

LONGVIEW FIBRE PAPER AND PACKAGING, INC.— MILL INFRASTRUCTURE MODIFICATION PROJECT

PSD Applicability Determination

March 15, 2011

SUMMARY

Longview Fibre Paper and Packaging, Inc. (Longview) submitted a Notice of Construction (NOC) application to the Department of Ecology's Industrial Section on November 5, 2010. The project (*aka* "the infrastructure modification project") includes upgrading mill operations by modifying the mill infrastructure to enable production of additional electricity.

The NOC application proposed two possible projects (*aka* "Scenario 1" and "Scenario 2"). Under Scenario 1, Longview proposed to convert Recovery Furnace No. 19 into a low-odor design; modify Power Boiler No. 20 to enable it to primarily burn "carbon neutral" fuel; increase the capacity of the Lime Kiln 5 from 325 tons per day to 400 tons per day CaO; install a new steam turbine to generate up to 54.22 MW of electrical power; and perform other minor miscellaneous modifications to other mill infrastructure. Under Scenario 2, Longview proposed to permanently shut down Power Boiler No. 20 and install a new fluidized bed boiler (Power Boiler No. 24) to provide steam to a new turbine capable of generating up to 65 MW of electrical power.

On December 28, 2010, Longview formally withdrew the portion of the NOC application that proposed installation of a new fluidized bed boiler (i.e., Scenario 2).¹ In the withdrawal letter, Longview stated that the new boiler project was being withdrawn "after numerous discussions and concerns that the complexity of the [NOC] application and permitting process could cause the review and permit issuance to exceed the timeline necessary for success of the project."

Longview has requested that the Department of Ecology's Air Quality Program (Ecology) make a determination on the applicability of the Prevention of Significant Deterioration (PSD) permitting requirements of WAC 173-400-720 to their project. Ecology's PSD applicability review assumes only Scenario 1 is being proposed.

As demonstrated below, Ecology believes the proposed project, as presented to Ecology, does not trigger PSD review at this time because the project will not result in a significant net emissions increase. However, before the anticipated emissions and production increases can be realized, an amendment to the existing PSD Permit No. PSD 01-03, Second Amendment, may be required.

This determination is based on our review of the information presented to Ecology by Longview and their consultant, Trinity Consultants, as well as Longview's documented representations

¹ Steven DuVall, Longview, letter, addressed to David Ogulei and Marc Heffner, Ecology, December 28, 2010.

regarding the proposed project. While we have made every effort to verify all data and assumptions provided to Ecology by Longview, we are not endorsing the accuracy or completeness of the project's scope or resulting net emissions increase as presented by Longview.

1. FACILITY DESCRIPTION

1.1. Source Description

Longview owns and operates a large, integrated Kraft pulp and paper mill located in Longview, Washington (Longview Mill). The Longview Mill obtains its fiber from repulping of purchased secondary fiber and bleached market pulp bales. Additional fiber comes from pulping wood chips and sawdust. The wood chips and sawdust are transported to the mill by barge, truck, and rail. The majority of the wood chips are screened on-site. Pulping of the screened wood chips occurs at the neutral sulfite semi-chemical process or the Kraft process.

The Kraft process uses a chemical recovery and regeneration system including recovery furnaces, smelt dissolving tanks, and lime kilns. Spent cooking liquor is recycled to regenerate active cooking chemicals used in the Kraft pulping process.

Once the various types of fiber are pulped or repulped, the pulp is sent to paper machines where the fiber is converted into paper. The paper from the paper machines is sent to either the finishing department or the corrugated containers and solid fiber plant, both of which are located on the mill site. The finishing department completes non-corrugated container converting operations. The corrugated containers and solid fiber plant manages corrugated container converting operations. Following production on the paper machines and/or conversion, the paper and paperboard products are sent to the shipping department for final preparation.

In addition to the processes directly related to pulping and papermaking, Longview uses multiple power boilers to produce process steam, and a wastewater collection and treatment system to treat water from the various mill processes before it is discharged back into the Columbia River.

1.2. Major Source Status and Summary of PSD Applicability Requirements

The Longview Mill is an existing major stationary source under the PSD permitting program because it has the potential to emit (PTE) greater than 100 tons per year (tpy) of several PSD pollutants.² PSD Permit No. 01-03, Second Amendment, was issued to Longview on September 18, 2006.

Under WAC 173-400-720 through 750, a project proposed at an existing major stationary source is subject PSD review if the project either is a "major modification" to an existing "major stationary source," or is a major stationary source unto itself.

² 40 CFR §52.21(b)(1)(i)(a)

Unless otherwise exempted by applicable regulation, a change to an existing major stationary source is a major modification if the change results in both a significant emissions increase and a significant net emissions increase at the source.³ “Significant emissions increase” means that the emissions increase for any regulated PSD pollutant is greater than the PSD Significant Emission Rate (SER) threshold for that regulated pollutant.⁴ Details of Longview’s proposed project and the associated emissions increases are summarized below.

2. PROJECT DESCRIPTION

As part of the proposed mill infrastructure modification project, multiple emissions units will be physically changed, and new supporting equipment will be constructed. Longview proposes to conduct the following activities at the Longview Mill:

2.1. Modify Recovery Furnace 19 and Construct a New Heavy Black Liquor Solids (BLS) Tank

- 2.1.1. The Recovery Furnace 19 will be upgraded to a low-odor, non-direct contact evaporator (NDCE) unit with the addition of a concentrator and a new, and more efficient dry bottom precipitator.
- 2.1.2. The furnace pressure parts (i.e., the economizer and superheater), the soot blower system, the air system, the flue gas system, and the combustion controls will be modified such that the Recovery Furnace 19 will be able to produce steam at 850 psig and 900°F.
- 2.1.3. Steam from the modified Recovery Furnace 19 will be routed to a new 54.22 MW Steam Turbine 9, which will produce electricity either for sale or to support mill operations.
- 2.1.4. The physical changes to the Recovery Furnace 19 will not affect the overall capacity of this unit, which is permitted at 2,000 tons black liquor solids (BLS)/day.⁵ The boiler will be modified to produce slightly hotter, higher-pressure steam in order to produce electricity from a more modern, more efficient turbine. Longview estimates that the furnace-firing rate may actually be derated slightly in order to make the higher pressure, hotter temperature steam.
- 2.1.5. A new heavy black liquor solids (BLS) tank will be constructed to support the Recovery Furnace 19 conversion.
- 2.1.6. The Smelt Dissolving Tank 19 associated with the Recovery Furnace 19 will not be physically modified as a result of the mill infrastructure modification project.

