler	80.0	700,800	Mlb stm	4.8E-05	lb/Mlb stm	3.8E-03	33.6	8.4
					Total	0.0038	33.6	8.4

Table 3
Riley Creek Moyie Springs Facility
Assumptions

1 Boiler capacity is 80,000 lb stm/hr.
2 At capacity the boiler burns 95,000 tons of fuel per year.
3 Kiln potential production is based on the following:

	MBF/hr	MBF/yr	
1 Kiln Original Length	3.7		
3 Kilns Original Length	11.1	97,236	Prior to 1984
4 Kilns Original Length	14.8	129,648	1984 to 1988
4 Kilns Extended	23.4	204,984	1988 to 2003

4 Sawmill production is limited by the stackers. Plant production is limited by the kilns.

If all sawing is 2X4, maximum possible sawmill production would be as follows:

	MBF/hr	MBF/yr
Prior to 1996	35	306,600
1996 and Later	48	420,480

5 Chip and sawdust production is dependent on sawmill production and shavings production is based on planer production.
The following were the average ratios of byproduct production for the years 1995 through 2000. See production history spreadsheet.

1,060.14 Gr. Tons Chips/Sawmill MMBF
218.80 Gr. Tons Sawdust/Sawmill MMBF
175.20 Gr. Tons Shavings/Planer MMBF

6 Historically 15% of chips went through the chip surge bin. The chip surge bin was removed in 2006 and now 10% of the chips go through the chip cyclone.
7 10% of the fuel goes through the truck bin target box. The target box was installed in 1996.
8 All material is augured into the shavings bin and there are no emissions.
9 The fuel mix bin was covered by a building in 2006 and is no longer an emission point.
10 A baghouse was added to one of the planer cyclones in 1993 and a baghouse was added to the other planer cyclone in 1998.

Table 4
Riley Creek Moyie Springs Facility
Emission Factors

Source	VOC Emission Factor		CO Emission Factor		NOX Emission Factor		SO2 Emission Factor	
Boiler (Uncontrolled)	0.13 lb/Mlb stm	IDEQ Factor	2.0 lb/Mlb stm	IDEQ Factor	0.31 lb/Mlb stm	IDEQ Factor	0.014 lb/Mlb stm	IDEQ Factor
Boiler (EFB Control)	0.13 lb/Mlb stm	IDEQ Factor	2.0 lb/Mlb stm	IDEQ Factor	0.31 lb/Mlb stm	IDEQ Factor	0.014 lb/Mlb stm	IDEQ Factor
Dry Kilns	0.62 lb/Mbf	Based on Species Mix Spreadsheet						

Source	Lead Emission Factor	
Boiler (Uncontrolled)	4.8E-05 lb/MMBtu	AP-42 1.6
Boiler (EFB Control)	4.8E-05 lb/MMBtu	AP-42 1.6

Table 5
Riley Creek Moyie Springs Facility
Plant Change PSD Analysis

1984 #4 dry kiln addition

Average estimated actual emissions for 1983 and 1984 are compared to the estimated potential emissions from the kiln and increased boiler load.
See Table 5a for calculations.

	Emission Increase ton/yr	SER ton/yr
PM	14.2	25
PM10	8.1	15
VOC	22.2	40
CO	16.9	100
NOX	2.6	40
SO2	0.1	40

1988 dry kiln extensions

Average estimated actual emissions for 1986 and 1987 are compared to the estimated potential emissions from the kiln and increased boiler load.
See Table 5a for calculations.

	Emission Increase ton/yr	SER ton/yr
PM	74.0	25
PM10	39.4	15
VOC	49.1	40
CO	221.3	100
NOX	34.3	40
SO2	1.5	40

1989 Stetson planer installation

The planer throughput at the plant is limited by the production capacity of the kilns which were not increased by the change.
The estimated production increase is based on an assumption that lumber produced outside the plant could ahve been planed at the plant.
The calculations are based on the Stetson Planer being able to produce an estimated 18,000 tons/yr of additional shavings.

	Shavings Increase ton/yr	Emission Factor lb/ton	Stetson Emission Increase ton/yr	SER ton/yr
PM	18,000	0.5	4.5	25
PM10		0.25	2.3	15

There were no changes in CO, NOX, VOC or SO2 emissions.
The SER was not exceeded by the addition of the Stetson Planer.

1996 stud mill 2x4 stacker change

The stacker change permitted faster operation of the sawmill. Historically all lumber sawed onsite has been dried in the kilns. Therefore the kilns limit plant production and there was no increase in sawmill production due to this change.

Table 5a
Riley Creek Moyie Springs Facility
PSD Actual to PTE Calculations

The boiler potential emissions are based on 2500 Mlb stm load per MMBF dryed in the kiln.
See Table 1 for actual emission estimates and Table 3 for kiln potential estimates.

Although the Stetson Planer Addition Shows an Actual to Potential Increase, the Increase is the Result of the 1988 Kiln Extension.

