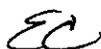


Statement of Basis

**Permit to Construct P-2009.0064
Project No. 60856**

**Tamarack Mill LLC
dba Evergreen Forests and Tamarack Energy Partnership
New Meadows, Idaho**



Facility ID No. 003-00001

Final

**May 31, 2011
Eric Clark
Permit Writer**

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations (for non-carcinogens)
AAAC	acceptable ambient concentrations (for carcinogens)
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
Btu	British thermal unit
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
HAP	hazardous air pollutant
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/day	pounds per day
lb/hr	pounds per hour
lb/Mbf	pounds per thousand board feet
m	meter(s)
MACT	Maximum Achievable Control Technology
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
MMbf/yr	million board feet per year
MMBtu	million British thermal units
NAAQS	National Ambient Air Quality Standard
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
SM	Synthetic Minor
SO ₂	sulfur dioxide
SO _x	sulfur oxides
TAP	toxic air pollutant
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
T2	Tier II operating permit
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

FACILITY INFORMATION

Description

The Tamarack Energy Partnership facility is located approximately 6 miles SW of New Meadows, Idaho on Highway 95 and is a topping cycle cogeneration facility. The Evergreen Forests sawmill processes logs into green dimensional lumber. The facility processes approximately 35% white fir, 35% Douglas fir, 15% ponderosa pine, 10-15% lodge pole, and 0-5% larch or spruce. Wood waste is burned to produce steam in a water wall boiler. Steam from the boiler is piped to a turbine which powers an electrical generator. The facility sells electrical energy to Idaho Power Company

Permitting History

The following 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).

July 27, 2007	T2-050047, Initial Combination Permit. This Tier II operating permit and Permit to Construct was created to fulfill the requirement of the compliance section of the Tier I operating permit issued on February 6, 2003, Permit Status (A, but will become S upon issuance of this permit)
November 4, 2009	P-2009.0064, Addition of three Wellons lumber drying kilns, Permit status (A, but will become S upon issuance of this permit)

Application Scope

This PTC is a revision of an existing PTC and an existing PTC/T2 existing permit. The applicant has proposed to combine the two current two permits into one Permit to Construct.

Application Chronology

April 26, 2011	DEQ received an application and an application fee.
April 29, 2011	DEQ determined that the application was complete.
May 2, 2011	DEQ made available the draft permit and statement of basis for peer and regional office review.
May 9, 2011	DEQ made available the draft permit and statement of basis for applicant review.
May 24, 2011	DEQ received the permit processing fee.
May 31, 2011	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL DEVICE INFORMATION

ID No.	Source Description	Control Equipment Description	Emissions Point ID No. and Description
Lumber Drying Kilns (No. 1, 2, 3)	<p><u>Drying Kilns</u> Manufacturer.: Wellons Model: double-track Year Installed: 2009 Max. Capacity for Each Kiln: 25.33 million board feet per any consecutive 12-month period (25.33 MMBf/yr per kiln) Total Max. Capacity: 76.0 million board feet per any consecutive 12-month period (76.0 MMBf/yr)</p>	None	<p>KILN No. 1 (11 vents) Vent IDs: KILN1A, KILN1B, KILN1C</p> <p>KILN No. 2 (11 vents) Vent IDs: KILN2A, KILN2B, KILN2C</p> <p>KILN No. 3 (11 vents) Vent IDs: KILN3A, KILN3B, KILN3C</p> <p>All vents Stack Height: 21.6 ft Temp.: up to 200 °F Exit Velocity: 4.39 ft/s Stack Dia.: 4.12 ft</p>
Boiler	<p><u>Cogeneration Boiler</u> Manufacturer: Yanke Energy (Riley on nameplate SN-2772) Steam Rated capacity: 72,000 lbs Built: 1951 Remanufactured: 1983 Model: CG-1 Heat capacity: 102 MMBtu/hr Burner type: Stoker Stack diameter: 7.25 feet Stack height: 75 feet Exit temperature: 156°F Flow rate: 46,439 acfm Fuels: bark, sawdust, and chips</p>	<p>Multiclone Manufacturer: Joy Manufacturing Model: 9-inch Joy</p> <p>Wet Scrubber Manufacturer: Yanke Energy Model: CG-1 W.S.</p>	Multiclone and scrubber exhaust stacks
Bins	Sawdust and Chip Bins (ST 3 & 4)	None	Vents
Engine	150 HP Emergency Engine	None	Exhaust Stack

Emissions Inventories

This project did not involve any changes in emissions. Refer to the Statements of Basis associated with permits P-2009.0064, issued November 4, 2009 and T2-050047, issued July 27, 2007.