³ 40 CFR §52.21(b)(2)(i)

⁴ The SER for each regulated pollutant is established under 40 CFR 52.21(b)(23)(i).

⁵ Title V Permit No. AOP 000007-8, Condition A3.8 and PSD Permit No. 01-03, 2nd Amendment, Condition 1.14.

2.2. Modify Recover Furnace 22

- 2.2.1. The superheater and economizer at the Recovery Furnace 22 will be modified (less heat to economizer and more heat to the superheater) in order to provide steam at the original design temperature and pressure of the existing Turbine 7. Modifications to the superheater and economizer will result in the production of steam at a higher temperature and/or pressure than is achievable under the current configuration.
- 2.2.2. There are no other physical or process changes that will occur on the Recovery Furnace 22. The changes to the Recovery Furnace 22 affect steam quality from the furnace but will not affect the potential or actual throughput of the unit. Recovery Furnace 22 is currently permitted at 1,950 tons BLS/day.⁶
- 2.2.3. Following the project, Longview plans to operate the Recovery Furnace 19 as the base load furnace (will continuously operate near maximum capacity) in order to generate as much “green power” as possible. The Recovery Furnace 22 will pick up any additional load required by mill production, depending on market demand. This load relationship is opposite to how the mill currently operates, where the Recovery Furnace 22 is the main recovery furnace and the Recovery Furnace 19 picks up any additional load required.

2.3. Modify Lime Kiln 5 and Lime Slaker 6

- 2.3.1. The Lime Kiln 5 will be physically modified to increase its permitted throughput capacity from 325 tons calcium oxide (CaO) per day⁷ to 400 tons CaO per day. Thus, the overall capacity of the Lime Kiln 5 and the corresponding Lime Slaker 6 will change as a result of the project.
- 2.3.2. The increase in throughput will be accomplished through changes in the pumping configuration, mud handling systems, and air systems.
- 2.3.3. The Lime Slaker 6 will be physically modified to handle the increased capacity of the Lime Kiln 5. The screw feeder will be modified to allow for a larger flow rate of lime to the slaker. Longview states that this additional pumping capacity is required to supply green liquor to the slaker and to pump the white liquor away from the slaker.

⁶ Title V Permit No. AOP 000007-8, Condition A4.8 and PSD Permit No. 01-03, 2nd Amendment, Condition 1.21.

⁷ Title V Permit No. AOP 000007-8, Condition C5.8 and PSD Permit No. 01-03, 2nd Amendment, Condition 1.69.

2.4. Modify Power Boiler 20

- 2.4.1. The Power Boiler 20 will be physically modified to provide additional steam for the new steam turbine with a capacity to generate up to 54.22 MW of electrical power. The project's goal is to increase the amount of steam from hog fuel, with a corresponding decrease in fossil fuel use since the boiler is hydraulically limited to 600,000 pounds steam per hour.
- 2.4.2. The modified Power Boiler 20 will combust hog fuel, wastewater treatment plant (WWTP) sludge, fuel oil, and natural gas.
- 2.4.3. The rated wood burning capacity of the Power Boiler 20 will increase from 300,000 lb steam per hour to 380,000 lb steam per hour. This increase will be accomplished by increasing the boiler's capacity to fire solid fuel. However, the overall capacity of the Power Boiler 20 will not change as a result of the project. Power Boiler 20's heat input rating will not change from the currently permitted 900 MMBtu/hr, heat input. The capacity of the boiler to burn fuel oil will not be affected by the project.
- 2.4.4. A modern overfire air system combined with better material distribution on the travel grate will increase the wood burning rate of the boiler. Induced draft fan speed, forced draft fan speed, and wood conveyor capacities will be increased to support the higher solid fuel-firing rate. Additionally, Longview may retube certain sections of the Power Boiler 20 as part of the project.
- 2.4.5. A selective non-catalytic reduction (SNCR) system will be installed on the Power Boiler 20 to reduce NO_x emissions.
- 2.4.6. The mechanical dust collector will be modified or replaced to accommodate the increased fly ash loading.
- 2.4.7. Old corrugated cardboard (OCC) rejects, medical waste, and mill garbage will no longer be fired in the Power Boiler 20. The existing OCC rejects handling system will be shut down as part of the mill infrastructure modification project. After the project, the Power Boiler 20 will not combust any fuel that meets the definition of municipal solid waste or hospital/medical/medical/infection waste, as defined in 40 CFR 60.51b and 40 CFR 60.51c, respectively. Additionally, the Power Boiler 20 will not combust any material that meets the definition of solid waste, as defined under Chapter 173-434 WAC.
- 2.4.8. The existing hog fuel handling system that serves the Power Boiler 12, the Power Boiler 13, and the Power Boiler 20, will not be physically modified as part of the mill infrastructure modification project.

2.5. Construct a New Cooling Tower

- 2.5.1. A new cooling tower will be constructed to support the new turbine capacity.
- 2.5.2. The pressure drop across the turbine will be achieved by using a two-cell cooling tower fitted with high efficiency drift eliminators.

2.6. Reconfigure the Non-Condensable Gases (NCGs) System

- 2.6.1. The destruction of NCGs at the Longview Mill will be affected by the proposed mill infrastructure modification project. Currently, the following emissions units can be used for destruction of low volume high concentration (LVHC) NCGs: the Lime Kiln 3,⁸ the Lime Kiln 4, the Power Boiler 12, and/or the Power Boiler 13. These same units are used for the destruction of high volume low concentration (HVLC) NCGs.
- 2.6.2. Following the project, Longview will combust NCGs at the Lime Kiln 5 and/or the Power Boiler 20 instead of the Power Boilers 12 and 13. The Power Boilers 12 and 13 will be shut down as a result of the proposed project.
- 2.6.3. The Lime Kiln 3 and the Lime Kiln 4 will continue to operate as combustion sources for NCGs.
- 2.6.4. NCG combustion at the Lime Kiln 5 and/or the Power Boiler 20 will have equal or greater destruction (combustion) efficiency as the boilers that will be shut down.

According to documents presented by Longview, the mill infrastructure modification project will result in an increase in actual emissions of at least one regulated PSD pollutant at the following emissions units: Recovery Furnace 19, Smelt Dissolving Tank 19, New Heavy BLS Tank, Recovery Furnace 22, Lime Kiln 5, Lime Slaker 6, Power Boiler 20, and New Cooling Tower.

No other emissions units at Longview will undergo an emissions increase as a result of this project.

3. EMISSIONS CALCULATIONS

3.1. Overview of Calculation Procedure

To determine whether the proposed mill infrastructure modification project is a major modification, Longview used the procedure described in 40 CFR 52.21 to calculate emissions. That procedure can be summarized as follows:

⁸ The Lime Kiln 2 was also permitted to combust NCGs; however, this unit was shut down in June 2008.

