

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10

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Reply To
Attn Of: OAQ-107

Alan Newman
State of Washington Department of Ecology
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Olympia, Washington 98504-7600

Re: Response to Inquiry Regarding Routine Maintenance, Repair and Replacement Analysis for Recovery Furnace Modifications at Longview Fibre, Longview Mill and Boise Cascade Corporation, Wallula Mill

Dear Mr. Newman:

This letter responds to your December 13, 2000, letter to Dan Meyer of my staff. You requested that the United States Environmental Protection Agency, Region 10 (Agency or EPA) concur with two preliminary Prevention of Significant Deterioration of Air Quality (PSD) applicability interpretations made by the State of Washington Department of Ecology (Ecology). Although not specifically mentioned in the December 13th letter, EPA learned through subsequent discussions with Ecology that the two facilities discussed in the letter are the Longview Fibre pulp and paper mill located in Longview, Washington, and the Boise Cascade pulp and paper mill located in Wallula, Washington. We also learned that Boise Cascade had already undertaken the activity in question by December 2000, while Longview Fibre has applied for a PSD permit.

In each case, the threshold question is whether the activity is a "physical change." If it is a physical change, further analysis would be required to determine whether there would be a resultant significant net emissions increase. Because no information was provided related to emissions increases, EPA expresses no opinion with respect to that issue in this letter.

Regarding whether the activities in question are or would be physical changes, both sources asked Ecology to consider whether the activities fall within the exclusion from the definition of physical change for routine maintenance, repair and replacement under 40 C.F.R. § 52.21(b)(2)(iii)(a). In analyzing whether these changes are subject to this exemption, we note that the September 9, 1988 Memorandum from Don R. Clay, Acting Assistant Administrator for Air and Radiation to David A. Kee, Director, Air and Radiation Division, Region V (Clay Memorandum) at page three, states that the clear intent of the PSD regulations is to construe "physical change" very broadly, to cover virtually any significant alteration to an existing plant and to interpret the exclusion related to routine maintenance, repair and replacement narrowly.

Ecology has already instructed Longview Fibre to apply for a PSD permit based on Ecology's conclusion that the proposal to completely reconstruct the firebox in Recovery Furnace No. 19 (RF 19) is a physical change that is not routine, and that the change would result in a significant net emissions increase. Based on the information provided in your letter, EPA has no reason to disagree with Ecology's assessment that the physical change to RF 19 at Longview Fibre was not routine.

In your December 13, 2000, letter, you state that Ecology's preliminary conclusion was that Boise Cascade's Recovery Furnace No.2 (RF 2) tube replacement project constitutes routine maintenance, repair or replacement, and thus does not require a PSD permit. Based on the information currently available to the Agency, EPA does not concur with Ecology's assessment of Boise Cascade's RF 2 tube replacement project. For the reasons discussed below, EPA believes that when all the factors used to assess whether a project constitutes routine maintenance, repair or replacement are considered together, the information provided to the Agency does not support the conclusion that the RF 2 tube replacement project was "routine."

Background

RF 2 was originally constructed in the 1960's as a power boiler. In 1980 the power boiler was significantly modified and converted into a recovery furnace. Boise Cascade obtained a PSD permit for this modification. RF 2 experienced an emergency shutdown in May 2000, after a water leak was discovered in one or more boiler tubes. During the shutdown, an inspection revealed cracks in boiler tubes entering the steam drum. In response, the suspect tubes were plugged and RF 2 returned to service. However, Boise Cascade's insurance carrier requested a follow-up inspection. The follow-up inspection, conducted in August 2000, revealed cracks in twelve additional boiler tubes, stress cracks in the economizer, and signs of failure in the steam generator bank tubes. The insurance carrier recommended that the economizer and generator bank tubes should be replaced in order to assure continued safe and efficient operation.

In response to the insurance carrier's recommendations, Boise Cascade replaced several damaged boiler components. Prior to the repair project, RF 2 was operating at its full rated capacity in terms of both black liquor firing rate and steam production. The project was designed to safely return RF 2 to full use. The components were replaced over a three-week period during the scheduled October 1, 2000 annual maintenance shutdown. Other maintenance activity at other units throughout the mill was completed within two weeks. Boise Cascade spent \$3.9 million to return RF 2 back to service. The cost to replace RF 2 today is estimated in your letter to be \$45 to \$50 million.

Discussion

When assessing whether changes can be considered "routine" under PSD regulations, permitting authorities consider the following factors: nature and extent, purpose, frequency, and

cost.¹ None of these factors on its own conclusively determines a project to be routine or not. Rather, all the factors and their relationship to one another are considered together. In your December 13, 2000, letter, you explain that Ecology considered all these factors and concluded that the RF 2 project can be considered routine within the meaning of 40 C.F.R. § 52.21(b)(2)(iii)(a). However, based on the information provided to the Agency, EPA does not agree with this conclusion.