Production			1983	1984	1985 4th Kiln Potential	1986	1987	1988 Kiln Extension Potential	1987	1988	Stetson Planer Potential
	Boiler	(Mlb stm/yr)	322,535	291,852	324,120	293,304	288,948	512,460	288,948	340,494	512,460
		(MMBtu/yr)	516,056	466,963	518,592	469,286	462,317	819,936	462,317	544,790	819,936
	Sawmill	(MMBF/yr)	58.79	63.39	95.07	88.88	95.07	109.80	95.07	106.16	109.80
	Planermill	(MMBF/yr)	58.65	63.59	129.65	88.63	95.29	204.98	95.29	125.43	204.98
	Kilns	(MMBF/yr)	58.65	63.59	129.65	88.63	95.29	204.98	95.29	125.43	204.98
	Sawdust	(gr tons/yr)	12,663	13,670	20,601	19,447	20,601	24,024	20,601	23,227	24,024
	Chips	(gr tons/yr)	62,326	67,202	100,787	94,225	100,787	116,403	100,787	112,544	116,403
	Chips to Chip Surge	(gr tons/yr)	9,349	10,080	15,118	14,134	15,118	17,461	15,118	16,882	17,461
	Planer Shavings	(gr tons/yr)	10,275	11,141	22,714	15,528	18,894	35,913	18,894	21,975	35,913
	Fuel	(gr tons/yr)	43,723	39,563	43,939	39,760	39,170	69,469	39,170	46,157	69,469
PM Estimated Annual Emissions											
Source	PM Emission Factor		1983 PM	1984 PM	Potential	1986 PM	1987 PM	Potential	1987 PM	1988 PM	Potential
Boiler (Uncontrolled) (EFB)	0.4 lb/Mlb stm 0.117 lb/MMStu		64.5	58.4	64.8	58.7	57.8	102.5	57.8	68.1	102.5
Sawdust Truck Bin Target Box	0.1 lb/ton		0.6	0.7	1.0	1.0	1.0	1.2	1.0	1.2	1.2
Chip Bin Target Boxes	0.1 lb/ton		3.1	3.4	5.0	4.7	5.0	5.8	5.0	5.6	5.8
Chip Surge Bin Cyclone	0.5 lb/ton		2.3	2.5	3.8	3.5	3.8	4.4	3.8	4.2	4.4
Chip Surge Bin Vent	0.4 lb/ton		1.9	2.0	3.0	2.8	3.0	3.5	3.0	3.4	3.5
Hog Fuel Mix Bin Cyclone	0.5 lb/ton		10.9	9.9	11.0	9.9	9.8	17.4	9.8	11.5	17.4
Hog Fuel Mix Bin Vent	0.4 lb/ton		8.7	7.9	8.8	8.0	7.8	13.9	7.8	9.2	13.9
Fuel Bin Vents	0.4 lb/ton		8.7	7.9	8.8	8.0	7.8	13.9	7.8	9.2	13.9
Fuel Truck Bin Target Box	0.1 lb/ton										
Planer Cyclone(s)	0.5 lb/ton		2.6	2.8	5.7	3.9	4.2	9.0	4.2	5.5	9.0
Planer Baghouse(s)	0.001 lb/ton										
Dry Kilns	0.05 lb/Mbf		1.5	1.6	3.2	2.2	2.4	5.1	2.4	3.1	5.1
	PM Annual Emissions, Ton/yr		**104.9**	**97.1**	**115.2**	**102.6**	**102.7**	**176.6**	**102.7**	**121.1**	**176.6**
	2 Year Averages			**101.0**			**102.7**			**111.9**	
	Increase				**14.2**			**74.0**			**64.7**
	SER				**25.0**			**25.0**			**25.0**
PM10 Estimated Annual Emissions											
Source	PM10 Emission Factor		1983 PM10	1984 PM10	Potential	1986 PM10	1987 PM10	Potential	1987 PM10	1988 PM10	Potential
Boiler (Uncontrolled) (EFB)	0.2 lb/Mlb stm 0.091 lb/MMStu		32.3	29.2	32.4	29.3	28.9	51.2	28.9	34.0	51.2
Sawdust Truck Bin Target Box	0.05 lb/ton		0.3	0.3	0.5	0.5	0.5	0.6	0.5	0.6	0.6
Chip Bin Target Boxes	0.05 lb/ton		1.6	1.7	2.5	2.4	2.5	2.9	2.5	2.8	2.9
Chip Surge Bin Cyclone	0.25 lb/ton		1.2	1.3	1.9	1.8	1.9	2.2	1.9	2.1	2.2
Chip Surge Bin Vent	0.23 lb/ton		1.1	1.2	1.8	1.6	1.8	2.0	1.8	2.0	2.0
Hog Fuel Mix Bin Cyclone	0.25 lb/ton		5.5	4.9	5.5	5.0	4.9	8.7	4.9	5.8	8.7
Hog Fuel Mix Bin Vent	0.23 lb/ton		5.1	4.6	5.1	4.6	4.5	8.1	4.5	5.4	8.1
Fuel Bin Vents	0.23 lb/ton		5.1	4.6	5.1	4.6	4.5	8.1	4.5	5.4	8.1
Fuel Truck Bin Target Box	0.05 lb/ton										
Planer Cyclone(s)	0.25 lb/ton		1.3	1.4	2.8	1.9	2.1	4.5	2.1	2.7	4.5
Planer Baghouse(s)	0.001 lb/ton										
Dry Kilns	0.05 lb/Mbf		1.5	1.6	3.2	2.2	2.4	5.1	2.4	3.1	5.1

Table 5a

PM10 Annual Emissions, Ton/yr		54.7	50.7	60.9	53.9	54.0	93.4	54.0	63.9	93.4
2 Year Averages			52.7			54.0			59.0	
Increase				8.1			39.4			34.4
SER				15.0			15.0			15.0
VOC Estimated Annual Emissions										
Source	VOC Emission Factor	1983 VOC	1984 VOC	Potential	1986 VOC	1987 VOC	Potential	1987 VOC	1988 VOC	Potential
Boiler	0.13 lb/Mlb stm	21.0	19.0	21.1	19.1	18.8	33.3	18.8	22.1	33.3
Dry Kilns	0.62 lb/Mbf	18.0	19.6	39.9	27.3	29.3	63.0	29.3	38.6	63.0
VOC Annual Emissions, Ton/yr		39.0	38.5	60.9	46.3	48.1	96.4	48.1	60.7	96.4
2 Year Averages			38.8			47.2			54.4	
Increase				22.2			49.1			42.0
SER				40.0			40.0			40.0
CO Estimated Annual Emissions										
Source	CO Emission Factor	1983 CO	1984 CO	Potential	1986 CO	1987 CO	Potential	1987 CO	1988 CO	Potential
Boiler	2.0 lb/Mlb stm	322.5	291.9	324.1	293.3	288.9	512.5	288.9	340.5	512.5
2 Year Averages			307.2			291.1			314.7	
Increase				16.9			221.3			197.7
SER				100.0			100.0			100.0
NOX Estimated Annual Emissions										
Source	NOX Emission Factor	1983 NOX	1984 NOX	Potential	1986 NOX	1987 NOX	Potential	1987 NOX	1988 NOX	Potential
Boiler	0.31 lb/Mlb stm	50.0	45.2	50.2	45.5	44.8	79.4	44.8	52.8	79.4
2 Year Averages			47.6			45.1			48.8	
Increase				2.6			34.3			30.6
SER				40.0			40.0			40.0
SO2 Estimated Annual Emissions										
Source	SO2 Emission Factor	1983 SO2	1984 SO2	Potential	1986 SO2	1987 SO2	Potential	1987 SO2	1988 SO2	Potential
Boiler	0.014 lb/Mlb stm	2.3	2.0	2.3	2.1	2.0	3.6	2.0	2.4	3.6
2 Year Averages			2.2			2.0			2.2	
Increase				0.1			1.5			1.4
SER				40.0			40.0			40.0

Table 6
Riley Creek Moyie Springs Facility
Other Changes Not Included in PSD Analysis

Boiler

In 1992 an Electronic Filterbed was installed.
PM and PM10 emissions were decreased.

