

Key Legal Background on Enviva Hamlet's Proposed Air Permit Revision

The Clean Air Act separates sources like Enviva Hamlet into two general categories: major sources subject to stringent pollution control technology requirements and other conditions designed to prevent significant deterioration of air quality, and minor sources which are subject to less stringent requirements.¹ For facilities like Enviva Hamlet, the Act defines major sources as those facilities with the potential to emit air pollutants such as volatile organic compounds (VOCs) at rates higher than 250 tons per year, and minor sources are those with the maximum potential to emit pollutants at rates lower than 250 tons per year. Finally, there is a third category of facilities known as “synthetic minor” sources, which otherwise have the potential to emit at rates higher than 250 tons per year and would therefore be major sources, but which accept enforceable operating limits (e.g. limits on hours of operation or the amount of product produced per year) that restrict the facility's potential to emit to below the 250 ton per year major source threshold.

Enviva Hamlet was initially permitted as a major source of air pollutants, subject to the Clean Air Act's “best available control technology” requirement. Despite this stringent control requirement, the facility did not plan to install any pollution controls for VOCs—unlike most similar mills in the southeastern United States—and would emit more than 600 tons of VOCs per year (for comparison, a larger pellet mill in Georgia that utilizes VOC control technology on each major unit emits only 130 tons of VOCs per year).² VOCs are a group of air pollutants that cause ground level ozone and smog; breathing ground level ozone and smog is detrimental to human health, especially for children, the elderly, and people with lung diseases like asthma.³

Now, Enviva has determined that it cannot comply with the terms of its initial major source air permit—if the facility were built under the terms of the current permit, the facility would exceed the already very high limits for VOCs, as demonstrated by recent emissions testing at a similar Enviva facility.⁴ To remedy this potential violation, Enviva has applied for a permit modification to install VOC pollution controls on some of the facility's units while also becoming a synthetic minor source by attempting to reduce VOC emissions to below the 250 ton per year major source threshold.

While the plan to install some VOC controls and reduce emissions is good in principle, coupled with this permit modification are plans to *increase* allowable production from 537,000 tons per year to 625,000 tons per year. The problem is that Enviva does not plan to install VOC controls on each of the major units at the facility, and without controlling all of the units, it is highly unlikely the facility will be able to stay below the 250 ton per year threshold if it is allowed to produce up to 625,000 tons of pellets per year. At that rate, based on emissions testing from other Enviva facilities, Enviva Hamlet will emit between 340 and 480 tons of VOCs per year, well above the 250 ton-per-year major source threshold.⁵

The entire issue hinges on Enviva's estimated emissions. Enviva cites to only one emission test as the basis for estimating emissions from the key units in question (dry hammermills), yet that test bafflingly shows VOC emissions nearly three times higher than what Enviva estimates for the Hamlet plant.⁶ Likewise, three other tests at Enviva facilities also show rates that will lead to Hamlet exceeding the major source threshold.⁷

We are therefore calling on DEQ to revise the proposed permit to restrict Enviva Hamlet's production limit to levels that actually ensure Enviva Hamlet's VOC emissions remain below 250 tons per year. Based on the stack testing that Enviva has cited in its own permit application materials (as well as the three additional sets of testing at Enviva plants), the permit must restrict production to 324,000 tons per year or less, at least until Enviva Hamlet conducts reliable, source specific testing to confirm the facility's true emission rate.

The draft permit contains other significant flaws that DEQ must address before issuing the final permit modification, which will be highlighted in upcoming comments. For more information on these and other permitting issues, please contact Patrick Anderson at panderson@powellenvironmentallaw.com or at (470) 440-1124 or Heather Hillaker at hhillaker@selcnc.org or (919) 967-1450 Ext. 132.

Notes:

¹ This dichotomy refers to preconstruction requirements known as New Source Review, and in particular New Source Review requirements for areas of the nation that are either in compliance with ambient air quality standards or are unclassifiable due to a lack of data. *See* 40 CFR § 51.166 and 15A NCAC 2D .0530. Enviva Hamlet is located in Richmond County, which is unclassifiable for ozone due to a lack of monitoring data.

² Georgia Biomass, a wood pellet manufacturing facility in Waycross, Georgia, has installed VOC pollution control devices known as regenerative thermal oxidizers and/or regenerative catalytic oxidizers on each of the main units at the plant, and therefore emits significantly lower VOCs than Enviva Hamlet will. This is because Enviva Hamlet does not intend to install these controls on units known as dry hammermills, which are significant sources of VOCs.

³ *See* EPA's webpage on Ozone pollution, *available at*: <https://www.epa.gov/ozone-pollution>.

⁴ Enviva recently constructed a nearly identical pellet mill, Enviva Sampson, and conducted initial compliance testing on the facility's wood dryer in 2017. Those tests showed that the facility's wood dryer exceeded the VOC limit, meaning Hamlet's wood dryer would almost certainly also exceed the permitted VOC limit. Notably, these tests did not include the facility's dry hammermills, the units at issue here.

⁵ This range is based on emission testing on dry hammermills, the key uncontrolled units at Hamlet, conducted at Enviva Greenwood (South Carolina), Enviva Wiggins and Enviva Amory (Mississippi), and Enviva Cottdale (Florida). All four tests produced emission rates significantly higher than what Enviva estimates for Enviva Hamlet.

⁶ When Enviva initially provided emission estimates to North Carolina DEQ for the permit revision, it based the estimates on "testing at similar Enviva facilities" without giving any more detail. DEQ requested that Enviva provide more information on these tests, and the company produced a table showing basic testing information from each unit at the facility. This table lists only one emission test for dry hammermills for VOC emissions, testing conducted at Enviva Cottdale, a Florida facility, in 2013. Notably, Enviva did not actually provide the results of this test to North Carolina DEQ, and it does not appear that DEQ requested the results. We have obtained the results of those tests, and the results were 1.4 pounds of VOC emissions per ton of pellets produced. In Enviva Hamlet's permit application, the company estimates the dry hammermills at Hamlet will emit VOCs at just .51 pounds per ton of pellets produced. Enviva has not provided any explanation for this major discrepancy.

⁷ Although Enviva only cited one test in support of its emission estimates for Enviva Hamlet, we are aware of three other sets of testing on dry hammermills at Enviva facilities. Each one produced an emission rate higher than what Enviva estimates for the Hamlet plant, and each one results in the Hamlet plant's potential emissions exceeding the major source threshold. These tests were conducted at Enviva Amory, in Mississippi, Enviva Wiggins, also in Mississippi, and Enviva Greenwood, in South Carolina. Notably, Enviva did not mention these tests in its permit application or other correspondence with DEQ.