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November 13, 2024

Mr. William Weaver
Air Quality Program Manager
Southcentral Regional Office
PA Department of Environmental Protection
909 Elmerton Avenue
Harrisburg, PA 17110

Re: Comments on Revised August 9, 2024 Air Quality Plan Approval Application submitted by Elverson AD 1, LLC for Food Waste Processing & Anaerobic Digester Project in Caernarvon Township, Berks County, PA

Dear Mr. Weaver:

On behalf of Caernarvon Township (Berks), Liberty Environmental, Inc. (Liberty) is providing comments on the air quality Plan Approval permit application submitted to the PA DEP Air Management Program by Elverson AD1 for the proposed installation of a food waste processing and anaerobic digester system to produce renewable natural gas (RNG) at a dairy farm located at 4365 Main Street, Elverson, Caernarvon Township, Berks County. The August 9, 2024 permit application was submitted by Braun Intertec Corporation and replaces the March 3, 2023 permit application that was submitted by Gannett Fleming on behalf of Vanguard Organics, LLC (Vanguard). Liberty provided comments on the 3/3/23 application and PA DEP subsequently issued a Technical Deficiency Letter dated July 21, 2023. The 8/9/24 application addresses the items identified in that PA DEP letter.

Project Background

Liberty was retained by the Township in April 2023 to review and comment on both the air permit application and a separate municipal waste general permit application that Vanguard submitted to the PA DEP Waste Management Program. The April 3, 2023 waste management permit application requests a modification to a general permit to allow processing of biogas to pipeline-quality RNG. In addition, Liberty attended a public meeting held at the Township on April 18, 2023 at which Vanguard described the proposed project and answered questions regarding the proposed operations. At the public hearing Vanguard stated that they had not yet secured a third party pipeline contract and that the land necessary for a pipeline connection to the site has not been acquired. Vanguard stated that they might store the RNG onsite and compress or refrigerate it for tank truck delivery of either CNG or LNG. We noted that the air permit application did not address the compression or refrigeration of RNG, RNG storage vessels, or RNG tank truck loading operations.

A revised air quality Plan Approval application was submitted on 8/9/24 by Elverson AD1, LLC, which is another corporate entity affiliated with Vanguard in that they share the same mailing address in Weston, Massachusetts. The revised application describes two design changes to the proposed facility: (1) the project no longer includes an “organics receiving area” (ORA) where food waste depackaging and processing was to occur, food waste will instead be received in liquid “slurry” form in tanker trucks and pumped to onsite bulk storage tanks before being pumped to the digesters; and, (2) the project will produce RNG that will leave the site via pipeline and no natural gas will be compressed, refrigerated, or stored onsite.

The Township understands that there are important environmental benefits associated with anaerobic digesters at dairy farms with regard to reducing nutrient runoff through the manure processing, and with regard to reducing methane by either flaring or using the biogas as a fuel. However, the Township expressed concern in 2023 that the proposed digester project will process predominantly food wastes with the farm manure representing less than half the feedstock to the digesters. As the project will be primarily a municipal waste receipt/storage/processing operation, the Township identified the potential for nuisance conditions including malodors associated with the ORA and with the receipt/storage of liquid wastes like fat/oil/grease prior to processing in the digesters. Now that the project no longer includes an ORA, there are less concerns about the potential for malodors provided the “odor control system” associated with the three slurry storage tanks (“hydrolysis” tanks) is effective, and provided the “digestate lagoon” does not become a significant source of odors.

Liberty is providing comments on the revised 8/9/24 air permit application below.

Air Permit Application Comments

1. Hydrolysis Tank Odor Control System – The permit application identifies that a single “odor control system” will be installed on the three (3) hydrolysis food waste slurry storage tanks. The system is described on page 13 of the application as “either an activated carbon (or similar media) absorption system or biofilter”. We request that PA DEP require the applicant to identify which of these two systems will be used, to provide vendor guaranteed emission rates, and to provide specifications and operation/maintenance procedures for the odor control system. Because a single 1,000-cfm system is proposed to control the 3 storage tanks, we also believe it is important to describe how the system will operate to ensure control of odors during storage tank slurry loading from tanker trucks.

Liberty notes that the applicant provided “generic” specifications from vendor Biorem for a “biofilter” and for a “catalytic activated carbon dry scrubber” in Attachment E, but provided none of the specific information requested in Section C of the application forms, and did not include any stack parameters associated with these air pollution control devices.

2. Compliance with PA’s Hydrogen Sulfide Ambient Air Quality Standards – The permit application identifies emissions of hydrogen sulfide (H₂S), a highly malodorous compound



that is regulated in Pennsylvania with ambient air quality standards (25 PA Code 131.3) limiting ambient air concentrations to a maximum of 0.1 ppm (1-hour average) and 0.005 ppm (24-hour average). The applicant identifies H₂S concentrations of up to 5 ppm in the “biogas upgrading system tail gas”, up to 10 ppm in the safety flare exhaust (98% destruction of 500 ppm H₂S in the biogas), and H₂S annual emissions of about 400 pounds per year from the “digestate lagoon”. We request that PA DEP require the applicant to demonstrate that overall project H₂S emissions will meet the PA ambient air quality standards at the facility property line and at the “sensitive receptors” (schools, churches, medical care facilities) identified on the applicant’s Figure 2.

We appreciate the opportunity to provide comments on the Elverson AD1 air permit application and we trust that PA DEP will address the Township’s concerns regarding possible nuisance malodors. Please provide any correspondence related to these comments to Heather Brendle, Township Administrator at Caernarvon Township and to Eric Brown, Esq., Township Solicitor.

If you have any questions regarding these comments, please feel free to call me at (610) 375-9301.

Sincerely,

Liberty Environmental, Inc.

Gavin Biebuyck
Principal

cc: Heather Brendle, Township Administrator
Eric M. Brown, Esquire, Township Solicitor
Kelsey Suddard – Braun Intertec
Libby McDonald - Vanguard Renewables