Ambient Air Quality Impact Analyses

This project did not involve any modeling analysis. Refer to the Statements of Basis associated with permits P-2009.0064, issued November 4, 2009 and T2-050047, issued July 27, 2007.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Adams County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201

Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the facility. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401

Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Standards for New Sources (IDAPA 58.01.01.676)

IDAPA 58.01.01.676

Standards for New Sources

The fuel burning equipment located at this facility, with a maximum rated input of ten (10) million BTU per hour or more, are subject to a particulate matter limitation of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume when combusting gaseous fuels. Fuel-Burning Equipment is defined as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. This requirement is assured by Permit Condition 8.

Particulate Matter – New Equipment Process Weight Limitations (IDAPA 58.01.01.701)

IDAPA 58.01.01.701

Particulate Matter – New Equipment Process Weight Limitations

The process weight rule applies to the proposed kilns (No. 1, 2, and 3) because the kilns emit particulates and will commence operation after October 1, 1979. The emissions are limited according to the equation in the rule.

The total throughput limit is 76.0 million board feet per any consecutive 12-month period (76.0 MMbf/yr) or 8,735.6 board feet per hour (8,735.6 bf/hr) based on 8,700 hours per year.

The following calculations were used to determine the process weight and the corresponding PM emissions limitation for the three lumber drying kilns (No. 1, 2, and 3):

$$\text{Process weight (PW) (lb/hr)} = (50 \text{ lb/ft}^3) \times (0.083 \text{ ft}^3/\text{bf}) \times (8,735.6 \text{ bf/hr}) = 36,252.7 \text{ lb/hr}$$

In accordance with IDAPA 58.01.01.702.b, if the PW is equal to or greater than 9,250 lb/hr, then the allowable emission (E) for the entire source is: $E \text{ (lb/hr)} = 1.10(\text{PW})^{0.25}$.

$$E \text{ (lb/hr)} = 1.10(\text{PW})^{0.25} = 1.10 \times (36,252.7 \text{ lb/hr})^{0.25} = 15.2 \text{ lb/hr}$$

Notes:

The facility processes approximately 35% white fir, 35% Douglas fir, 15% ponderosa pine, 10-15% lodge pole, and 0-5% larch or spruce. AP-42, Appendix A: Miscellaneous Data and Conversion Factors was used as a reference for density of lumber. Only the density of Douglas fir was found; all other lumber species used by Tamarack Mill, LLC were not available. The maximum density listed for other lumber species not processed by Tamarack Mill, LLC was 50 lb/ft³. Thus, to be conservative the average density of 50 lb/ft³ was used for the calculations.

0.083 ft³/bf is a conversion factor to convert from 1 bf to 1 ft³.

Actual estimated hourly PM emissions = 0.44 lb/hr (see Appendix B of Statement of Basis issued November 4, 2009 for calculation)

The estimated hourly PM emissions are less than the calculated allowable PM emission limit. Thus, the proposed lumber drying kiln meets the process weight rate PM emission limit.

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

IDAPA 58.01.01.301

Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility have a potential to emit greater than 100 tons per year for CO as demonstrated previously in the Emissions Inventories Section of analyses of July 27, 2007 and November 4, 2009. Therefore, this facility is classified as a major facility, as defined in IDAPA 58.01.01.008.10.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The facility is classified as an existing major stationary source, because the estimated emissions of PM₁₀, SO₂, NO_x, CO, VOC, and HAP have the potential to exceed major stationary source thresholds. The facility is/is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a).

NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

40 CFR 63 Subpart DDDD NESHAPS: Plywood and Composite Wood Products (PCWP)

In accordance with §63.2231, the requirements of this subpart apply to facilities that meet the criteria in both paragraphs (a) and (b), except for facilities that the EPA determines are part of the low-risk subcategory of PCWP manufacturing facilities.

(a) You own or operate a PCWP manufacturing facility. A PCWP manufacturing facility is a facility that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a structural panel or engineered wood product. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include, but are not limited to, plywood, veneer, particleboard, oriented strand board, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

(b) The PCWP manufacturing facility is located at a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year.

The Tamarack Mill, LLC facility has potential HAP emissions of less than 10 tons per year of any single HAP and less than 25 tons per year of combined HAPs (see emissions inventory and Appendix B). The facility meets the criteria of (a) but not of (b). Therefore, 40 CFR 63 Subpart DDDD **does not apply** to Tamarack Mill, LLC.

