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Submitted electronically to mwejkszner@pa.gov

Re: Proposed Air Quality Plan Approval 48-00111A, Slate Belt Heat Recovery Center

Delaware Riverkeeper Network submits these comments on proposed Air Quality Plan Approval 48-00111A for Synagro's Slate Belt Heat Recovery Center, LLC (the Permittee), 435 Williams Court, Baltimore, MD 21220-2888 to construct and operate a biosolids processing facility which is proposed to be sited on a parcel of land owned by Grand Central Sanitary Landfill (GCSL), in Plainfield Township, Northampton County, as described in the Permittee's May 18, 2018 Plan Approval Application and any other subsequent supplemental submissions.

The Department states: "Plan Approval No. 48-00111A is for the construction and operation of a biosolids processing facility consisting of following equipment: Installation of a thermal oil heater, thermal drying equipment to facilitate processing biosolids into a Class A dried biosolids product, product conveyance and storage equipment, a two-stage odor control system and a baghouse."

As DRN stated in our November 2018 comment on the air quality plan approval for this project, DRN objects to the determination by the Department of a "Single Source Determination" for the facility. As stated in the application dated March 20, 2018: "The SBHRC facility will be a stand-alone facility separate from GCSL and GKEDC [Green Knight Energy Center]. The proposed SBHRC facility will be sited on a parcel of land owned by GCSL, and situated near the GKEDC facility in Plainfield Township, Northampton County, Pennsylvania (see Figure 1 -Site Location Map)."

The application continues, "United States Environmental Protection Agency (USEPA) and Commonwealth of Pennsylvania Department of Environmental Protection (PADEP) guidance documentation and the discussion at the pre-permit application meeting on November 28, 2017 indicate the emissions from the proposed SBHRC facility should not be aggregated with GCSL or Green Knight Energy Center (GKEC)." (EarthRes Group, Inc. Air Quality Plan Approval Application for the SBHRC dated March 20, 2018, pages 7-8).

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Delaware Riverkeeper Network disagrees with the Single Source Determination for the GCSL, the Green Knight Energy Center (GKEDC) and Synagro's SBHRC. By definition, the entire project is a coordinated effort to utilize landfill gas and represent a single source of emissions. Apparently, current emissions from the GKEDC would be routed through the SBHRC, connecting these operations. Similarly, the GCSL shares the quarry pond (called Sediment Basin #2) with the GKEDC and the proposed SBHRC for the collection of stormwater generated at these three sites. Air emissions could also be contributed by off-gassing from surface water at the site. Furthermore, GCSL owns the property that the proposed facility would utilize and the entrance and access roads are owned and used every day by GCSL and GKEDC.

Practically speaking, the emissions from the trucks and other motor vehicles that would be generated by the SBHRC and the emissions from the thermal dryer, the sludge receiving facility, the biosolids storage facilities, the roadways and paved parking areas, and the wastewater storage silo will all be mixed with the current emissions for the GCSL and GKEDC. The cumulative impact of these emissions will be experienced by the local community and will directly affect the environment in the region. The deposition of air pollution onto vegetation, soil, impervious surfaces, and surface water such as the quarry pond and the protected Waltz Creek and Little Bushkill Creek (and its unnamed tributary) will come from these mixed sources of pollution. The Little Bushkill Creek and Waltz Creek are prohibited from being degraded by this project and their HQ designation and existing uses must be maintained but are at risk of being degraded by deposition of these pollutants, especially when considered in combination with other sources of pollution to the surface waters there.

DRN has commented on the myriad pollutants that are contained in sewage sludge and biosolids in comment to DEP on the various permits for the SBHRC, most recently the redrafted NPDES permit and maintains information about reports on these threats. DRN's comment dated 8.23.19 to DEP re. SBHRC NPDES redrafted permit is here: https://www.delawareriverkeeper.org/sites/default/files/DRN%20cmnt%20DEP%20SW%20prmt%20SBHRC.pdf See scientific reports and studies about sludge and "biosolids" here: https://bit.ly/2xBcZjf . Many contaminants would be present on the site and emitted by operations that are not regulated in the Air Quality Plan, posing a significant risk of threats to human health, the protected streams and quarry pond (Sediment Basin #2), and the environment. The combined effect on the environment and the implications for public health of the community must be considered as a whole to accurately reflect the potential for substantial harm.