EPA's opinion on the proposed RF-2 tube replacement project based on the facts provided by your letter and subsequent conversations is as follows:

- Nature and Extent - All economizer and generator bank tubes have been replaced. Although the replacement tubes represent less than half of total boiler tube area, they also represent complete replacement of all the tubes in two major components of the boiler. It is our understanding that such a wholesale change to a major component of RF 2 does not occur annually, or on any regular basis. This is not a matter of merely replacing only a few worn or damaged tubes on an as-needed basis. The fact that it took three weeks to accomplish the on-site work is significant because it extends beyond the mill's typical two-week outage for annual maintenance. These facts indicate that the complete replacement of all the tubes in major components is not routine.
- Purpose - As you indicated in your letter, the repair to RF 2 was of an emergency nature, and hardly routine. Furthermore, whether the stress cracks to RF 2 were the result of normal wear and tear on the boiler, or due to excessive use, the cracks may simply

¹ As early as 1988, EPA articulated its position that "in determining whether proposed work at an existing facility is 'routine,' EPA makes a case-by-case determination by weighing the nature, extent, purpose, frequency, and cost of the work, as well as other relevant factors, to arrive at a common-sense finding." Clay Memorandum at 3. EPA's Environmental Appeals Board recently confirmed the application of these factors to determine whether an activity is routine in *In re: Tennessee Valley Authority*, CAA Docket No. 00-6, at 64-65 (EAB, Sept 5, 2000). EPA also notes the following determinations related to whether a physical change was routine with respect to modifications at other pulp and paper mills. September 24, 2001 letter from Gregg M. Worley, Chief, Air Permits Section, Air Planning Branch, EP A Region 4, to Barry R. Stephens, P.E., Tennessee Department of Environment and Conservation (concluding that \$924,500 project at the Packaging Corporation of America (PCA)'s pulp and paper mill including replacement of all tubes in a recovery boiler generating bank, and 44 tubes on an economizer did not constitute routine maintenance, repair or replacement); September 13, 2000 letter from R. Douglas Neeley, Chief, Air and Radiation Technology Branch, Air, Pesticides, and Toxics Management Division, EP A Region 4 (concluding that \$4.6 million maintenance project at PCA pulp and paper mill including partial replacement of water tubes in furnace walls, removal and replacement of outer casing, insulation and brick work in order to repair economizer, replacement of tank shell, and inspection and repair of electrostatic precipitator, air heater, liquor heater, cascade, auxiliary equipment and ductwork, did not constitute routine maintenance, repair or replacement).

indicate that the equipment was near, or had exceeded, its useful life. Although EPA recognizes that the purpose of the project was to assure continued safe operation of the boiler, and not to increase operating capacity, safety-related projects are not categorically exempt from PSD review.

- Frequency - EPA is not aware of RF 2 undergoing such an extensive boiler tube replacement project since it started up as a recovery furnace in 1980, more than twenty years ago. EPA does not believe that a wholesale boiler tube replacement project is a frequent occurrence, thus, consideration of the frequency factor does not support a conclusion that the project is routine.
- Cost - As previously indicated, Boise Cascade spent \$3.9 million to return RF 2 to service. A cost of nearly \$4 million is within the range of costs for projects that have been considered non-routine by EPA in other contexts. Although Boise Cascade's annual maintenance expenditures are not specified in Ecology's letter, EPA expects that this cost is substantially greater than the annual maintenance budget for the facility, given the information we have from other similar facilities across the country. Thus, this factor also does not support a conclusion that the project is routine.

Conclusion

In your December 13, 2000 letter you ask that EPA concur on Ecology's preliminary PSD applicability determinations with respect to Longview Fibre's reconstruction of its firebox in RF 19, and Boise Cascade's RF 2 Project. As stated previously, the Agency agrees with your conclusion that Longview Fibre's RF 19 project is not routine maintenance, repair or replacement. However, after applying the facts presented in your letter describing Boise Cascade's RF 2 Project to the factors used to determine whether an activity is routine maintenance, repair or replacement, we do not agree with Ecology's conclusion that such activity was routine. We would be glad to consider any further information that you would like to provide to the Agency with regard to this matter, or if you wish to discuss the issue further, please contact Dan Meyer of my staff at 206-553-4150.

Sincerely,

Doug Cole, Acting Manager
Federal and Delegated Air Programs

cc: Tapas Das, Ecology
Merley McCall, Ecology
Rich Garber, Boise Cascade Corporation
Randy Sandberg, Environmental Manager, Boise Cascade Wallula Mill
Alan Whitford, Environmental Services Manager, Longview Fibre