It should also be noted that the facility may be subject to the following subparts, but because the Tier I Operating Permit is up for renewal in the next couple of months, assessment of applicability in this PTC action was not done to avoid redundancy in the permits. The subparts are federally regulated and should be more appropriately added into the Tier I permit. These are DDDDD (NESHAPS: Industrial, Commercial, and Institutional Boilers and Process Heaters) and JJJJJ (NESHAPS: Industrial, Commercial, and Institutional Boilers Area Sources) for the boiler and ZZZZ (NESHAPS: Stationary Reciprocating Internal Combustion Engines for the emergency engine). These regulations need be addressed in the upcoming Tier I application.

Permit Conditions Review

This section describes the permit conditions for this initial permit or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Existing Permit Condition 3.10 (T2-050047)

Within 60 days of issuance of this permit, the permittee shall have developed an O&M manual for the wet scrubber. The O&M manual shall be based on the wet scrubber manufacturer's specifications and recommendations and shall describe the methods and procedures that will be followed to assure the wet scrubber is maintained in good working order and operated as efficiently as practical. The O&M manual shall be updated as necessary and shall include, at a minimum, the recommended pressure drop operating range, the recommended scrubbing media flow rate, startup, shutdown, and maintenance procedures, upset conditions, and corrective action procedures. The O&M manual shall remain on site at all times and shall be made available to DEQ representatives upon request.

Revised Permit Condition 14

If any changes to the O&M manual are made, an updated manual shall be submitted to DEQ within 15 days of the change. The O&M manual shall be based on the wet scrubber manufacturer's specifications and recommendations and shall describe the methods and procedures that will be followed to assure the wet scrubber is maintained in good working order and operated as efficiently as practical. The O&M manual shall be updated as necessary and shall include, at a minimum, the recommended pressure drop operating range, the recommended scrubbing media flow rate, startup, shutdown, and maintenance procedures, upset conditions, and corrective action procedures. The O&M manual shall remain on site at all times and shall be made available to DEQ representatives upon request.

This permit condition has been revised to remove the 60 day requirement to submit the O&M Manual. This was already completed. The new condition states that if any changes to the manual are made it must be submitted to DEQ within 15 days of the change.

Existing Permit Condition 3.11 (T2-050047)

- *Within 60 days after achieving the maximum production rate at which the boiler will be operated, but not later than 180 days after issuance of this permit, and at least once every five years thereafter, the permittee shall conduct a performance test to measure PM and PM₁₀ emissions from the boiler stack. The test shall be conducted to demonstrate compliance with the emission rate limits specified by Permit Conditions 3.3 and 3.4. Each performance test conducted to demonstrate compliance shall be performed in accordance with IDAPA 58.01.01.157. Compliance with the daily emissions limit shall be determined by multiplying the average hourly PM₁₀ emissions rate measured during the performance test by 24.*
- *All performance testing shall be conducted in accordance with General Provision 6.*
- *If the PM/PM₁₀ test results are below 75% of the PM/PM₁₀ emissions limits listed in Permit Conditions 3.3 and 3.4, the permittee shall conduct a PM/PM₁₀ performance test on the boiler stack at least once every five years from the issuance date of this permit. If the test results are greater than 90% of the PM/PM₁₀ emissions limits listed in Permit Conditions 3.3 and 3.4, the permittee shall conduct a PM/PM₁₀ performance test on the boiler stack annually. If the test results are between 75% and 90% of the PM/PM₁₀ emissions limits listed in Permit Conditions 3.3 and 3.4, the permittee shall conduct a PM/PM₁₀ performance test on the boiler stack at least once every three years from the issuance date of this permit.*

Revised Permit Condition 15

- *A PM₁₀ performance test shall be conducted no later than August 16, 2012 and at least once every five years thereafter, the permittee shall conduct a performance test to measure PM₁₀ emissions from the boiler stack. The test shall be conducted to demonstrate compliance with the emission rate limits specified by Emission Limit and Fuel-burning standard permit conditions. Each performance test conducted to demonstrate compliance shall be performed in accordance with IDAPA 58.01.01.157. Compliance with the daily emissions limit shall be determined by multiplying the average hourly PM₁₀ emissions rate measured during the performance test by 24.*

- All performance testing shall be conducted in accordance with the Performance Testing General Provision.
- If the PM₁₀ test results are below 75% of the PM₁₀ emissions limits listed in the Emissions Limit and Fuel-burning standard permit conditions, the permittee shall conduct a PM₁₀ performance test on the boiler stack at least once every five years from the issuance date of this permit. If the test results are greater than 90% of the PM₁₀ emissions limits listed in the Emission Limit and Fuel-burning standard permit conditions, the permittee shall conduct a PM₁₀ performance test on the boiler stack annually. If the test results are between 75% and 90% of the PM₁₀ emissions limits listed in the Emissions Limit and Fuel-burning standard permit conditions, the permittee shall conduct a PM₁₀ performance test on the boiler stack at least once every three years from the issuance date of this permit.