Chip Handling

In 2006 the chip surge bin was removed and a chip cyclone was installed at a different location.
Prior to 2006, 15% of the chips went through the chip surge bin.
After 2006, 10% of the chips went through the chip cyclone.
PM and MP10 emissions were decreased by theses changes.

Hog Fuel Mix Changes

The hog fuel mix bin was enclosed in a building in 2006. It is no longer a source of emissions.
PM and PM10 emissions were decreased.

Fuel Bin System

In 1996 a truck bin target box was added near the fuel bins for shipping excess fuel offsite.
An estimated maximum of 10% of the fuel goes through the target box.
The estimated maximum annual PM and PM10 increase based on 68 % boiler load was:

	PM tpy	PM10 tpy
Fuel Truck Bin Target Box	0.48	0.24

Shavings Handling

In 1993 a baghouse was installed on one of the shavings bin cyclones.
In 1998 a baghouse was installed on the other shavings bin cyclone.
PM and PM10 emissions were decreased.

Table 8
Riley Creek Moyie Springs Facility
Species Mix and Estimated VOC Emission Factor

Average Species Mix for 1996 through 2000

Species	Percent	Carbon Emission Factor (lb/MBF)	Weighting	Weighted Average (lbC/MBF)	Notes
Ponderosa Pine	0.7	1.86	1.302		Univ. of Idaho
Larch	45.6	0.24	10.944		Used Hemlock Factor
Hemlock	22.6	0.24	5.424		Univ. of Idaho
Lodgepole Pine	29.6	1.08	31.968		OSU
Mixed	1.5	1.08	1.62		Used Lodgepole Factor
Total	100		51.258	0.51	
			lb VOC/MBF	0.62	

Conversion factor of 1.2 used to convert lb carbon to VOC.

Table 10
Riley Creek Moyie Springs Facility
Differences Between Current Calculations and 2005 Submittal

Overall

The historic estimated actual emission calculations were changed based on revised calculations of steam production based on estimated kiln operating hours.
PM10 emission estimates were added.
Estimated VOC emissions were removed from all sources except the boiler and kilns.

Boiler

The uncontrolled PM emission factor was changed from 0.6 lb/Mlb stm to the 0.4 lb/Mlb stm IDEQ emission factor to be consistent with the other emission factors used
The EFB controlled emission factor was changed from 0.1656 lb/Mlb stm to the AP-42 factor of 0.117 lb/MMBtu
The boiler VOC emission factor was changed from 0.03 lb/Mlb stm to the IDEQ factor of 0.13 lb/Mlb stm
The boiler CO emission factor with the EFB was changed from 1.2 lb/Mlb stm to the IDEQ factor of 2.0 lb/Mlb stm.
The boiler NOx emission factor was changed from 0.4 lb/Mlb stm to the IDEQ factor of 0.31 lb/Mlb stm.
Estimated boiler SO2 emissions were added.

Vents

The PM emission factor for vents was changed from 0.1 lb/ton to the IDEQ factor of 0.4 lb/ton.

Planer Baghouses

The PM emission factor for the baghouses was changed from 0.013 lb/ton to the IDEQ factor of 0.001 lb/ton.

Shavings Bin Vent

The shavings bin vent was removed as an emission point because the shavings are augured into the bin and not dropped.

Kilns

The PM emission factor was changed from 0.02 lb/Mbf to the ODEQ Hemlock factor of 0.05 lb/Mbf
The VOC emission factor was changed from 0.5 lb/Mbf to 0.62 lb/Mbf based on species mix calculations.

IFG, Moyie Springs
Actual Ton per Year HAP and TAP Emission Estimates

Boiler Factors from AP-42, Section 1.6 Wood Residue Combustion in Boilers, Table 1.6-3
Kiln Emission Factors from 1996 University of Idaho Study and 2000 Oregon State University Study

Annual Average Boiler Heat input	44.63 MMBtu/hr	391,000 MMBtu/yr
Annual Average Kiln Production	22.72 MBF/hr	199 MMBF/yr