1. Calculate project emission increases.
 - a. For existing emissions units, the increase in emissions is calculated as the difference between projected actual emissions and baseline actual emissions.
 - b. For new emissions units, the increase in emissions is equal to the PTE of the unit.
 - c. The increase in emissions is calculated for:
 - i. New emissions units,
 - ii. Existing emissions units that will be physically modified,
 - iii. Existing emissions units that will not be physically modified but will have an associated increase in emissions as a result of the project, and
 - iv. Existing emissions units from any past or future projects that must be aggregated with the current project.
2. Calculate net contemporaneous and creditable emission increases and decreases.
 - a. For all pollutants that will have a project emissions increase from Step 1 that is greater than the SER, a further analysis is used to determine the creditable emissions increases and decreases that occurred during the contemporaneous period.
 - b. An increase or decrease in actual emissions is contemporaneous with the increase from the project only if it occurs between:
 - i. The date five years before construction on the project commences; and
 - ii. The date that the increase from the project occurs.⁹
 - c. An increase or decrease in actual emissions is creditable only if:¹⁰
 - i. EPA or Ecology has not relied on it in issuing a PSD permit for the source, which permit is in effect when the increase in actual emissions from the project occurs; and
 - ii. As it pertains to an increase or decrease in fugitive emissions (to the extent quantifiable), it occurs at an emissions unit that is part of one of the source categories listed in 40 CFR 52.21(b)(1)(iii) or it occurs at an emissions unit that

⁹ See 40 CFR 52.21(b)(3)(ii)

¹⁰ See 40 CFR 52.21(b)(3) for a detailed list of creditability criteria. 40 CFR 52.21(b)(3)(iii)(b) also states that the increase or decrease should not have occurred at a Clean Unit. However, that requirement does not apply because EPA removed the Clean Unit provisions from 40 CFR 52.21 through rulemaking at 72 FR 32526, June 13, 2007.

is located at a major stationary source that belongs to one of the listed source categories.¹¹

- d. A decrease in actual emissions is creditable only to the extent that it is enforceable as a practical matter at and after the time that actual construction on the particular change begins.
3. Determine the net emissions increase.
 - a. The emissions increase from the project alone is added to the net contemporaneous emissions change to determine the net emissions increase of a pollutant.
 - b. If the net emissions increase is less than the respective SER, PSD permitting is not triggered for that particular pollutant.

3.1.1. Debottlenecking, Aggregation, and Increased Utilization

To identify those emissions units that should be reviewed as part of the mill infrastructure modification project, Longview carefully reviewed their entire process flow diagram, and all previous capital expenditures in excess of \$250,000.¹²

There were approximately 150 projects that occurred during the 10-year period from 2001 through December 2010. Longview performed a thorough review of all capital expenditures at the facility, and Ecology was provided information on the capital expenditures that both exceeded the \$250,000 threshold and affected the chemical recovery area or the steam generating area of the mill.

Longview has determined that there are no past projects that need to be considered and aggregated when performing the PSD applicability analysis for the mill infrastructure modification project. Based on Ecology's review of the data supplied by Longview, Ecology does not dispute this conclusion.

Longview has submitted information that indicates their facility is currently capable of generating excess steam. The project will not increase the capacity of the modified recovery furnaces or their permitted throughput limits. The project will not affect the steam capability or the capacity of the plant. Any additional excess steam that is generated as a result of the project will be used to generate electricity for sale to the local electricity grid.

¹¹ The Longview Mill is a Kraft pulp and paper mill, which is listed under 40 CFR (b)(1)(iii)(b). Thus, any increases or decreases in fugitive emissions, which occur at the facility, may be creditable.

¹² Longview reviewed ALL past and future projects. The \$250,000 figure was an arbitrarily selected threshold based on suggestions by Bryan Holtrop, EPA Region 10, and telephone discussions with Longview. Due to the number of capital expenditures that occurred at Longview over the last 10 years, a lower capital expenditure threshold would yield hundreds of projects.

Additionally, because Longview is proposing to shut down existing recovery furnaces, the mill will have less capacity to combust BLS at the recovery furnaces after the completion of the project.

Longview states that they will not debottleneck any emissions unit located at the entire facility as part of the proposed project. The facility currently has excess capacity at the recovery furnaces, lime kilns, and power boilers, and the overall mill's capacity at each of these equipment types will be reduced as a result of the mill infrastructure modification project. The concentrator and BLS tank for the Recovery Furnace 19 are not available to feed the Recovery Furnace 22. All emissions units that will experience associated emissions increases as a result of the project have been evaluated in this analysis.

Longview maintains that they will not transfer throughput from a shutdown emissions unit to another emissions unit that is unaffected by the mill infrastructure modification project. Longview has provided data illustrating that they have captured any anticipated loss in throughput from a shutdown emissions unit by including the anticipated loss in throughput in the projected throughput of modified or associated emissions units. For example, the projected actual lime production from the Lime Kiln 5 alone exceeds the total lime production from the facility in 2009. Any additional lime that needs to be produced as a result of shutting down the Lime Kiln 2 is accounted for in the Lime Kiln 5 projected actual production. Therefore, it is reasonable that the Lime Kilns 3 and 4 will not have an increase in lime production as a result of shutting down the Lime Kiln 2 (which in this case was already shut down in 2009).

3.1.2. Greenhouse Gas Emissions

On June 3, 2010, the United States Environmental Protection Agency (EPA) promulgated an approach for "tailoring" the Clean Air Act permitting programs to address greenhouse gas (GHG) emissions (GHG Tailoring Rule). The GHG Tailoring Rule provides a two-step approach to regulate GHG emissions under the federal PSD permitting program. The applicable implementation phase for PSD permitting under the GHG Tailoring Rule depends on the date that the final permit is issued.

The Step 1 phase of the GHG Tailoring Rule implementation applies to final PSD permits issued after January 2, 2011, but before July 1, 2011. As an existing major PSD source for non-GHG pollutants, the Longview Mill will trigger PSD permitting for GHGs under Step 1 if the mill infrastructure modification project meets all of the following criteria:

1. A PSD significant net emissions increase occurs for at least one non-GHG pollutant (i.e., a non-GHG pollutant triggers PSD permitting);

2. The project results in a GHG emissions increase (or net emissions increase) of 0 tpy or more;¹³
3. The project results in a net GHG emissions increase of 75,000 tpy CO₂e or more, calculated as the sum of six well-mixed GHGs on a CO₂e basis (i.e., GWPs are applied to each GHG constituent to determine CO₂e emissions).