This condition was revised to remove the requirement of a performance test soon after permit issuance. This test was conducted August 16, 2007 and the results required that a subsequent test be conducted no later than five years after. Therefore this condition was modified to include August 16, 2012 as the test deadline.

Existing Permit Condition 3.12 (T2-050047)

- Within 60 days after achieving the maximum production rate at which the boiler will be operated, but not later than 180 days after issuance of this permit, and at least once every five years thereafter, the permittee shall conduct a performance test to measure CO emissions from the boiler stack. The test shall be conducted to demonstrate compliance with the emission rate limit specified by Permit Condition 3.3. Each performance test conducted to demonstrate compliance shall be performed in accordance with IDAPA 58.01.01.157.
- All performance testing shall be conducted in accordance with General Provision 6.

Revised Permit Condition 16

- A CO performance test shall be conducted no later than August 16, 2012 and at least once every five years thereafter, the permittee shall conduct a performance test to measure CO emissions from the boiler stack. The test shall be conducted to demonstrate compliance with the emission rate limit specified by Emissions Limit permit condition. Each performance test conducted to demonstrate compliance shall be performed in accordance with IDAPA 58.01.01.157.
- All performance testing shall be conducted in accordance with the Performance Testing General Provision.

This condition was revised to remove the requirement of a performance test soon after permit issuance. This test was conducted August 16, 2007 and the results required that a subsequent test be conducted no later than five years after. Therefore this condition was modified to include August 16, 2012 as the test deadline.

Removed Permit Condition 6.1 (T2-050047)

Table 6.1 EMISSION LIMITS

Source Description	Daily PM ₁₀ ^c Emissions (lb/day)	Annual PM ₁₀ ^c Emissions (T/yr)	CO	
			lb/hr ^a	T/yr ^b
Riley Boiler	432	77.4	57.6	242
Sawdust and Chip Target boxes	19.2	3.2	N/A	N/A
Emergency Generator ^d	7.92	0.083	1.0	0.25

^aAs determined by a pollutant-specific EPA reference method, a DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.

^bAs determined by multiplying the actual or allowable (if actual is not available) pound per hour emission rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates, where "annual" means per consecutive 12-calendar month period.

^cIncludes condensibles

^dGenerator emissions based on 24 hours per day and 500 hours per year, emission factors from AP-42.

This condition was removed because both the boiler and target box limits are already included in previous conditions of the permit. Also, the engine limits are unnecessary because it is already inherently limited by hours of operation and fuel restrictions.

Added Permit Condition 17

All requests, reports, applications, submittals, certifications, and other communications required by this permit shall be submitted to:

*Air Quality Permit Compliance
Department of Environmental Quality
Boise Regional Office
1445 N. Orchard St.
Boise, Idaho 83706
phone: (208) 373-0550
fax: (208) 373-0287*

This condition was added to notify the facility where to send any pertinent information associated with the Air Quality permit.

PUBLIC REVIEW

Public Comment Opportunity

Because this permitting action does not authorize an increase in emissions, an opportunity for public comment period was not required or provided in accordance with IDAPA 58.01.01.209.04.

APPENDIX A – PROCESSING FEE

PTC Fee Calculation

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Tamarack Mill, LLC
Address: PO Box H
City: New Meadows
State: Idaho
Zip Code: 83654
Facility Contact: Mark Krogh
Title: Plant Superintendent
AIRS No.: 003-00001

- N** Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
- N** Did this permit require engineering analysis? Y/N
- N** Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0.0	0	0.0
SO ₂	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	0	0.0
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	0.0
Fee Due	\$ 250.00		

Comments: Because there was no engineering analysis necessary for this project, the processing fee is \$250.00 in accordance with IDAPA 58.01.01.225

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on May 13, 2011:

Facility Comment: In item 28, you have copied in language that says the kilns "will be added". They have since been put into production, so it would be more accurate to say the kilns "exist" or "are in operation".

DEQ Response: The requested change was made.