Synagro has proposed to construct the facility on land currently owned by the GCSL and names the facility a heat recovery center but the facility is proposing to also use natural gas. There is no breakdown in the available materials that states exactly how much landfill gas will be utilized and for how long and how much natural gas will be piped into the site to fuel the thermal dryer. DRN points out that the GCSL is slated to close before the projected life of the SBHRC is completed. This is important in terms of emissions that differ between landfill gas and natural gas. This is also important in terms of greenhouse gas emissions in Pennsylvania, which are contributing to global climate change. Methane is a major greenhouse gas that is 86 times more potent than carbon in heating the atmosphere on a 20-year time scale. Metahne is 104 times more powerful at heating the atmosphere on a 100-year period. The accurate estimate of these greenhouse gas emissions are important in considering the global warming potential of the methane that would be used released throughout the entire life cycle of the natural gas from cradle to grave by this project.

Even if SBHRC was an independent pollution source, it still constitutes a major source of particulate matter (PM). SBHRC is proposing over 15 tons per year (TPY) of PM10 (15.47) and over 25 TPY of general PM (35.62), both of which should trigger Prevention of Significant Deterioration thresholds in a county that fails PM standards. Synagro's proposed 11.3 TPY of PM2.5 is above the New Source Review (NSR) threshold of 10 TPY.

As DRN stated in our November 2018 comment on the air quality plan approval, Delaware Riverkeeper Network objects to the various odors, dust, and chemical emissions that the facility would entail, adding to the air quality problems that currently result in complaints from residents on a regular basis to Waste Management Inc. for the day to day operations of GCSL. These odors and emissions are a source of pollution for the residents in Pen Argyl and Plainfield Township. Recent air emissions and odor complaints have been filed with DEP by residents in the area. Emissions from the trucks now transporting garbage and sewage sludge to the landfill are also a source of complaint along the route the trucks travel, such as through Wind Gap, and at the GCSL property. Additionally, outside dust from new and existing truck and other vehicle traffic for this facility must be prevented if air quality conditions are ever to be improved in the area and the County. The addition of the emissions from the proposed SBHRC must be considered in combination with these current sources of air pollution. Furthermore, until these complaints from current problems are resolved, no further potential source of emissions should be allowed; the SBHRC should not be allowed to proceed until the GCSL landfill-related air pollution/odor complaint problems a fully abated.

DRN is still concerned about the emissions from the processing of the sludge into biosolids and the chemicals that will be used and stored at the facility. We are very concerned about ammonia that would be released and that DEP is not preventing entirely its release to the air but only requiring partial control. The facility will be a source of hazardous air pollutants. Both Sulfuric Acid and Sodium Hydroxide will be utilized. Sulfuric Acid will be stored and used in processing.

Sulfuric Acid can cause irritation to eyes, skin, nose, throat; pulmonary edema, bronchitis; emphysema; conjunctivitis; stomatis; dental erosion; eye, skin burns; dermatitis (https://www.cdc.gov/niosh/npg/npgd0577.html) The International Agency for Research on Cancer (IARC) has classified strong inorganic acid mists containing sulfuric acid as a known human carcinogen. (https://bit.ly/2zqNgeN) Sodium hydroxide can cause eye and skin burns, digestive and respiratory tract burns. (http://www.certified-lye.com/MSDS-Lye.pdf). As DRN stated in our November 2018 comment on the air quality plan approval, DRN questions the concentration of sulfuric acid that is proposed to be used. There are statements in the proposed air quality plan that negative air pressure will be maintained in the thermal dryer unit and other storage equipment but nothing about the offloading of these chemicals and how the storage will be contained. It is also not known how much will be stored, used and disposed each day. DRN asked in our prior comment letter why chemical releases are not being fully removed under air plan limits but has not received an answer. Why are any emissions of hazardous air pollutants being allowed by DEP?

Even where negative pressure is supposed to contain emissions and odors, there are failings in the air plan. In the proposed plan, it is stated:

Plan approval terms and conditions.

1. The receiving/storage bunker shall be operated at negative pressure at all times and the cover closed, except during unloading periods, to prevent the escape of malodors. The air shall be collected and routed through odor control system. Open storage of sludge is prohibited. (48-00111A**,** SLATE BELT HEAT RECOVERY CTR/BIOSOLIDS PROCESSING FACILITY, Section D., Page 26).