Starting July 1, 2011, an existing major PSD source for non-GHG pollutants will trigger PSD permitting for GHGs if:

1. The project results in a GHG emission increase (or net emissions increase) of 0 tpy or more, based on the sum of six well-mixed GHGs on a mass basis; and
2. The project results in a net GHG emissions increase of 75,000 tpy CO₂e or more, calculated as the sum of six well-mixed GHGs on a CO₂e basis (i.e., GWPs are applied to each GHG constituent to determine CO₂e emissions).

Therefore, starting July 1, 2011, PSD review for GHG pollutants can be triggered regardless of whether PSD review is also triggered for non-GHG pollutants. Longview did not calculate the net emissions increase for GHG. Therefore, the emissions calculations presented in this technical analysis do not include GHG emissions.

Longview maintains that the mill infrastructure modification project will not trigger PSD review for non-GHG pollutants. Longview expects to receive a final minor new source review permit (NOC approval order) and to begin actual construction of the mill infrastructure modification project before July 1, 2011. If indeed the mill infrastructure modification project does not trigger PSD review for non-GHG pollutants, and Longview begins actual construction of the mill infrastructure modification project before July 1, 2011, PSD review for GHGs will not be triggered for this project.

3.2. Baseline Actual Emissions

3.2.1. Calculation Procedure

For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions are¹⁴ the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either:

- a. The date the owner or operator begins actual construction of the project, or
- b. The date a complete permit application is received by Ecology, whichever is earlier.

¹³ The emission increase calculation must be based on the sum of six well-mixed GHGs on a mass basis (i.e., global warming potentials (GWPs) are not applied to each GHG prior to aggregating individual GHG constituents).

¹⁴ See 40 CFR 52.21(b)(48)(ii).

For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero.

For a “listed” source category such as the Longview Mill, the calculation of baseline actual emissions for each emissions unit that will undergo an emissions increase must:

- a. Include emissions associated with start-ups, shutdowns, and malfunctions;
- b. Include fugitive emissions (to the extent quantifiable);
- c. Adjust downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month baseline period;
- d. Adjust downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period;¹⁵
- e. Use only one consecutive 24-month period to determine the baseline actual emissions for all the emissions units being changed; but can use a different consecutive 24-month period for each regulated PSD pollutant; and
- f. Not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by 40 CFR 52.21(b)(48)(ii)(b) and (c).

Longview has demonstrated to Ecology through statements and emissions calculations that the above steps were followed in calculating baseline actual emissions for the mill infrastructure modification project.

For existing units where emission increases will occur as a result of the mill infrastructure modification project, Longview calculated the baseline actual emissions from annual emission inventories covering the period 2004-2009. Emissions were calculated based on data obtained by Continuous Emissions Monitoring Systems (CEMS); Ecology-required source tests, emission factors used in the annual emissions inventory; or emission factors published by the National Council for Air and Stream Improvement, Inc. (NCASI).

Baseline actual emissions and the selected baseline periods are summarized in Table 1.

¹⁵ In Washington State, this adjustment does not currently apply to MACT limits per 40 CFR 52.21(b)(48)(c).

3.2.2. Adjustment for Applicable Emissions Limitations

The only emissions unit affected by any permitting actions, or subject to new federally enforceable emissions limitations from 2004 to 2010, is the Power Boiler 20.

A new wet scrubber was installed on the Power Boiler 20 as approved by NOC Order No. 4115-AQ07. This action may have impacted emissions of PM. Although a new emission limit was not established as a result of this permitting action, Longview recalculated emissions during the 2004-2005 baseline period to account for the impact the scrubber may have had on PM emissions.

From July 2, 2007 to December 3, 2009, ten PM source tests were conducted by the mill on the Power Boiler 20. These test results provide a good basis to calculate PM emissions assuming the new scrubber was always installed on the Power Boiler 20. Therefore, baseline actual emissions between 2004 and 2005 are calculated using the average emission factor calculated from the 10 recent source tests (i.e., after the scrubber installation), and the actual throughput between 2004 and 2005.

The replacement of the wet scrubber did not impact SO₂ or other pollutants from the Power Boiler 20. As such, other pollutants from the baseline period are not adjusted.

Table 1. Baseline Actual Emissions (Tons per Year)

Pollutant	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	TRS	H ₂ S	H ₂ SO ₄
Baseline Period	2004-2005	2004-2005	2004-2005	9/2006-8/2008	4/2004-3/2006	2004-2005	2004-2005	2004-2005	2004-2005	2004-2005
Recovery Furnace 19	118.4*	108.7*	100.4*	11.2	281.3	11.1*	81.2	11.4*	11.4*	2.2
Smelt Dissolving Tank 19	7.0	5.9	5.1	0.1	0.1	51.4	0.5	0.5	0.5	0.0
Recovery Furnace 22	42.9	36.9	34.2	56.9	251.3	2.5*	227.3	2.6	2.6	1.6
Lime Kiln 5	7.8	7.4	6.9	1.3	29.0	0.0	8.9	1.4	1.4	0.7
Lime Slaker 6	0.7	0.7	0.7	0.0	0.0	1.8	0.0	0.1	0.1	0.0
Power Boiler 20	47.7	44.2	43.0	90.0	412.4	1.8	233.8	0.0	0.0	0.8
New Cooling Tower	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hog Fuel Handling System	0.03*	0.01*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
Haul Roads	4.2*	0.8*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
TOTAL EMISSIONS	106.1	95.1	89.9	159.4	974.0	55.1	551.8	4.6	4.6	5.3

* The PM, PM₁₀, PM_{2.5}, VOC, TRS, and H₂S emission decreases from Recovery Furnace 19; VOC emissions from Recovery Furnace 22; and PM/PM₁₀/PM_{2.5} emissions from the Hog Fuel Handling System and Haul Roads are not included in the project emissions increase calculation, because the first step of the PSD applicability analysis does not take credit for decreases in emissions at modified sources.

3.2.3. Adjustment for Non-Compliant Emissions

As stated above, baseline actual emissions must be adjusted downward to “exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.” To determine if the baseline actual emissions need to be adjusted downward, Longview performed a thorough review of their Annual Compliance Certification (ACC) reports for the baseline period selected for each regulated pollutant.

Longview provided a detailed list of all occurrences of non-compliance at any emissions unit affected by this project. Table 2 provides a summary of the quantified non-compliant emissions and the affected emissions units. Table 3 presents the adjusted baseline actual emissions for each pollutant affected by the project. The recalculated project emissions increase is also shown.