Calculations

Compound	EPA HAP	Idaho TAP	Boiler lb/MMBTU	Boiler lb/hr	Kiln lb/MDF	Kiln lb/hr	Total ton/yr
Acetaldehyde	X	Carc	8.30E-04	3.70E-02	0.113	2.57E+00	1.14E+01
Acetone		Non-Carc	1.90E-04	8.48E-03			3.71E-02
Acetophenone	X		3.20E-09	1.43E-07			6.26E-07
Acrolein	X	Non-Carc	4.00E-03	1.79E-01			7.82E-01
Benzene	X	Carc	4.20E-03	1.87E-01			8.21E-01
Benzo(e)pyrene	X		2.60E-09	1.16E-07			5.08E-07
Benzo(g,h,i)perylene	X		9.30E-08	4.15E-06			1.82E-05
Benzo(j,k)fluoranthene	X		1.60E-07	7.14E-06			3.13E-05
bis(2-Ethylhexyl)phthalate	X	Carc	4.70E-08	2.10E-06			9.19E-06
Bromomethane	X	Non-Carc	1.50E-05	6.70E-04			2.93E-03
2-Butanone (MEK)		Non-Carc	5.40E-06	2.41E-04			1.06E-03
Carbon tetrachloride	X	Carc	4.50E-05	2.01E-03			8.80E-03
Chlorine	X	Non-Carc	7.90E-04	3.53E-02			1.54E-01
Chlorobenzene	X	Non-Carc	3.30E-05	1.47E-03			6.45E-03
Chloroform	X	Carc	2.80E-05	1.25E-03			5.47E-03
Chloromethane	X	Non-Carc	2.30E-05	1.03E-03			4.50E-03
2-Chlorophenol		Non-Carc	2.40E-08	1.07E-06			4.69E-06
Crotonaldehyde		Non-Carc	9.90E-06	4.42E-04			1.94E-03
Decaclorobiphenyl	X	Carc	2.70E-10	1.21E-08			5.28E-08
Dichlorobiphenyl	X	Carc	7.40E-10	3.30E-08			1.45E-07
1,2-Dichloroethane	X	Non-Carc	2.90E-05	1.29E-03			5.67E-03
Dichloromethane	X	Carc	2.90E-04	1.29E-02			5.67E-02
1,2-Dichloropropane	X	Non-Carc	3.30E-05	1.47E-03			6.45E-03
2,4-Dinitrophenol	X		1.80E-07	8.03E-06			3.52E-05
Ethylbenzene	X	Non-Carc	3.10E-05	1.38E-03			6.06E-03
Formaldehyde	X	Carc	4.40E-03	1.96E-01	0.004	9.09E-02	1.26E+00
Heptachlorobiphenyl	X	Carc	6.60E-11	2.95E-09			1.29E-08
Hexachlorobiphenyl	X	Carc	5.50E-10	2.45E-08			1.08E-07
Hydrogen chloride	X	Non-Carc	1.90E-02	8.48E-01			3.71E+00
Methanol	X	Non-Carc			0.122	2.77E+00	1.21E+01
Monochlorobiphenyl	X	Carc	2.20E-10	9.82E-09			4.30E-08
Naphthalene	X	Non-Carc	9.70E-05	4.33E-03			1.90E-02
4-Nitrophenol	X		1.10E-07	4.91E-06			2.15E-05
Pentachlorobiphenyl	X	Carc	1.20E-09	5.36E-08			2.35E-07
Pentachlorophenol	X	Non-Carc	5.10E-08	2.28E-06			9.97E-06
Phenol	X	Non-Carc	5.10E-05	2.28E-03			9.97E-03
Propionaldehyde	X	Non-Carc	6.10E-05	2.72E-03			1.19E-02
Styrene	X	Non-Carc	1.90E-03	8.48E-02			3.71E-01
Tetrachlorobiphenyl	X	Carc	2.50E-09	1.12E-07			4.89E-07
Tetrachloroethene	X	Carc	3.80E-05	1.70E-03			7.43E-03
Toluene	X	Non-Carc	9.20E-04	4.11E-02			1.80E-01
Trichlorobiphenyl	X	Carc	2.60E-09	1.16E-07			5.08E-07
1,1,1-Trichloroethane	X	Non-Carc	3.10E-05	1.38E-03			6.06E-03
Trichloroethene	X	Non-Carc	3.00E-05	1.34E-03			5.87E-03
2,4,6-Trichlorophenol	X	Non-Carc	2.20E-08	9.82E-07			4.30E-06
Vinyl Chloride	X	Carc	1.80E-05	8.03E-04			3.52E-03
o-Xylene	X	Non-Carc	2.50E-05	1.12E-03			4.89E-03

Plant Total	31.85

Compound	EPA HAP	Idaho TAP	Boiler lb/MMBTU	Boiler lb/hr	Total ton/yr
Antimony	X	Non-Carc	7.90E-06	3.53E-04	1.54E-03
Arsenic	X	Carc	2.20E-05	9.82E-04	4.30E-03
Barium		Non-Carc	1.70E-04	7.59E-03	3.32E-02
Beryllium	X	Carc	1.10E-06	4.91E-05	2.15E-04
Cadmium	X	Carc	4.10E-06	1.83E-04	8.02E-04
Chromium	X	Non-Carc	2.10E-05	9.37E-04	4.11E-03
Chromium (VI)	X	Carc	3.50E-06	1.56E-04	6.84E-04
Cobalt	X	Non-Carc	6.50E-06	2.90E-04	1.27E-03
Copper		Non-Carc	4.90E-05	2.19E-03	9.58E-03
Lead	X		4.80E-05	2.14E-03	9.38E-03
Manganese	X	Non-Carc	1.60E-03	7.14E-02	3.13E-01
Mercury	X	Non-Carc	3.50E-06	1.56E-04	6.84E-04
Molybdenum		Non-Carc	2.10E-06	9.37E-05	4.11E-04
Nickel	X	Carc	3.30E-05	1.47E-03	6.45E-03
Phosphorus		Non-Carc	2.70E-05	1.21E-03	5.28E-03
Selenium	X	Non-Carc	2.80E-06	1.25E-04	5.47E-04
Silver		Non-Carc	1.70E-03	7.59E-02	3.32E-01
Tin		Non-Carc	2.30E-05	1.03E-03	4.50E-03
Vanadiaum		Non-Carc	9.80E-07	4.37E-05	1.92E-04
Yttrium		Non-Carc	3.00E-07	1.34E-05	5.87E-05
Zinc		Non-Carc	4.20E-04	1.87E-02	8.21E-02
Polyaromatic hydrocarbon (PAH)	X	Carc		1.31E-04	5.74E-04
PAH Emission Factor is the sum of the following substances in accordance with IDAPA 58.01.01.586 Table					
Benzo(a)anthracene	X	Carc	6.50E-08	2.90E-06	
Benzo(a)pyrene	X	Carc	2.60E-06	1.16E-04	
Benzo(b)fluoranthene	X	Carc	1.00E-07	4.46E-06	
Benzo(k)fluoranthene	X	Carc	3.60E-08	1.61E-06	
Chrysene	X	Carc	3.80E-08	1.70E-06	
Dibenzo(a,h)anthracene	X	Carc	9.10E-09	4.06E-07	
Indeno(1,2,3,c,d)pyrene	X	Carc	8.70E-08	3.88E-06	
2,3,7,8,TCDD Equivalent	X	Carc		3.74E-09	1.64E-08
Dioxin and Furan Equivalent calculated in accordance with IDAPA 58.01.01.586 Table					Equiv Factor
Heptachlorodibenzo-p-dioxins	X	Carc	2.00E-09	0	0
Heptachlorodibenzo-p-furans	X	Carc	2.40E-10	0	0
Hexachlorodibenzo-p-dioxins	X	Carc	1.60E-06	0	0
Hexachlorodibenzo-p-furans	X	Carc	2.80E-10	0	0
2,3,7,8-Tetrachlorodibenzo-p-dioxins	X	Carc	8.60E-12	3.84E-10	1.0
Tetrachlorodibenzo-p-dioxins	X	Carc	4.70E-10	0	0
2,3,7,8-Tetrachlorodibenzo-p-furans	X	Carc	9.00E-11	4.02E-10	0.1
Tetrachlorodibenzo-p-furans	X	Carc	7.50E-10	0	0
Octachlorodibenzo-p-dioxins	X	Carc	6.60E-08	2.95E-09	0.001
Octachlorodibenzo-p-furans	X	Carc	8.80E-11	3.93E-12	0.001
Pentachlorodibenzo-p-dioxins	X	Carc	1.50E-09	0	0
Pentachlorodibenzo-p-furans	X	Carc	4.20E-10	0	0

