UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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NEW YORK, NY 10007-1866

JUL - 2 2015

Sandra Le Barron
Director, EHS & Security
Finch Paper, LLC
One Glen Street
Glens Falls, NY 12801

Dear Ms. LeBarron:

In your letter of May 31, 2013, you requested the U.S. Environmental Protection Agency's (EPA's) opinion regarding your determination that digester rejects, generated at Finch Papers' Glens Falls paper mill and burned onsite in Boiler #9, are not solid wastes pursuant to 40 CFR 241.3(b)(1). Additional information to support this request was submitted in a letter dated May 31, 2013, a follow-up conference call on March 27, 2014, and follow-up correspondence on May 5, 2014. To be designated as a non-waste fuel under section 241.3(b)(1), the rule requires that the NHSM remain within control of the generator as defined by 40 CFR §241.2. Also, the NHSM must meet the legitimacy criteria for fuels in 40 CFR §241.3(d)(1).

Based on the information provided, we believe the digester rejects burned for energy recovery in Boiler #9 would constitute a non-waste fuel under 40 CFR Part 241. The remainder of this letter provides the basis for our position. *If there is a discrepancy in the information provided to us, it could result in a different interpretation.*

Background[1]

Finch Paper, LLC (Finch) located in Glens Falls, NY owns and operates an integrated pulp and paper manufacturing facility for the production of lightweight, bleached grade paper. A critical component of the operation is a 249 MMBtu/hr wood fired boiler (Boiler #9) used to generate high pressure, super-heated steam for use in onsite power generation and paper manufacturing. Boiler #9 is designed to combust the various process residuals at the facility including: hog fuel, sawdust, digester rejects and bark. Finch also utilizes five natural gas and No. 6 oil fired boilers for production of steam.

The pulp and paper making process is energy intensive and requires a significant amount of steam generation for electricity production and process heating. Pulp and paper manufacturing facilities are designed to utilize as many of the onsite generated process residuals as possible to control fuel costs. It is common in the industry for facilities to have a combination fuel boiler to utilize the multiple fuel sources that are associated with the process such as bark, hog fuel, and

[1] Background information taken from Finch's May 31, 2013 letter.

digester rejects. These combination boilers provide flexibility in the fuel supply and are designed to handle a wide range of fuel characteristics like moisture content and heating value.

Digester rejects consist of uncooked wood fiber called "knots" that are generated in the pulping process in the digester. These knots are undesirable in the paper making process and, for quality purposes, must be removed from the system. Removal of digester rejects from the process and onsite combustion is a common practice in the pulp and paper manufacturing industry. In 2012, digester rejects made up 6.4% of the solid fuel combustion in Boiler #9. The digester rejects contain wood fiber high in lignin and trace amounts of residual pulping liquor (ammonium bisulfite). The rejects are managed onsite in a similar manner as the other, traditional biomass fuels.

Based on the information you submitted this material is used as a fuel in a continuous industrial process and is not discarded at all between the time it is generated and the time it is used as a fuel. Nevertheless, EPA finds, below, that the material would also be considered a non-discarded product fuel based on the criteria the Agency has promulgated under 40 CFR Part 241.

Within Control of the Generator

Within control of the generator is defined in 40 CFR §241.2 to mean that the NHSM is generated and burned in combustion units at the generating facility; or that such material is generated and burned in combustion units at different facilities, provided the facility combusting the non-hazardous secondary material is controlled by the generator; or both the generating facility and the facility combusting the non-hazardous secondary material are under the control of the same person. In your letters and supporting materials, you state that the digester rejects are gravity thickened after the fiber washing process and then taken from the pulping process straight to the fuel storage and feed system for Boiler #9.

Based on this description, we agree that the digester rejects are maintained within the control of the generator and thus meets the definition of *within control of the generator* codified in 40 CFR §241.2.

Legitimacy Criteria

In accordance with 40 CFR 241.3(b)(1), non-hazardous secondary materials used as a fuel in an onsite combustion unit and that remain within the control of the generator are not solid wastes if they meet the legitimacy criteria of 40 CFR 241.3(d)(1)[2]. Specifically, the digester rejects must: 1) be managed as a valuable commodity; 2) have a meaningful heating value; and 3) contain

[2] A non-waste determination under 40 CFR Part 241 does not preempt New York State's authority to regulate a non-hazardous secondary material as a solid waste. Non-hazardous secondary materials may be regulated simultaneously as a solid waste by the state, but as a non-waste fuel under 40 CFR Part 241 for the purposes of determining the applicable emissions standards under the Clean Air Act for the combustion unit in which it is used.

contaminants at levels comparable to or less than those in traditional fuels which the combustion unit is designed to burn.