Table 2. Summary of Non-Compliant Emissions and the Affected Emissions Units

Pollutant	Emission Unit	Non-Compliant Emissions (tons)
PM/PM ₁₀ /PM _{2.5}	Power Boiler 20	0.39
	Power Boiler 13	0.29
SO ₂	Recovery Furnace 19	0.11
	Recovery Furnace 22	0.15
NO _x	Power Boiler 20	0.05
CO	Lime Kiln 5	0.48

Table 3. Adjusted Baseline Actual Emissions (Tons per Year)

Emission Unit	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	TRS	H ₂ S	H ₂ SO ₄
Unadjusted Baseline Actual Emissions	106.1	95.1	89.9	159.4	974.0	55.1	551.8	4.6	4.6	5.3
Non-Compliant Emissions	0.39	0.39	0.39	0.26	0.05	0	0.48	0	0	0
Adjusted Baseline Actual Emissions	105.7	94.7	89.5	159.2	974.0	55.1	551.3	4.6	4.6	5.3

3.3. Projected Actual Emissions

Projected actual emissions are determined by projecting what the existing emission unit will emit once regular operation occurs following the project, as follows:

- Over a 5-year period following the project if there is not an increase in the emission unit's design capacity or PTE, or
- Over a 10-year period following the project if there is an increase in the emission unit's design capacity or PTE.

When estimating projected actual emissions, a "listed" source,¹⁶ such as Longview, must:¹⁷

- a. Consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the state or federal regulatory authorities, and compliance plans under the approved State Implementation Plan;
- b. Include emissions associated with start-ups, shutdowns, and malfunctions, and quantifiable fugitive emissions;
- c. Exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project, including any increased utilization due to product demand growth; or
- d. In lieu of using the method set out above, may elect to use the emissions unit's PTE, in tons per year.

For each newly constructed emissions unit, Longview must calculate the emissions increase by using the PTE of the unit. For this project, the PTE was used to calculate post-project emissions for the new heavy BLS tank and cooling tower.

In calculating emissions increases at any emissions unit, Longview did not take advantage of the provision in the rules that allow a facility to exclude that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project, including any increased utilization due to product demand growth. This conservative calculation method was applied in order to simplify and streamline the PSD applicability review.

¹⁶ 40 CFR 52.21(b)(1)(iii)

¹⁷ 40 CFR 52.21(b)(41)(ii)

3.3.1. Data Inputs Used for Projecting Emissions

The maximum BLS combusted at the mill over the five years following completion of the project will be equal to 1,174,804 tons BLS per year. This number originates from the best data available to forecast the amount of Kraft pulp that will be produced in the years to come based on anticipated customer demand.

Table 4 provides the projected throughputs for each modified emissions unit following the project. The overall total annual BLS throughput used in the projected actual emissions calculations is greater than the total actual BLS throughput anticipated by Longview (1,174,804 tons BLS per year).

Table 4. Projected Actual Emissions (Tons per Year)

Pollutant	Annual Throughput	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	TRS	H ₂ S	H ₂ SO ₄
Recovery Furnace 19	716,000 tBLS	86.4*	72.3*	66.0*	84.7	395.9	3.1*	359.4	4.8*	4.8*	2.5
Smelt Dissolving Tank 19	716,000 tBLS	23.6	19.2	16.4	0.4	0.1	93.6	1.3	1.0	1.0	0.0
New Heavy BLS Tank	716,000 tBLS	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.8	0.8	0.0
Recovery Furnace 22	496,683 tBLS	60.0	50.2	45.8	58.8	274.7	2.5*	249.3	3.4	3.4	1.7
Lime Kiln 5	143,200 tCaO	19.4	18.2	16.3	4.8	100.2	0.2	24.5	3.9	3.9	1.5
Lime Slaker 6	143,200 tCaO	1.7	1.7	1.7	0.0	0.0	4.3	0.0	0.3	0.3	0.0
Power Boiler 20	7,732,800 MMBtu	91.1	84.5	82.2	181.7	580.0	12.8	897.3	0.0	0.0	2.3
New Cooling Tower		2.2	0.8	0.004	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hog Fuel Handling System		0.03*	0.01*	0.00*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
Haul Roads		3.5*	0.7*	0.1*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
TOTAL EMISSIONS		198.0	174.7	162.4	330.4	1350.9	111.8	1531.7	9.2	9.2	8.1

* The PM, PM₁₀, PM_{2.5}, VOC, TRS, and H₂S emission decreases from Recovery Furnace 19; VOC emissions from Recovery Furnace 22; and PM/PM₁₀/PM_{2.5} emissions from the Hog Fuel Handling System and Haul Roads are not included in the project emissions increase calculation, because the first step of the PSD applicability analysis does not take credit for decreases in emissions at modified sources.

Because the Recovery Furnace 19 will be considered a non-direct contact evaporator (NDCE) furnace following the project and the Recovery Furnace 22 currently has an NDCE furnace, Longview expects the post-project emissions profile from the Recovery Furnace 19 to be similar

to the current emissions profile of the Recovery Furnace 22. Therefore, historical emissions data from the Recovery Furnace 22 is used to project future emissions from the Recovery Furnace 19 following the project.

The annual throughputs for the Recovery Furnace 19, the Lime Kiln 5, and the Power Boiler 20 are determined by taking the permitted throughput limits and assuming that each unit will operate 358 days of the year, taking into account the seven days of downtime needed for annual inspections. The Smelt Dissolving Tank 19 and the Lime Slaker 6 throughputs are directly related to the throughputs of the Recovery Furnace 19 and the Lime Kiln 5, respectively.

An ESP was added to the Power Boiler 20 in 2004 and the unit resumed normal operation on October 22, 2004. New wet scrubbers were added to the Power Boiler 20 in 2007, and the Power Boiler 20 resumed normal operation on July 2, 2007. PM source tests were conducted by Longview after the installation of these new control devices. Since the results of these source tests are the only data available to calculate historical emissions assuming the scrubber and ESP were installed on the Power Boiler 20, historical emissions are assumed equal to annual heat input multiplied by the average emission factor from the PM source tests.

On June 8, 2009, Ecology approved a retubing project on the Power Boiler 20. However, this project was never performed on the Power Boiler 20. Therefore, the possible increase in emissions due to this cancelled project was not included in the emissions increase.

Longview states that the project will result in a throughput capacity increase of Lime Kiln 5 from 325 tons per day of CaO to 400 tons per day of CaO. Thus, the overall capacity of the Lime Kiln 5 and the corresponding Lime Slaker 6 will increase as a result of the project. This constitutes a change in the PTE and design capacity of Lime Kiln 5 and Lime Slaker 6. However, Longview is not requesting an increase in the existing annual PTE limits for any pollutant from Lime Kiln 5 (including PSD 01-03, Second Amendment, Conditions 1.70 through 1.74 and Title V Permit No. AOP 000007-8, Conditions C5.1, C5.3, C5.4, C5.5, and C5.6).