IFG, Moyie Springs
Potential Ton per Year HAP and TAP Emission Estimates

Boiler Factors from AP-42, Section 1.6 Wood Residue Combustion in Boilers, Table 1.6-3
Kiln Emission Factors from 1996 University of Idaho Study and 2000 Oregon State University Study

Boiler Heat Input 128 MMBtu/hr
Kiln Production 23.4 MBF/hr

Calculations

Compound	EPA HAP	Idaho TAP	Boiler lb/MMBTU	Boiler lb/hr	Kiln lb/MDF	Kiln lb/hr	Total ton/yr
Acetaldehyde	X	Carc	8.30E-04	1.06E-01	0.113	2.64E+00	1.20E+01
Acetone		Non-Carc	1.90E-04	2.43E-02			1.07E-01
Acetophenone	X		3.20E-09	4.10E-07			1.79E-06
Acrolein	X	Non-Carc	4.00E-03	5.12E-01			2.24E+00
Benzene	X	Carc	4.20E-03	5.38E-01			2.35E+00
Benzo(e)pyrene	X		2.60E-09	3.33E-07			1.46E-06
Benzo(g,h,i)perylene	X		9.30E-08	1.19E-05			5.21E-05
Benzo(j,k)fluoranthene	X		1.60E-07	2.05E-05			8.97E-05
bis(2-Ethylhexyl)phthalate	X	Carc	4.70E-08	6.02E-06			2.64E-05
Bromomethane	X	Non-Carc	1.50E-05	1.92E-03			8.41E-03
2-Butanone (MEK)		Non-Carc	5.40E-06	6.91E-04			3.03E-03
Carbon tetrachloride	X	Carc	4.50E-05	5.76E-03			2.52E-02
Chlorine	X	Non-Carc	7.90E-04	1.01E-01			4.43E-01
Chlorobenzene	X	Non-Carc	3.30E-05	4.22E-03			1.85E-02
Chloroform	X	Carc	2.80E-05	3.58E-03			1.57E-02
Chloromethane	X	Non-Carc	2.30E-05	2.94E-03			1.29E-02
2-Chlorophenol		Non-Carc	2.40E-08	3.07E-06			1.35E-05
Crotonaldehyde		Non-Carc	9.90E-06	1.27E-03			5.55E-03
Decaclorobiphenyl	X	Carc	2.70E-10	3.46E-08			1.51E-07
Dichlorobiphenyl	X	Carc	7.40E-10	9.47E-08			4.15E-07
1,2-Dichloroethane	X	Non-Carc	2.90E-05	3.71E-03			1.63E-02
Dichloromethane	X	Carc	2.90E-04	3.71E-02			1.63E-01
1,2-Dichloropropane	X	Non-Carc	3.30E-05	4.22E-03			1.85E-02
2,4-Dinitrophenol	X		1.80E-07	2.30E-05			1.01E-04
Ethylbenzene	X	Non-Carc	3.10E-05	3.97E-03			1.74E-02
Formaldehyde	X	Carc	4.40E-03	5.63E-01	0.004	9.36E-02	2.88E+00
Heptachlorobiphenyl	X	Carc	6.60E-11	8.45E-09			3.70E-08
Hexachlorobiphenyl	X	Carc	5.50E-10	7.04E-08			3.08E-07
Hydrogen chloride	X	Non-Carc	1.90E-02	2.43E+00			1.07E+01
Methanol	X	Non-Carc			0.122	2.85E+00	1.25E+01
Monochlorobiphenyl	X	Carc	2.20E-10	2.82E-08			1.23E-07
Naphthalene	X	Non-Carc	9.70E-05	1.24E-02			5.44E-02
4-Nitrophenol	X		1.10E-07	1.41E-05			6.17E-05
Pentachlorobiphenyl	X	Carc	1.20E-09	1.54E-07			6.73E-07
Pentachlorophenol	X	Non-Carc	5.10E-08	6.53E-06			2.86E-05
Phenol	X	Non-Carc	5.10E-05	6.53E-03			2.86E-02
Propionaldehyde	X	Non-Carc	6.10E-05	7.81E-03			3.42E-02
Styrene	X	Non-Carc	1.90E-03	2.43E-01			1.07E+00
Tetrachlorobiphenyl	X	Carc	2.50E-09	3.20E-07			1.40E-06
Tetrachloroethene	X	Carc	3.80E-05	4.86E-03			2.13E-02
Toluene	X	Non-Carc	9.20E-04	1.18E-01			5.16E-01
Trichlorobiphenyl	X	Carc	2.60E-09	3.33E-07			1.46E-06
1,1,1-Trichloroethane	X	Non-Carc	3.10E-05	3.97E-03			1.74E-02
Trichloroethene	X	Non-Carc	3.00E-05	3.84E-03			1.68E-02
2,4,6-Trichlorophenol	X	Non-Carc	2.20E-08	2.82E-06			1.23E-05
Vinyl Chloride	X	Carc	1.80E-05	2.30E-03			1.01E-02
o-Xylene	X	Non-Carc	2.50E-05	3.20E-03			1.40E-02
					Plant Total		47.63

