



August 20, 2019

BY EMAIL

Kenzie Billings (kenzie.billings@deq.state.or.us)
Oregon Department of Environmental Quality
700 NE Multnomah St., Suite 600
Portland, OR 97232

RE: Cleaner Air Oregon Emissions Inventory Revised Submittal

Dear Ms. Billings:

As requested in the Department of Environmental Quality's (DEQ's) letter dated July 31, 2019, please find an electronic copy of the revised CAO emission inventory for Roseburg Forest Products (Roseburg) Medford MDF facility included with this letter. This emission inventory represents the best data currently available to Roseburg, and please note that the data submitted is subject to change should additional or more appropriate data become available.

In addition to the revised emission inventory, responses to the DEQ's specific comments are provided below:

Specific Comment #1: DEQ requested that Roseburg provide emissions of toxic air contaminants (TAC) from the "Storage Pile and Material Handling Equipment" listed in the facility's permit.

First, Roseburg wants to clarify that the facility permit does not list a "Storage Pile and Material Handling Equipment" emissions unit. Storage Piles and Miscellaneous Fugitive Sources are listed emissions units, and Roseburg assumes that the comment is intended to address these units. Roseburg is responding on that basis.

Storage Pile:

The Storage Piles and Miscellaneous Fugitive Sources listed in the facility permit include emission estimates for fugitive particulate matter. Roseburg does not believe that particulate matter emissions include any of the TACs listed in Table 2 of the CAO rules (i.e., the reportable TACs). Therefore, particulate matter emissions are not required to be reported as toxic air contaminant emissions for these units.

The permit also includes emissions estimates for VOC emissions from “miscellaneous fugitives”, based on NCASI Technical Bulletin 723, which Roseburg understands to account for emissions from the storage of the raw materials used in the facility production process. This is based on the scope of the NCASI Technical Bulletin, which is a limited investigation of the storage of wood residuals and the production of wood residuals from the whole log processing and sawmill processes.

Roseburg knows of no TAC emission factors that exist for wood furnish storage piles, nor do we know of a way to calculate for such a request. We have also contacted NCASI regarding this request, and they too are a bit perplexed by the request. However, NCASI did provide Roseburg with information that leads to a conclusion that most or all of any storage pile VOC emissions are likely made up of terpenes; terpenes are not included on the Oregon list of reportable TACs. Further, NCASI has stated that it would not be appropriate to use VOC estimates for emission estimates of non-terpene compounds.

Material Handling Equipment:

The initial submittal included emission factors and rates for the facility’s material handling equipment. Specifically, the “Former” represents total material throughput for baghouses 8-11; The “Saw and Hog” represents total material throughput for Baghouse 13; the “Sander” represents total material throughput for Baghouse 12. Adding additional data would result in double or triple counting emissions from these sources.

Baghouses 1 through 6 were not included because similar to the material contained in the storage pile, the material conveyed through those processes is still cold and wet. Roseburg knows of no TAC emission factors that exist for these material handling units, nor do we know of a way to calculate for such a request. We have also contacted NCASI regarding this request, and they too are a bit perplexed by the request. However, NCASI did provide Roseburg with information that leads to a conclusion that most or all of any VOC emissions are likely made up of terpenes; terpenes are not included on the Oregon list of reportable TACs. Further, NCASI has stated that it would not be appropriate to use VOC estimates for emission estimates of non-terpene compounds.

Specific Comment #2: DEQ requested that Roseburg provide emission factor references or methodologies used to calculate emissions.

Based on the example reference in DEQ’s July 31, 2019 letter (“e.g. NCASI database references”), Roseburg believes that sufficient emission factor references were provided in the original submittal. However, Roseburg has included additional reference information with this submittal. If DEQ believes they are missing reference information for certain data, please let us know which specific data would be helpful.

Specific Comment #3: DEQ requested the addition of PAHs and dioxins/furans for wood fired boilers.

Roseburg neither previously included, nor includes here, emission factors for PAHs, dioxins and furans as data does not exist for Roseburg’s Medford type of combustion unit which is a sanderdust suspension unit burner. Additionally, NCASI presented compelling rationale to EPA in its August 31, 2018 letter to EPA (attached) where it explained that PAHs, dioxins and furans are not expected to occur in suspension burners that combust very fine particles. NCASI’s memo speaks specifically to this:

Most direct-fired dryers are heated by 100% suspension burners that combust very fine, dry wood particles, such as sander dust. This type of burner is designed to rapidly combust the fuel to completion. The rapid combustion, along with the resulting high temperatures, is expected to produce drastically lower levels of PICs (the precursors for PCDD/F formation) than the combustion of wet fuel on the grates of industrial boilers.

And:

Another distinction in direct-fired dryers and lumber kilns is that, even if PICs were formed during combustion, there is limited potential for PCDD/F formation through the de novo synthesis pathway. In both process unit types, the amount of time post-combustion gases spend in the range of 250° to 400°C is minimal in comparison to boilers.

Although NCASI was directing this to EPA regarding combustion units for direct-fired process units, Roseburg's Medford boiler represents exactly the same type of suspension burner referred to in their memo. Specifically, the burner is a suspension burner that rapidly burns sander dust at very high temperatures (well over 1,000°F); the result is a very complete combustion followed by rapid cooling of the exhaust stream. Suspension burners such as Roseburg's Medford boiler is unlike the type of combustion units that run at lower temperatures, are more prone to result in incomplete combustion, and are expected to emit measureable levels of PAHs, dioxins and furans. In addition, a sander dust burner would not have a source of chlorine which is a necessary component for dioxin and furan formation. Accordingly, Roseburg has not included emission factors for those TACs. Roseburg is willing to discuss further if DEQ feels so compelled.

Specific Comment #4: DEQ requested supporting source test data for source tests referenced in the submittal.

Supporting data from the source tests referenced in the original submittal are included with this letter. Please note that while the DEQ's letter requested source test data for the Press from September 2006, the original submittal only contained source test data for the Press from a test conducted in December 2006. We are not aware of a September 2006 press test, if DEQ has information that we do not, please advise.

General Comment

In response to DEQ's request for clarification, Roseburg wishes to clarify that the submittal intentionally contained identical activity values for the "requested PTE" and "capacity" activity levels. Based on the definitions in OAR 340-200 of these terms, we do not see a difference as they relate to the Medford facility.

If you have any questions or concerns with the data contained within the emission inventory, please feel free to contact me by email at ChantalG@rfpco.com, and please copy Ellen Porter at ellen@lmienviro.com.

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Sincerely,

A handwritten signature in blue ink, appearing to be 'C. Green', written in a cursive style.

Chantal Green
Roseburg Forest Products