Also, although the permitted overall heat input limit for the Power Boiler 20 will not change as a result of the project, the rated wood burning capacity of the Power Boiler 20 will increase from 300,000 lb steam per hour to 380,000 lb steam per hour through implementation of various physical changes to the unit. While the overall 900 MMBtu/hr heat input limit¹⁸ will not change as a result of the project, the increase in wood burning capacity could be interpreted as an increase in the “design capacity” of the Power Boiler 20 if the capacity of the boiler to burn other fuels is not reduced. Longview states that the Power Boiler 20 is “hydraulically limited to 600,000 pounds of steam per hour,” which confirms that an increase in wood burning capacity necessitates a corresponding decrease in other fuel burning capacity.

For all emissions units where a design capacity or PTE increase will result, and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase,

¹⁸ Condition 1.85, PSD 01-03, Second Amendment.

the projected actual emissions must represent the maximum annual rate, in tons per year, at which the unit is projected to emit a regulated PSD pollutant in any one of the 10 years following the date the unit resumes regular operation after the project.¹⁹ Longview reports that the estimated projected actual emissions for Lime Kiln 5 and Lime Slaker 6 are based on a 10-year forecast period.

3.3.2. Effect of 2010 Temporary Relaxation of PSD Limit

On June 17, 2010, Ecology approved Longview's request to operate the Recovery Furnace 22 in excess of 1,950 tons BLS/day provided Longview met additional criteria specified in the temporary revision to PSD 01-03, Second Amendment.

Longview subsequently determined that the Recovery Furnace 22 could not operate above the 1,950 tons BLS/day on a long-term basis (i.e., the average daily throughput over a month could not exceed 1,950 tons BLS/day).²⁰ Accordingly, projected actual emissions from the Recovery Furnace 22 do not take into account the 2010 temporary relaxation of the 1,950 tons BLS/day permit limit. Baseline actual emissions are based on emission rates prior to the relaxation, and projected actual emissions calculations assume that the relaxation will no longer be in effect.

Further, the temporary relaxation of production limits for the Recovery Furnace 22 is expected to have no effect on actual 2010 emission rates because Longview has not been able to sustain higher Recovery Furnace 22 production rates in practice.

Table 4 provides a summary of the calculated projected actual emissions, based on the methodology described above.

3.4. Project Emissions Increase

The project emissions increase is calculated by subtracting the baseline actual emissions from the projected actual emissions. As shown in Table 5, the project emissions increases exceed the PSD SER for PM, PM₁₀, PM_{2.5}, SO₂, NO_x, VOC, and CO. Therefore, a netting analysis is conducted for these pollutants.

No further analysis is required for TRS, H₂S, or H₂SO₄ since emission increases from the project do not exceed the applicable PSD SER for these pollutants.

¹⁹ 40 CFR 52.21(b)(41)(i)

²⁰ Steven D. DuVall, Longview, letter, addressed to Alan Newman, Ecology, December 23, 2010.

Table 5. Project Emissions Change (Tons per Year)

Pollutant	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	TRS	H ₂ S	H ₂ SO ₄
Significant Emission Rate	25	15	10	40	40	40	100	10	10	7
Baseline Actual Emissions	105.7	94.7	89.5	159.2	974.0	55.1	551.3	4.6	4.6	5.3
Projected Actual Emissions	198.0	174.7	162.4	330.4	1350.9	111.8	1531.7	9.2	9.2	8.1
Project Emissions Increase*	92.3	79.9	72.9	171.2	377.0	56.7	980.4	4.6	4.6	2.8
Is the Project Emissions Increase Significant?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No

* The PM, PM₁₀, PM_{2.5}, VOC, TRS, and H₂S emission decreases from Recovery Furnace 19, VOC emissions from Recovery Furnace 22, and PM/PM₁₀/PM_{2.5} emissions from the Hog Fuel Handling System and Haul Roads are not included in the project emissions increase calculation, because the PSD applicability analysis does not take credit for decreases in emissions at modified sources.

3.5. Contemporaneous Emissions Increase

Because the project emission increases of PM, PM₁₀, PM_{2.5}, SO₂, NO_x, VOC, and CO are each above the respective SER, Longview conducted a netting analysis for each of those pollutants.

The netting analysis involves adding all creditable emission increases and decreases that occurred during the contemporaneous period to the project emission increases. The contemporaneous period begins five years before construction of the project is scheduled to commence, and ends when the increase from the project occurs. The net emissions increase is then compared to the SER to determine if PSD review is triggered.

Note that when any emissions decrease is claimed (including those associated with the proposed modification), all source-wide creditable and contemporaneous emissions increases and decreases of the pollutant subject to netting must be included in the PSD applicability determination.²¹

Longview submitted the NOC application for the mill infrastructure modification project to Ecology on November 5, 2010. Based on the anticipated date of commencement of construction (which Longview expects to be some time in April 2011), the contemporaneous period for the project covers the time period from May 2006 to the date that normal operation starts following the project.

²¹ Draft New Source Review Workshop Manual, 1990, p. A.36.

3.5.1. Notes From the Netting Analysis

The Power Boiler 12 and Power Boiler 13 retubing and fan replacement projects in 2008 and 2007, respectively, did not affect any other units. Because the Longview Mill had excess steam available before and after the Power Boiler 12 and Power Boiler 13 projects, no associated emissions increases occurred due to the retubing and fan replacement projects. Additionally, the project did not affect the capacity of the Power Boiler 12 or Power Boiler 13; both emission units were capable of producing the same amount of steam before and after the project.

An electrostatic precipitator (ESP) was installed on the Power Boiler 12 during the contemporaneous period. However, the addition of the ESP was relied upon in the issuance of PSD Permit #01-03. Therefore, the emission decrease for the Power Boiler 12 is determined based on normal operation after the installation of the ESP, and does not include the reduction in emissions from the ESP installation.

An ESP was installed on the Power Boiler 13 during the contemporaneous period. However, the addition of the ESP was relied upon in the issuance of PSD Permit #01-03. Therefore, the emission decrease for the Power Boiler 13 is determined based on normal operation after the installation of the ESP, and does not include the reduction in emissions from the ESP installation.

Substantial emissions reductions will be achieved by shutting down Power Boilers 12 & 13, Recovery Furnace 18, Smelt Dissolving Tank 18, Lime Kiln 2, Lime Slaker 3 and #5 Washer Line.