Compound	EPA HAP	Idaho TAP	Boiler lb/MMBTU	Boiler lb/hr	Total ton/yr
Antimony	X	Non-Carc	7.90E-06	1.01E-03	4.43E-03
Arsenic	X	Carc	2.20E-05	2.82E-03	1.23E-02
Barium		Non-Carc	1.70E-04	2.18E-02	9.53E-02
Beryllium	X	Carc	1.10E-06	1.41E-04	6.17E-04
Cadmium	X	Carc	4.10E-06	5.25E-04	2.30E-03
Chromium	X	Non-Carc	2.10E-05	2.69E-03	1.18E-02
Chromium (VI)	X	Carc	3.50E-06	4.48E-04	1.96E-03
Cobalt	X	Non-Carc	6.50E-06	8.32E-04	3.64E-03
Copper		Non-Carc	4.90E-05	6.27E-03	2.75E-02
Lead	X		4.80E-05	6.14E-03	2.69E-02
Manganese	X	Non-Carc	1.60E-03	2.05E-01	8.97E-01
Mercury	X	Non-Carc	3.50E-06	4.48E-04	1.96E-03
Molybdenum		Non-Carc	2.10E-06	2.69E-04	1.18E-03
Nickel	X	Carc	3.30E-05	4.22E-03	1.85E-02
Phosphorus		Non-Carc	2.70E-05	3.46E-03	1.51E-02
Selenium	X	Non-Carc	2.80E-06	3.58E-04	1.57E-03
Silver		Non-Carc	1.70E-03	2.18E-01	9.53E-01
Tin		Non-Carc	2.30E-05	2.94E-03	1.29E-02
Vanadiaum		Non-Carc	9.80E-07	1.25E-04	5.49E-04
Yttrium		Non-Carc	3.00E-07	3.84E-05	1.68E-04
Zinc		Non-Carc	4.20E-04	5.38E-02	2.35E-01
Polyaromatic hydrocarbon (PAH)	X	Carc		3.76E-04	1.65E-03
PAH Emission Factor is the sum of the following substances in accordance with IDAPA 58.01.01.586 Table					
Benzo(a)anthracene	X	Carc	6.50E-08	8.32E-06	
Benzo(a)pyrene	X	Carc	2.60E-06	3.33E-04	
Benzo(b)fluoranthene	X	Carc	1.00E-07	1.28E-05	
Benzo(k)fluoranthene	X	Carc	3.60E-08	4.61E-06	
Chrysene	X	Carc	3.80E-08	4.86E-06	
Dibenzo(a,h)anthracene	X	Carc	9.10E-09	1.16E-06	
Indeno(1,2,3,c,d)pyrene	X	Carc	8.70E-08	1.11E-05	
2,3,7,8,TCDD Equivalent	X	Carc		1.07E-08	4.69E-08
Dioxin and Furan Equivalent calculated in accordance with IDAPA 58.01.01.586 Table					Equiv Factor
Heptachlorodibenzo-p-dioxins	X	Carc	2.00E-09	0	0
Heptachlorodibenzo-p-furans	X	Carc	2.40E-10	0	0
Hexachlorodibenzo-p-dioxins	X	Carc	1.60E-06	0	0
Hexachlorodibenzo-p-furans	X	Carc	2.80E-10	0	0
2,3,7,8-Tetrachlorodibenzo-p-dioxins	X	Carc	8.60E-12	1.10E-09	1.0
Tetrachlorodibenzo-p-dioxins	X	Carc	4.70E-10	0	0
2,3,7,8-Tetrachlorodibenzo-p-furans	X	Carc	9.00E-11	1.15E-09	0.1
Tetrachlorodibenzo-p-furans	X	Carc	7.50E-10	0	0
Octachlorodibenzo-p-dioxins	X	Carc	6.60E-08	8.45E-09	0.001
Octachlorodibenzo-p-furans	X	Carc	8.80E-11	1.13E-11	0.001
Pentachlorodibenzo-p-dioxins	X	Carc	1.50E-09	0	0
Pentachlorodibenzo-p-furans	X	Carc	4.20E-10	0	0

Appendix C – Compliance Assurance Monitoring Plan
(Submitted by IFG on January 11, 2010)

IDAHO FOREST
— GROUP —

687 W. CANFIELD AVE., STE. 100 COEUR D' ALENE, ID 83815 IDAHOFORESTGROUP.COM 208.762.6630

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DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

January 5, 2010

Harbi Elshafei
Idaho Department of Environmental Quality
Air Quality Division
1410 N. Hilton
Boise, ID 83706
Tel: (208) 373 – 0502

Re: Idaho Forest Group – Moyie Springs

Dear Mr. Elshafei:

Idaho Forest Group is submitting the enclosed Idaho Form CAM for our Moyie Springs facility. The form summarizes information in the current Compliance Assurance Monitoring (CAM) plan and includes additional parameters. An updated CAM plan is attached to the Idaho Form CAM.

Based on the information and belief formed after reasonable inquiry, the statements and information contained herein are true, accurate and complete, to the best of my knowledge.

Sincerely,

Scott Atkison
President

Enclosure

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Compliance Assurance Monitoring - **Form CAM**
Revision 2
08/28/08

Please see instructions on pages 3-8 before filling out the form.

IDENTIFICATION

1. Company Name: Idaho Forest Group LLC	2. Facility Name: Idaho Forest Group - Moyie Springs	3. Facility ID No.: 021-00001
4. Brief Project Description: CAM monitoring conditions update for permit renewal.		

MONITORING APPROACH SUBMITTAL

Background

5. Emissions Unit	Description (type of emission point): Hog Fuel Boiler	Identification (emission point number): Hog Fuel Boiler, EU#1
6. Applicable Regulation, Emission Limits, and Monitoring Requirements	Applicable regulation citation: IDAPA 58.01.01.677 Tier II/PTC NO. T2-050113 Tier I T1-040104	Pollutant: PM Emission limit: 0.200 gr/dscf @ 8% oxygen Pollutant: PM Emission limit: 6.51 lb/hr and 28.5 tpy
		Monitoring requirements: NSPS does not apply, so there are no regulatory monitoring requirements.
7. Control Technology	Brief description: Multiclone, followed by a two-tower electrified filter bed (EFB) with a media-cleaning baghouse.	

