VERMONT

Vermont Department of Environmental Conservation *Agency of Natural Resources*
Air Quality and Climate Division
Davis Building, 2nd Floor
One National Life Drive
Montpelier, VT 05602, 3802
(802) 828-1288

MEMORANDUM

TO: Peter Walke, Commissioner Department of Environmental Conservation

FROM: Doug Elliott, Permitting Chief Air Quality & Climate Division

DATE: February 12, 2021

RE: Testimony Follow Up on S.1 - An act relating to extending the baseload renewable power portfolio requirement for the Ryegate Wood Energy Plant

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Just following up on the testimony on S.1 Wednesday, specifically in response to Senator Hardy's question of whether any additional emission control measures could or should be considered as part of reupping the Ryegate power purchasing agreement. We appreciate the question and opportunity to re-evaluate the existing emission control measures and emission limits for possible reasonable improvements. Most of our permitting authority to require emission controls, but not all, is with the preconstruction permit before the plant is built. And this plant was built close to 30 years ago.

While I was thinking out loud on the possibility of adding an oxidation catalyst to further reduce emissions, a deeper look confirms that the current emission limits and actual performance for the facility are still reflective of a well-controlled unit today. A new plant permitted/built today would be expected to have lower emission limits for some pollutants, but the Ryegate plant's actual performance is better than its permitted emission limits and thus any reductions in actual emissions would be less significant than I initially thought. While permits issued to proposed biomass plants in New England in the 2010 – 2015 time range required an oxidation catalyst, none of those units were ever built and we are not immediately able to identify a single operating facility in the country with one. The most recently built facility we are aware of is Burgess Biopower in northern NH. This plant commenced operation in 2013 and is 3.5 times larger than Ryegate (70-75 MWe). Burgess Biopower relies on a bubbling fluidized bed design to minimize carbon monoxide and VOC emissions and it does not have an oxidation catalyst.

Unfortunately, we do not have cost data available and obtaining a reasonable estimate would be difficult given it is a retrofit on an existing plant that would need to take into account the existing emission controls and their locations. Unless directed otherwise, we do not intend to pursue the feasibility of an oxidation catalyst at this time.