

ATTACHMENT 8



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

5/26/2020

Mr. John Piotrowski
Vice President
Environmental Operations
Packaging Corporation of America
N9090 Country Road E
Tomahawk, Wisconsin 54487

Re: 40 C.F.R. Part 63, Subpart S Applicability Determination Request
Packaging Corporation of America, Wallula Mill

Dear Mr. Piotrowski:

This letter is in response to your request, dated January 24, 2020, for an applicability determination regarding the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Pulp and Paper Industry, 40 C.F.R. Part 63, Subpart S to the rotary valves on the two Messing-Durkee continuous digesters (M&D digesters) at the Packaging Corporation of America (PCA) pulp and paper mill in Wallula, WA (Wallula Mill).

Based on the information provided in your January 24, 2020 request, information gathered from EPA's inspections of the M&D digester systems at the Wallula Mill on September 19, 2018 and November 21, 2019, and other available information, EPA believes that the rotary valves feeding the M&D digesters at the Wallula mill could allow digester gases to be emitted to the atmosphere. Digester gases are required to be vented to a closed-vent system and routed to a control device according to §63.443(a)(1) and (c).

Background

The Wallula Mill is a pulp and paper mill subject to Subpart S. As discussed in your letter, the Wallula Mill operates two M&D digesters, each of which uses a Bauer rotary valve to transfer sawdust from the metering screw to the digester. Based on the information provided, no cooking liquor is used in the metering screws, which convey sawdust from the feed bin to the rotary valve on each digester. Your letter states that "both Digesters apply only high-pressure fresh steam (i.e., no flash or relief steam) to their respective Bauer [rotary] valves. All of the steam required for Digester operation is

introduced through the Bauer [rotary] valve as fresh steam at a pressure 25 psig greater than the Digester operating pressure.”

Your letter includes a diagram of the rotary valve, showing the ten positions of the clockwise rotary valve “pockets.” At position #4, high pressure fresh steam is fed into the pocket to raise the pressure of the pocket. At position #5, sawdust falls out of the pressurized pocket into the digester. At position #6, high pressure fresh steam is fed into the pocket to empty the pocket of sawdust. At positions #5 and #6, the valve is open to the high-pressure digester. At position #8, the pocket is depressurized by routing the gases trapped in the pocket to position #3 (sometimes called the primary exhaust or primary relief line). At position #9, residual pocket gases are exhausted through the secondary relief line.

Relevant NESHAP Subpart S Regulatory Requirements

Subpart S requires in §63.443(a)(1)(i) and (c) that each Low Volume High Concentration (“LVHC”) system must be “enclosed and vented into a closed-vent system and routed to a control device” that meets the requirements specified in §63.443(d).

“LVHC system” is defined in §63.441 as “the collection of equipment including the digester, turpentine recovery, evaporator, steam stripper systems, and any other equipment serving the same function as those previously listed.”

“Digester system” is defined as “each continuous or batch digester used for the chemical treatment of wood or non-wood fibers. The digester system equipment includes associated flash tank(s), blow tank(s), chip steamer(s) not using fresh steam, blow heat recovery accumulator(s), relief gas condenser(s), prehydrolysis unit(s) preceding the pulp washing system, and any other equipment serving the same function as those previously listed. The digester system includes any of the liquid streams or condensates associated with batch or continuous digester relief, blow, or flash steam processes.”

PCA’s Request

In your letter, you state that your rotary valves are “chip steamers” as used in the definition of “digester system” because the definition lists specific equipment, but also specifically includes “any other equipment serving the same function as those [pieces of equipment] previously listed.” See §63.441. To support this assertion, you note that the manufacturer of your rotary valves has stated that the rotary valves “perform... the roles of the low-pressure feeder, steaming vessel, high pressure feeder and top separator.” (emphasis added). You then point to the language in the definition of “digester system” specifically including within the digester system “chip steamer(s) not using fresh steam.” You state that because you only use fresh steam in the rotary valves, and because the rotary valves serve the same function as chip steamers, the rotary valves are explicitly excluded from the definition of “digester system.” From this information, you conclude that emissions from the rotary valves feeding the M&D digesters are not part of the LVHC system and are not required to be controlled under Subpart S.

EPA Consideration of Request

EPA recognizes that the Bauer rotary valve on your M&D digester is not specifically addressed in the definitions in Subpart S. EPA intends to address this emission source specifically through a notice and comment rulemaking as part of the next technology review of Subpart S required by Clean Air Act section 112(d)(6).

Subpart S clearly states in §63.443 that HAP emissions from LVHC systems (which, by definition, include the digester) must be collected and controlled. You did not provide any test data in your request. However, EPA is in possession of engineering test data from the secondary relief line on a similarly designed rotary valve feeding an M&D digester at another pulp and paper mill showing that the gases in the secondary relief line (position #9) contain methanol, a HAP. Examination of the rotary valve diagram provided in your letter indicates that any methanol present in the secondary relief line could only originate from the digester. Methanol exiting from the pocket at position #9 could not be the result of any pre-steaming that occurs in the rotary valve because the sawdust has already been deposited into the digester in positions #5 and #6. This suggests that digester gases are escaping the digester into the rotary valve when the valve is open to the digester in positions #5 and #6. If HAP emissions originating from the digester are exiting through the Bauer rotary valve at PCA, Subpart S requires these emissions to be captured and controlled.

Conclusion

For the reasons discussed above, EPA concludes that any digester gases leaking from the rotary valves on the M&D digesters at the Wallula Mill are required to be enclosed and vented into a closed-vent system and routed to a control device as provided in §63.443(a)(1)(i) and (c).

If you have any further questions, please contact Sara Ayres of my staff at 312-353-6266 or email ayres.sara@epa.gov.

Sincerely,



Martha Segall, Acting Director
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