Table 1. Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator Description	Ionizer Current	Ionizer Voltage	Filter bed Voltage
Measurement Approach	Continuous current monitor (ammeter) with operator readout for each tower.	Continuous voltage monitor (voltmeter) with operator readout for each tower.	Continuous voltage monitor (voltmeter) with operator readout for each tower.
II. Indicator Range (Quality improvement plan threshold optional)	1.0 to 2.5 milliamps (mA)	10 to 40 kilovolts (kV)	4 to 9.5 kilovolts (kV)
III. Performance Criteria	———	———	———
A. Data Representativeness	The current is measured using instrumentation provided by the EFB manufacturer and used as per design.	The voltage is measured using instrumentation provided by the EFB manufacturer and used as per design.	The voltage is measured using instrumentation provided by the EFB manufacturer and used as per design.
B. Verification of Operational Status	Verify that the ammeter is properly calibrated following any repair or maintenance.	Verify that the voltmeter is properly calibrated following any repair or maintenance.	Verify that the voltmeter is properly calibrated following any repair or maintenance.
C. QA/QC Practices and Criteria	Confirm that ammeter reads zero when the EFB is not operating.	Confirm that voltmeter reads zero when the EFB is not operating.	Confirm that voltmeter reads zero when the EFB is not operating.
D. Monitoring Frequency	Record hourly. Monitoring is complete if 20 of 24 hours are recorded.	Record hourly. Monitoring is complete if 20 of 24 hours are recorded.	Record hourly. Monitoring is complete if 20 of 24 hours are recorded.
E. Data Collection Procedures	Data is recorded on daily log forms and maintained on-site for 5 years.	Data is recorded on daily log forms and maintained on-site for 5 years.	Data is recorded on daily log forms and maintained on-site for 5 years.
F. Averaging Period	Current reading is instantaneous at the time recorded.	Voltage reading is instantaneous at the time recorded.	Voltage reading is instantaneous at the time recorded.

Table 1. Monitoring Approach, continued			
	Indicator No. 4	Indicator No. 5	Indicator No. 6
I. Indicator Description	Filter Bed Current	Filter Bed Temperature	Media Baghouse Pressure Drop
Measurement Approach	Continuous current monitor (ammeter) with operator readout for each tower.	Filter bed temperature is measured with a thermocouple at the beginning of the outlet plenum, where the gas streams from the two towers combine.	Pressure sensors are located at the inlet and outlet of the baghouse. Pressures are compared using a differential pressure gauge.
II. Indicator Range (Quality improvement plan threshold optional)	0 to 0.35 milliamps (mA)	≥ 150 °F	3.0 – 8.0 inches water column (" w.c.)
III. Performance Criteria	———	———	———
A. Data Representativeness	The current is measured using instrumentation provided by the EFB manufacturer and used as per design.	Temperature equalizes within the EFB towers and gas exiting the filter beds has essentially the same temperature as the beds.	Pressure differential (pressure drop) across the baghouse may indicate air flow is bypassing the bags (low ΔP) or is obstructed (high ΔP).
B. Verification of Operational Status	Verify that the ammeter is properly calibrated following any repair or maintenance.	Verify that the thermocouple is properly calibrated following any repair or maintenance.	Verify that the pressure sensors are in place
C. QA/QC Practices and Criteria	Confirm that ammeter reads zero when the EFB is not operating.	Confirm that thermocouple temperature approaches ambient temperature when the EFB is not operating.	Confirm that the pressure differential gauge reads zero when air is not flowing through the baghouse.
D. Monitoring Frequency	Record hourly. Monitoring is complete if 20 of 24 hours are recorded.	Record hourly. Monitoring is complete if 20 of 24 hours are recorded.	Record once per day.
E. Data Collection Procedures	Data is recorded on daily log forms and maintained on-site for five years.	Data is recorded on daily log forms and maintained on-site for five years.	Data is recorded on daily log forms and maintained on-site for five years.
F. Averaging Period	Current reading is instantaneous at the time recorded.	Temperature reading is instantaneous at the time recorded.	Pressure differential reading is instantaneous at the time recorded.

Table 1. Monitoring Approach, continued			
	Indicator No. 7		
I. Indicator Description	Visible Emissions		
Measurement Approach	Observation of visible emissions		
II. Indicator Range (Quality improvement plan threshold optional)	If visible emissions are present, corrections are made.		
III. Performance Criteria	———		
A. Data Representativeness	Under normal operations, emissions from the baghouse are not visible. If visible emissions are noted, it may indicate operational problems with the baghouse.		
B. Verification of Operational Status	Not applicable.		
C. QA/QC Practices and Criteria	Not applicable.		
D. Monitoring Frequency	Quarterly.		
E. Data Collection Procedures	Quarterly observations are included in the quarterly monitoring report.		
F. Averaging Period	Visible emissions observations are instantaneous at the time made.		

Justification	Present justification for selection of monitoring approach(es) and indicator range(s):
	Justification for Indicator 1: The current on the ionizer provides an indicator of the voltage. A decrease in current could indicate a malfunction, such as a buildup of PM or condensed hydrocarbons on the ionizer. **Justification for Indicator 2:** The voltage indicates that a corona is formed and is generating ions for charging particles. **Justification for Indicator 3:** The voltage on the gravel must be maintained so charged PM is attracted to the gravel. A decrease in voltage could indicate a malfunction, such as a short or a buildup of PM or condensed hydrocarbons on the gravel. **Justification for Indicator 4:** A sudden increase in bed current with no corresponding increase in bed voltage or with a bed voltage at zero indicates a short in the filter bed. **Justification for Indicator 5:** Filter bed temperature needs to be high enough to ensure that water in the gas stream does not condense. Moisture condensation in the filter bed can result in an electrical short, and contribute the buildup of hydrocarbon glaze on the ionizer or the gravel. This buildup interferes with the corona charging of the ionizer and the electrode charging of the filter bed. **Justification for Indicator 6:** Pressure differential from the inlet to the outlet of the baghouse (pressure drop) is an indicator of resistance within the baghouse. If the pressure drop is below the normal operating range, it may indicate a leak allowing air to bypass the filter bags. If the pressure drop is above the normal operating range, it may indicate that the flow has become obstructed in some way. **Justification for Indicator 7:** Under normal operations, emissions from the baghouse are not visible. Therefore, visible emissions may indicate a problem within the baghouse.

