



June 22, 2015

Louisville Metro Planning and Design Services 444 South Fifth Street Suite 300 Louisville, KY 40202

Re: 821 South 17<sup>th</sup> Street Anaerobic Digester

Dear Sir or Madam:

On behalf of Jefferson AD II, LLC, a Kentucky limited liability company (the "Applicant") and a subsidiary of Nature's Methane Holdings, LLC, I have enclosed a Conditional Use Permit Application (the "Application") for an anaerobic digester facility (the "Facility") to be developed at 821 South 17<sup>th</sup> Street (the "Property") as a "non-accessory alternative energy system" as defined in the Metro Land Development Code (the "LDC"). Section 4.2.38 of the LDC states that a "non-accessory alternative energy system" may be developed within the EZ-1 zoning classification, which is the classification of the Property, upon the granting of a conditional use permit.

An anaerobic digester is a closed, oxygen-free (anaerobic) biological system that uses naturally-occurring bacteria to break down (digest) organic waste into useable components with economic and marketable value. Sources of the organic waste include: food waste from hospitals, restaurants, food processing plants, schools, and other sources; expired and damaged produce from wholesalers and grocery stores; distiller's slop; yard waste; and fats, oils, and greases. The Applicant is currently negotiating with Heaven Hill Distillery to process a significant portion of the whole stillage produced at the distillery, which currently is either disposed of in the sewer system or taken from the distillery in tanker trucks. The whole stillage would be delivered to the Facility via a newly constructed pipeline and would constitute a majority of the organic material processed at the Facility.

The Applicant plans to partner with GE Power and Water to develop the Facility and install anaerobic digester technologies that will produce renewable natural gas for injection into the LG&E gas pipeline. The renewable natural gas will be purchased by BP through an offtake agreement with the Applicant and then be sold back immediately to LG&E. The project will also produce a marketable by-product in the form of high-grade organic fertilizer.

The process at the Facility starts by accepting all materials inside a reception building equipped with an odor control system that has a biofilter and that will recirculate the air in the reception building three times every hour. Usually within hours after being received at the Facility, the materials are depackaged and liquefied in turbo dissolvers (industrial blenders) before the resulting slurry is piped to the buffer tank outside the receiving building. The operational goal each day is to have all materials received that day processed into the buffer

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tank and the reception building floor cleared and cleaned. The buffer tank then feeds the slurry to each of the three digester tanks in which the slurry is naturally broken down by bacteria over an approximately 20-day period to produce biogas. The resulting biogas, which is approximately 60% methane, is captured in the sealed tanks and is then processed to remove the other components of the biogas (mainly carbon dioxide). The end product is biomethane that meets LG&E specifications, and after it is odorized by LG&E, it is injected into the gas pipeline grid as renewable natural gas.

The Property is zoned EZ-1 and is located in the Traditional Workplace Form District. (the "TWFD"). The land use objectives of the Comprehensive Plan for the TWFD include (a) encouragement of industrial uses, offices and public service/utilities, and (b) allowing heavy industrial, which have a potential to create greater nuisance to adjacent properties due to noise, odor, or other impacts, to locate within workplaces only if such uses are sufficiently buffered from abutting uses so that the reasonable enjoyment of such uses is not disturbed and only if the heavy industrial use has access to the regional transportation system without creating truck routes in residential areas. Additionally, the TWFD applies to older established industrial and employment areas that contain primarily small-to-medium scale industrial and employment uses. These uses are often historically integrated with or adjacent to residential neighborhoods, especially traditional neighborhoods.

We believe the Facility satisfies the objectives of the Comprehensive Plan and meets the standards for the TWFD in the LDC. The Facility is in effect a utility because it processes organic materials that would otherwise be deposited in a landfill or the sewer system and creates natural gas for the pipeline system. Even if the Facility was not treated as a utility for Comprehensive Plan purposes and instead deemed a heavy industrial use, the Property is bordered on the west by an industrial stamping facility, on the south by a distillery and its warehouses, on the east by a former paint and varnish plant that has been vacant for almost 30 years and is heavily contaminated, and two other industrial parcels. The Property is bordered on the north by commercial and residential properties, but the Facility will be located on the Property directly in front of the commercial space. The layout of the digester tanks at the Facility is designed to create a buffer from the main operating parts of the Facility and create a facade very similar in width and height to the existing warehouse on the Property, which is being refurbished for use in the Facility operations as the reception building and administrative offices. Additionally, these tanks are very similar in scale to the neighboring properties - the existing buildings on the east side of the Property are three and four stories and all bordering commercial and industrial properties have multi-story buildings on site.

The operation of the Facility will require handling of approximately 20 trucks per day. All loading and unloading of the trucks will occur inside the reception building, and the trucks will be rinsed before exiting the building. If the piping of the whole stillage is implemented with Heaven Hill, there may be a net reduction in truck traffic as the stillage will no longer be taken by tanker truck away from the distillery. Truck traffic will exit on 17th Street and

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generally use that street for access to Broadway and I-65 without passing any single family homes on that route.

We believe the Facility will be operated in a safe manner, will not create odors that affect the use of the surrounding owners, and will not release emissions that would adversely affect the health of the community. These issues are addressed in more detail in the summary and response to the comments received at the neighborhood meeting that is attached to the application.

Finally, we request that the staff and Board approve a modification to the CUP by allowing a modification to the 50-foot setback required in Section 4.2.38 of the LDC. Noise pollution appears to be the concern this requirement is addressing. The tanks system along Maple Street is the part of the process that creates the gas but this is done naturally without creation of noise. There may be small compressors attached to the tank system to move gas once it is created but not of the size or scope one would expect at a utility station. Additionally, the onsite natural gas generator used to produce electric and heat for the Facility is well behind the 50-foot setback, will be housed in a container designed to reduce noise and also buffered by the tank system.

Thank you for attention to this application.

Sincerely,

Brian D. Zoeller

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