3.5.2. Procedure Used to Calculate Contemporaneous Emissions Changes

Longview calculated creditable decreases from shutdown emissions units, and units that will be shut down, by subtracting baseline actual emissions from the PTE of the units after the shut down (i.e., zero). For each unit to be shut down or that will remain shutdown, Longview selected a 24-month baseline period from which to calculate baseline actual emissions according to 40 CFR 52.21(b)(3)(i)(b).

As shown in Table 6, there were tube and fan replacement projects on Power Boilers 12 & 13 in 2008 and 2007, respectively, which must be accounted for in the net emissions calculation because they occurred during the contemporaneous period.

Through multiple e-mail and telephone discussions with EPA Region 10, EPA has stated that for each contemporaneous emissions increase or decrease, the creditable emissions change should be calculated by subtracting actual emissions just before each project from the PTE of the affected unit after the project. If the unit is also being shut down within the contemporaneous period (as

proposed by Longview for Power Boilers 12 and 13), the emissions decrease should be calculated by subtracting zero from the actual emissions prior to the shutdown.²²

For a unit undergoing multiple changes during the contemporaneous period, this methodology assigns an emissions increase or decrease to each change occurring at that unit during the contemporaneous period. This could result in an overall positive emissions increase for a unit that is also being shut down with the project if the unit was not utilized at its full capacity during the contemporaneous period.

For Power Boilers 12 and 13, Longview calculated the emissions changes at those units by subtracting the actual emissions prior to the 2008 and 2007 tube and fan replacement projects, respectively, at those units from the PTE of the units after the shutdown (i.e., zero). This calculation methodology combines the effects of multiple changes during the contemporaneous period into a single calculation and reflects the actual emissions reduction that takes place at these units during the contemporaneous period, while still following the actual-to-PTE calculation method.

Ecology believes that if there are multiple changes at that unit, it is acceptable for the applicant to calculate the emissions increase (or decrease) by subtracting actual emissions before the first project (if it occurs within the contemporaneous period) from the PTE after the last project. In this case, the previous increase at this unit would be irrelevant since the unit is being shut down with the current project. Ecology was unable to find any formal EPA guidance that specifically prohibits this emissions calculation methodology.

Ecology has requested EPA to confirm that this approach is acceptable. In the case of Longview's project, Power Boilers 12 and 13 will be shut down with the current project, and enforceable restrictions will be imposed to that effect. Thus, the PTE after the last project (i.e., the shutdown) is zero.

EPA Region 5 is in the final stages of preparing a letter to the state of Indiana addressing the actual-to-projected-actual applicability test for contemporaneous emissions changes.²³ EPA believes their response to the state of Indiana will also address the situation with previously modified units that are being shut down.²⁴ If EPA's determination indicates that Longview's net emissions calculation is not consistent with EPA guidance, Longview will need to recalculate their emissions according to EPA guidance.

²² EPA explained in the preamble to the 2002 NSR reform rules that net emissions calculations should continue to be calculated using the pre-2002 methodology (67 FR 80203). The pre-2002 methodology used the actual-to-PTE approach, where actual emissions were calculated from the two years immediately preceding each contemporaneous change. Ecology believes that actual emissions can be calculated using the methodology for baseline actual emissions as described in 40 CFR 52.21(b)(48) and 40 CFR 52.21(b)(3)(i)(b). As stated in 40 CFR 52.21(b)(3)(i)(b), second sentence: "Baseline actual emissions for calculating increases and decreases under this paragraph (b)(3)(i)(b) shall be determined as provided in paragraph (b)(48) of this section, except that paragraphs (b)(48)(i)(c) and (b)(48)(ii)(d) of this section shall not apply".

²³ Nancy Helm, EPA Region 10, e-mail message, addressed to David Ogulei, Ecology, March 10, 2011.

²⁴ *Id.*

Table 6. Summary of Contemporaneous Emission Decreases and Increases

Emissions Unit	Increase or Decrease	Date of Decrease or Increase	Is Decrease or Increase Creditable?²⁵	Explanation
Cogen 23	Decrease	July 2006	Yes ²⁶	Unit was shut down
#5 Washer Line	Decrease	July 2007	Yes	The unit was decommissioned in July 2007. Longview requests a federally enforceable limit to permanently shut down this emission unit that will be in place when actual construction of the project begins.
Lime Slaker No. 3	Decrease	May 2008	Yes	The unit was decommissioned in May 2008. Longview requests a federally enforceable limit to permanently shut down this emission unit that will be in place when actual construction of the project begins.
Lime Kiln 2	Decrease	June 2008	Yes	The unit was decommissioned in June 2008. Longview requests a federally enforceable limit to permanently shut down this emission unit that will be in place when actual construction of the project begins.
Power Boiler 12	Decrease	TBD	Yes	Longview requests a federally enforceable limit to permanently shut down this emission unit that will be in place when actual construction of the project begins.
Power Boiler 12	Increase	2008	Yes	Retubing and fan replacement project. The emission increases resulting from this project are accounted for in the emission decrease calculation for the shutdown of the Power Boiler 12 (see discussion above).
Power Boiler 13	Decrease	TBD	Yes	Longview requests a federally enforceable limit to permanently shut down this emission unit that will be in place when actual construction of the project begins.

²⁵ The criteria for creditability are established in 40 CFR 52.21(b)(3). “Yes” responses in this column assume the claimed reductions are rendered federally enforceable through a permit condition or other appropriate means.

²⁶ Although the Cogen 23 was shut down during the contemporaneous period, emissions from this unit are not included in the emission decrease calculations. The additional emission decreases from this unit were not needed to demonstrate that the net emission increase was less than the SER.

Emissions Unit	Increase or Decrease	Date of Decrease or Increase	Is Decrease or Increase Creditable? ²⁵	Explanation
Power Boiler 13	Increase	2007	Yes	Retubing and fan replacement project. The emission increases resulting from this project are accounted for in the emission decrease calculation for the shutdown of the Power Boiler 13 (see discussion above).
Recovery Furnace 18	Decrease	TBD	Yes	Longview requests a federally enforceable limit to permanently shut down this emission unit that will be in place when actual construction of the project begins.
Smelt Dissolving Tank 18	Decrease	TBD	Yes	Longview requests a federally enforceable limit to permanently shut down this emission unit that will be in place when actual construction of the project begins.
OCC Rejects Handling System	Decrease	TBD	Yes	Longview requests a federally enforceable limit to permanently shut down this emission unit that will be in place when actual construction of the project begins.

Table 6 provides a summary of all projects with emissions increases and decreases during the contemporaneous period.