Idaho Forest Group – Moyie Springs
CAM Plan: Electrified Filter Bed System - PM Control

1. Applicability

1.1	Control Technology:	Electrified Filter Bed (EFB)
1.2	Control Technology:	EFB Media Disengagement Chamber Baghouse
1.3	Pollutants:	Particulate Matter (PM)
1.4	Process/Emissions unit:	Wood-fired Boiler

2. Monitoring Approach Description, EFB

2.1 Parameters to be monitored

a. South tower ionizer current, ionizer voltage, filter bed voltage, filter bed current.
b. North tower ionizer current, ionizer voltage, filter bed voltage, filter bed current.
c. Filter bed temperature, measured in the combined gas streams exiting the north and south tower filter beds.

2.2 Rationale for Monitoring Approach

a. Ionizer current: The current on the ionizer provides an indicator of the voltage. A decrease in current could indicate a malfunction, such as a buildup of PM or condensed hydrocarbons on the ionizer.
b. Ionizer voltage: The voltage indicates that a corona is formed and is generating ions for charging particles.
c. Filter bed voltage: The voltage on the gravel must be maintained so charged PM is attracted to the gravel. A decrease in voltage could indicate a malfunction, such as a short or a buildup of PM or condensed hydrocarbons on the gravel.
d. Filter bed current: A sudden increase in bed current with no corresponding increase in bed voltage or a bed voltage at zero indicates a short in the filter bed.
e. Filter bed temperature: Filter bed temperature needs to be high enough to ensure that water in the gas stream does not condense. Moisture condensation in the filter bed can result in an electrical short, and contribute the buildup of hydrocarbon glaze on the ionizer or the gravel. This buildup interferes with the corona charging of the ionizer and the electrode charging of the filter bed.

2.3 Monitoring Location

a. Ionizer current: Measure current to ionizer electrode
b. Ionizer voltage: Measure voltage of ionizer electrode
c. Filter bed voltage: Measure voltage of filter bed electrode
d. Filter bed current: Measure current to filter bed electrode
e. Filter bed temperature: Filter bed temperature is monitored with a thermostat in the bed area. If the temperature drops below 150 °F, an alarm sounds and the EFB shuts down. The thermostat also triggers a dummy light on the control panel, indicating that the EFB is shut down and more heat is needed to bring it back up to temperature. The thermostat does not report measured temperature.

   Filter bed temperature is measured with a thermocouple at the beginning of the outlet plenum, where the gas streams from the two towers combine. Temperature equalizes within the EFB towers and gas exiting the filter beds has essentially the same temperature as the beds. Measured bed/gas temperature is indicated on the boiler control panel.

2.4 Analytical Devices Required

a. Ionizer current: Ammeter
b. Ionizer voltage: Voltmeter
c. Filter bed voltage: Voltmeter
d. Filter bed current: Ammeter
e. Filter bed temperature: For operational purposes, temperature is monitored with a thermostat control in the filter bed. For temperature monitoring, a thermocouple in the outlet plenum measures gas temperature.

2.5 Data Acquisition and Measurement System Operation

a. Frequency of measurement: Hourly (20 minimum of 24 hourly readings recorded)
b. Reporting Units
   1. Ionizer current: Milliamps
   2. Ionizer voltage: Kilovolts
   3. Filter bed voltage: Kilovolts
   4. Filter bed current: Milliamps
   5. Filter bed temperature: Degrees Fahrenheit.
c. Recording process: Operators read measurements on gauges in the boiler room and log the data manually.

2.6 Data Requirements

a. Ionizer voltage, ionizer current, filter bed voltage, filter bed current measurements are have been measured concurrently with previous emissions test. Acceptable ranges are posted in the boiler room.

b. The operators have kept historical plant records of ionizer voltage, ionizer current, filter bed voltage, filter bed current, and differential pressure measurements.
c. Filter bed temperature, as measured via thermocouple in the outlet plenum will be recorded during the next source test and acceptable operating ranges will be set. The boiler operators will log this temperature with the other parameters.

2.7 Specific QA/QC Procedures

Calibrate the instrumentation annually and operate and maintain the instrumentation using procedures that take into account the manufacturer's specifications.

3. Monitoring Approach Description: EFB Media Disengagement Chamber Baghouse

3.1 Parameters to be monitored

a. Pressure drop across the baghouse.
b. Visible emissions, see-no-see.

3.2 Rationale for Monitoring Approach

a. Pressure differential from the inlet to the outlet of the baghouse (pressure drop) is an indicator of resistance within the baghouse. If the pressure drop is below the normal operating range, it may indicate a leak allowing air to bypass the filter bags. If the pressure drop is above the normal operating range, it may indicate that the flow has become obstructed in some way.
b. Under normal operations, emissions from the baghouse are not visible. Therefore, visible emissions may indicate a problem within the baghouse.

3.3 Monitoring Location

a. Pressure sensors are located at the inlet and outlet of the baghouse. The pressures are compared using a differential gauge and the reading is visible to the boiler operator.
b. Visible emissions are assessed at the outlet of the baghouse stack.

3.4 Analytical Devices Required

a. Pressure drop sensors and gauge with visible readout.
b. No equipment is needed for visible emissions assessment.

c. Data Acquisition and Measurement System Operation

a. Pressure drop is recorded once per day.
b. Operators read the pressure drop gauge and log the data manually.
c. Reporting Units for pressure drop is inches of water column ("w.c.)
d. Visible emissions are assessed quarterly. If visible emissions are seen, the baghouse is repaired following the Baghouse Procedures Document.

3.6 Data Requirements

a. Baghouse pressure drop has been recorded regularly for years. It has also been measured concurrently with PM emissions test. The acceptable pressure drop range is posted with the gauge.
b. Visible emissions observations are noted in the quarterly reports.

3.7 Specific QA/QC Procedures

Verify that the pressure drop instrumentation zeros when there is no air flow.

4. CAM Indicator Ranges

Ionizer current:	1.0 – 2.5 mA
Ionizer voltage:	10 – 40 kV
Filter bed voltage:	4 – 9. 5 kV
Filter bed current:	0 – 0.35 mA
Filter bed temperature:	$\geq$ 150 °F
Baghouse Pressure Drop:	3.0 – 8.0 "w.c.

5. Comments

5.1 Data Collection Frequency: EFB Data recording is required for a minimum of 20 hours during each 24 hour period.