Manage as a Valuable Commodity

Finch's digester rejects are dewatered to reduce the moisture content to approximately 70% and remove excess pulping liquor. The rejects are then blended in a fuel pile with traditional biomass fuels (e.g., bark and hog fuel) prior to being fed to Boiler #9. Because the digester rejects are managed in the same time frame and manner as Finch's traditional biomass fuels, we conclude that they are managed as a valuable commodity.

Meaningful Heating Value and Used As A Fuel to Recover Energy

Nonhazardous secondary materials must have a meaningful heating value and be used as a fuel in a combustion unit that recovers energy. EPA has addressed the concept of meaningful heating value by using a benchmark value of 5,000 BTU/lb, as fired (see 76 *FR* 15541, March 21, 2011). Information provided by Finch indicates that the dry heating value of the digester rejects ranges from 8100 to 8800 Btu/lb and the moisture content is between 45 and 65%. This produces an as-fired heating value between 2835 and 4840 Btu/lb.

For facilities with energy recovery units that use a non-hazardous secondary material as a fuel with an energy content lower than 5,000 Btu/lb, as-fired, a person may demonstrate that a meaningful heating value is derived from the non-hazardous secondary material if the energy recovery unit can cost-effectively recover meaningful energy from the non-hazardous secondary material used as a fuel. Factors that are important in determining whether an energy recovery unit can cost-effectively recover energy from the non-hazardous secondary material include, but are not limited to, whether the facility encounters a cost savings due to not having to purchase significant amounts of traditional fuels they otherwise would need, whether they are purchasing the non-hazardous secondary material to use as a fuel, whether the non-hazardous secondary material they are burning can self-sustain combustion, and whether their operation produces energy that is sold for a profit. (76 *FR* 15541).

The May 31, 2013 letter states that Boiler #9 is specifically designed to recover useful energy in the form of high pressure steam from high-moisture, low-heating value traditional fuels such as bark and hog fuel. The letter also explains the combustion design of Boiler #9 including how the fuel is introduced via air injected solid fuel feed chutes into the combustion chamber in a manner designed to both dry and burn the material while it is suspended in the combustion overfire air. The letter also states that "In 2012, digester rejects made up 6.4% of the solid fuel combusted in Boiler #9." Assuming this proportion is of the total fuel value input, this proportion of solid fuel is significant enough proportion of the overall solid fuel intake that it represents a cost savings due to not having to purchase significant amounts of traditional fuels. Thus Boiler #9 can be viewed as an energy recovery device, and the unit can cost-effectively recover meaningful energy from the digester rejects used as a fuel.

Comparability of Contaminant Levels

This criterion requires that the digester rejects contain contaminants comparable in concentration or lower than those in traditional fuels that the boiler is designed to burn. Traditional fuels that Boiler #9 is designed to burn include bark, hog fuel, and natural gas.

EPA has published tables of contaminant concentrations for various traditional fuels, including wood and biomass materials. These published values used for comparison are found in the *Contaminant Concentrations in Traditional Fuels: Tables for Comparison* published by EPA November 29, 2011 and found on the EPA NHSM webpage. Finch analyzed the digester rejects for all contaminants in the EPA contaminant tables.

Finch also reviewed additional resources, including the pulp and paper industry trade association publications from the National Council for Air and Stream Improvement (NCASI), to determine if additional contaminants should be evaluated beyond those found in the EPA-published data. Specifically, NCASI Technical Bulletin No. 906 titled *Alternative Fuels Used in the Forest Products Industry: Their Composition and Impact on Emissions* was researched to determine if additional contaminants should be added to the analysis. Finch determined that analysis for the hazardous air pollutants (HAPs) acetaldehyde, acrolein, phenol, and methanol should be added to the contaminants identified in the EPA-published data for wood and biomass. Since the comparison values for these four additional HAP contaminants are not provided in the EPA publication, Finch also arranged for the analysis of representative samples of the traditional biomass for those constituents.

Finch's contaminant comparisons are summarized in the enclosure to this letter. Based on those data, we conclude that contaminant concentrations are lower than those in the traditional fuel that Boiler #9 is designed to burn.

Conclusion

Based on the information provided by Finch, we believe that the digester rejects meet all of the legitimacy criteria. Accordingly, we would consider this non-hazardous secondary material a non-waste fuel under the 40 CFR Part 241 regulations when burned in Boiler #9.

If you have any other questions, please contact Joseph Malki of my staff at 212-637-4101.

Sincerely,

for John Filippelli, Director
Clean Air and Sustainability Division

cc: B. Cuthbertson, EPA-HQ
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