3.5.3. Requirements for Creditability of Emissions Increases and Decreases

40 CFR 52.21(b)(3)(vi)(b) states that the decrease in actual emissions is only creditable to the extent that it is enforceable as a practical matter at and after the time that actual construction on the particular change begins.

To make the claimed emissions reductions creditable, Ecology must issue a federally enforceable order that mandates shutting down the following units:

- #5 Washer Line
- Lime Slaker No. 3
- Lime Kiln 2
- Power Boiler 12
- Power Boiler 13
- Recovery Furnace 18
- Smelt Dissolving Tank 18
- OCC Rejects Handling System

The order to shut down the above units must be federally enforceable before construction on the project begins. The actual emissions reduction must take place before the date that the emissions

increase from any of the new or modified emissions units occurs. In addition, Ecology must verify that the source has maintained any contemporaneous decrease, which Longview states have occurred in the past.

For units that have already been shut down, Longview must either demonstrate that the emissions decrease was enforceable as a practical matter at the time the source claims it occurred, or it must otherwise demonstrate that the decrease was maintained until the present time and will continue until it becomes enforceable. An emissions decrease cannot occur, and therefore, cannot be credited from an emissions unit, which was never constructed or operated, including units that received a PSD permit.²⁷

If indeed the emissions reductions claimed in Longview's proposal are creditable at and after the time construction of the project begins, the contemporaneous emissions changes and the resulting net emissions increases are as shown in Tables 7 and 8, respectively.

Table 7. Contemporaneous Emissions Changes (Tons per Year)

	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO
#5 Washer Line	0	0	0	0	0	-0.06	0
Lime Slaker 3	-0.15	-0.15	-0.15	0	0	-0.3	0
Lime Kiln 2	-2.42	-2.16	-2	-0.08	-8.94	0	-0.19
Power Boiler 12	-32.04	-27.85	-26.4	-102.39	-167.77	-13.62	-928.12
Power Boiler 13	-24.38	-21.77	-20.83	-68.45	-128.19	0	-303.71
Recovery Furnace 18	-39.5	-38.43	-37.5	-12.03	-169.95	-5.87	-235.16
Smelt Dissolving Tank 18	-7.72	-6.26	-5.31	-0.04	-0.05	-22.72	-0.01
Existing OCC Rejects Handling System	-0.003	-0.001	-0.0002	0	0	0	0
TOTAL CHANGE	-106.2	-96.6	-92.1	-183.0	-474.9	-42.6	-1467.2

As shown in Table 8, the net emissions increases of all pollutants are below their applicable PSD SERs. Therefore, the proposed mill infrastructure modification project is not subject to PSD review for any pollutant at this time.

²⁷ Draft New Source Review Workshop Manual, 1990, p. A.38.

Table 8. Net Emissions Change (Tons per Year)

Pollutant	PM	PM₁₀	PM_{2.5}	SO₂	NO_x	VOC	CO
Significant Emission Rate	25	15	10	40	40	40	100
Baseline Actual Emissions	105.7	94.7	89.5	159.2	974.0	55.1	551.3
Projected Actual Emissions	198.0	174.7	162.4	330.4	1350.9	111.8	1531.7
Project Emissions Increase	92.3	79.9	72.9	171.2	377.0	56.7	980.4
Contemporaneous Emissions Change	-106.2	-96.9	-92.4	-183.0	-474.9	-42.6	-1467.2
Net Emissions Increase	-14.0	-16.7	-19.3	-11.8	-97.9	14.1	-486.7
Is the Net Emissions Increase Significant?	No	No	No	No	No	No	No

4. IMPLICATIONS FOR THE EXISTING PSD PERMIT

Longview's proposal involves increasing throughput and/or output limits for certain emissions units. However, no emissions limits contained in PSD 01-03, Second Amendment, are proposed for revision.

The Recovery Furnace 19 will be physically modified to produce steam at 850 psig and 900°F. Condition 1.104 of PSD 01-03, Second Amendment, contains a plant-wide operating limit of 2.6 million lb/hr steam production @ 800 psig @ the main header, 1-hour average. If Longview wants to generate steam at 850 psig, this condition may need to be revised.

The Lime Kiln 5 will be physically modified to increase its permitted throughput capacity from 325 tons CaO per day to 400 tons CaO per day. Thus, the overall capacity of the Lime Kiln 5 and the corresponding Lime Slaker 6 will increase as a result of the project. Condition 1.69 of PSD 01-03, Second Amendment, contains an operating limit of 325 tons CaO per day for Lime Kiln 5. This limit will need to be revised if Longview wants to operate the Lime Kiln 5 at a rate higher than 325 tons CaO per day.

Ecology was unable to verify at this time whether or not the original Lime Kiln 5 throughput limit was founded in BACT.²⁸ Any time a permit limit founded in BACT is being considered for revision, a corresponding reevaluation (or reopening) of the original BACT determination is required. This is necessary even if the permit limit is exceeded by less than a "significant" amount.²⁹

²⁸ BACT refers to Best Available Control Technology as that term is defined in 40 CFR 52.21(b)(12).

²⁹ McCutchen and Tutna, 1987, Request for Determination on Best Available Control Technology (BACT) Issues--Ogden Martin Tulsa Municipal Waste Incinerator Facility, Memorandum by the United States Environmental Protection Agency Office of Air Quality Planning and Standards, November 19, 1987.

The rated wood burning capacity of the Power Boiler 20 will increase from 300,000 lb steam per hour to 380,000 lb steam per hour through implementation of various physical changes to the unit. The overall 900 MMBtu/hr heat input limit contained in Condition 1.85 of PSD 01-03, Second Amendment, will not change as a result of the project. The existing PSD permit does not currently limit steam production by this specific unit. Therefore, a permit revision may not be required to address the anticipated steam production increase at the Power Boiler 20.

5. CONCLUSION

Longview has presented a wealth of information in support of their conclusion that the proposed mill infrastructure modification project is not subject to PSD review for any regulated pollutant at this time. Ecology has reviewed all of the information presented by Longview, including process flow diagrams, emissions calculations, and company statements regarding the proposed project.

Based on the information presented, and assuming the information is complete and accurate, Ecology concludes that the proposed project is not subject to PSD review at this time, provided that:

1. Actual construction of the project begins before July 1, 2011;
2. Ecology issues a federally enforceable order or orders requiring that the claimed emissions reductions are enforceable at and after the date that construction on the project begins;
3. The project will not violate any existing PSD permit approval condition;
4. The existing PSD permit is revised, as necessary, to accommodate any anticipated emissions or production increases; and
5. The record keeping and reporting requirements contained in WAC 173-400-720(4)(b)(iii) are adhered to.

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