However, the receiving/storage bunker must be opened to allow the offloading of the sewage sludge from the trucks, which would be unloading from 6:00 am to 6:00 pm, according to the applicant. DRN does not agree that the constant opening and closing of the roof of the bunker will not be a source of substantial air emissions and uncontrollable odor releases.

Odorous compounds such as hydrogen sulfide, ammonia, and odors from the belt dryer system, fans and other sources should be predicted based on an air dispersion model that considers wind direction, weather, and other site specific features such as existing structures, as DRN stated in our November 2018 comment on the air quality plan approval,. These emissions must also be modeled employing accurate data of current odors from the landfill in order to ascertain the cumulative or mixing effect of existing odors combined with new odor sources at this facility. There is no evidence that this will be considered in the applications.

DRN has commented in the redrafted NPDES Stormwater permit for the SDBHRC our concerns about the application of water on the roads for dust control. It is stated in the draft permits for the SBHRC that water or other fluids will be applied to gravel and paved areas when needed for dust control. Dust from sludge drying facilities can carry dangerous pollutants and the unloading and truck operations in and outside the facility can contribute to leaks, spills, and splashes that accumulate in dust on the site and/or the roadways. Additionally, the proposed use of water from the quarry pond (Sediment Basin #2) could contain contaminants but there is no mechanism to accurately assess its contents to assure it does not contain contaminants that pose a threat to water quality.

DRN opposes the use of the water from the quarry pond (Sediment Basin #2) unless water quality testing of the waterbody is accomplished at baseline (background conditions, current) and continuously to assure acceptable water quality. This is essential because the pond is directly connected to groundwater and to the Waltz Creek and Little Bushkill Creeks through the groundwater flows from the pond to surface water. It is essential that discharge of water uses from the pond water be kept from entering the creeks but DEP's proposal to attempt to limit the flow of water used for dust control, firefighting, or other purposes to the surface drainage areas to Waltz Creek and Little Bushkill Creek is not protective enough. The groundwater connection from the pond (Sediment Basin #2) to the creeks and the need to protect the quality of groundwater that is impacted by the use of the pond as a sediment basin must also be recognized. Pollution must be prevented from entering the pond and the streams. The quality of the pond water that would be withdrawn and used must be fully assessed now and throughout the life of the facility but DEP has not proposed this in the redrafted NPDES permit. Also, as materials that are applied to the roadways dry, they will be subject to becoming airborne and a source of air pollution.

DRN additionally states that alternative water sources such as imported water and fluids to be used for deicing/winter road conditioning must be tested and characterized and deemed clean in order to be applied where it will runoff into the pond and/or the two streams.

DRN points out that the issue of preventing particulate matter is of great importance in the proposed air quality plan approval. In the proposed Air Quality Plan Approval, that DEP is requiring the application of chemicals, oil, or water to the roadways to prevent particulate matter from being generated. As stated under:

> **Plan approval terms and conditions.**
> B. In order to prevent fugitive particulate matter resulting from truck traffic, the company shall adhere to the following plan:
> 1. All sludge delivery trucks must be tarped or enclosed when transporting the sludge to the plant facility. The company shall keep on hand such equipment and materials as are necessary to take reasonable action (including but not necessarily limited to the application of water, oil or chemicals) to prevent fugitive particulate matter resulting from the use of any roadways and/or material stockpiling operations associated with the plant from becoming airborne and shall be used, as necessary, to prevent such fugitive particulate matter from becoming airborne. (48-00111A**,** SLATE BELT HEAT RECOVERY CTR/BIOSOLIDS PROCESSING FACILITY, Section D., Page 26).

This application of these fluids pose substantial threat to the quarry pond (Sediment Basin #2). The groundwater, Little Bushkill Creek and Waltz Creek. The proposed plan is not sufficiently protective of these resources, and, in turn, the public's health.

Based on the potential in the Air Quality Plan Approval for degradation of air quality in the community and the region, Delaware Riverkeeper Network requests that the proposed Air Quality Plan be rejected for the SBHRC.

Thank you for the opportunity to comment.

Submitted by:

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