



October 30, 2024

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Re: Empire Green Generation Follansbee, West Virginia, WVDEP Regulatory Interpretation Request

Ms. Fernandez:

Thank you for taking the time to meet with Ohio Valley Environmental Advocates and us on September 17, 2024, to discuss West Virginia's regulatory interpretation request regarding the applicability of Section 129 of the Clean Air Act ("CAA") to Empire Green Generation's proposed plastic pyrolysis and combustion facility in Follansbee, West Virginia ("Empire" or "EGG"). We appreciate that EPA offices are looking closely at this facility.

By all appearances, Empire proposes to build a plastic waste incinerator masquerading as a recycling facility to evade CAA Section 129 protections. EPA should look carefully at Empire's claim that it will be producing hydrochloric acid ("HCl") and char for sale, as well as its claims regarding the origins and handling of its plastic feedstock.

This letter provides additional information clarifying why the plastic Empire proposes to accept constitutes solid waste under EPA's Non-Hazardous Secondary Material ("NHSM") Rule. It also reiterates the concern raised on our call that the liquids and solids leaving Empire's pyrolysis trains for combustion in the vitrifiers should be evaluated to determine whether they are hazardous waste requiring additional permitting under RCRA.

I. Facility Background and WVDEP's Regulatory Interpretation Request

Empire has applied to WVDEP for a permit modification to build a facility that would accept plastic waste from other unidentified entities. Empire's application states

that it would feed the plastic into pyrolysis units—resulting in some amount of syngas, HCl, and char—and burn the resultant solids.

In March 2023, WVDEP submitted a regulatory interpretation request to Region 3 posing the following questions:

1. Should EGG’s plastic feedstock be viewed as waste or non-waste?
2. If the plastic feedstock is determined to be fuel or ingredients in accordance with 40 CFR 241.3, then would the EGG pyrolysis trains be exempt from Section 129 of the CAA (e.g. subject to Subpart AAAA, CCCC, or Subpart EEEE)?
3. EGG plans to route the ash and char stream to the vitrifier (process heater) to be oxidized into products of combustion. Would the vitrifier be subject to Subpart CCCC or EEEE?
4. Would the vitrifiers be considered an “energy recovery unit” or a “commercial and industrial solid waste incineration unit” under Subpart CCCC?

As explained below, Empire’s “plastic feedstock” meets the definition of a waste, triggering Section 129 requirements for the pyrolysis trains. In addition, EPA should evaluate whether the solids entering the vitrifiers are hazardous wastes triggering additional permitting requirements under RCRA.

II. Empire’s “plastic feedstock” is waste

To determine whether the plastic Empire would receive constitutes a waste, we look to 40 CFR 241.3, which establishes the following criteria for a NHSM to be a non-waste when combusted: 1) the NHSM is maintained within the control of the generator *and* meets the legitimacy criteria in 40 CFR 241.3(d); or the discarded NHSM has undergone sufficient processing *and* meets the legitimacy criteria in 40 CFR 241.3(d).

The plastics Empire would combust are waste because they (1) are not managed within the control of the generator, and (2) are not sufficiently processed. In addition, the plastics do not meet the legitimacy criteria of the NHSM Rule.

A. The plastic Empire proposes to burn is not managed within the control of the generator

EPA regulations define “within control of the generator,” to mean “the non-hazardous secondary material is generated and burned in combustion units at the generating facility; or that the 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 as defined in this section.”¹

Empire readily acknowledges that it would receive plastic waste from third parties.² Further, Empire states it is “in discussion with several entities regarding their waste plastic disposal needs, and willingness to participate in our waste recycling efforts.”³ Empire has not even determined where it will be getting its plastic, but it is clear it will be from third parties. Therefore, Empire cannot assert that the plastic it would burn will be under its control when generated, and Empire cannot meet the first prong of the NHSM Rule to obtain non-waste status for its plastic feedstock.

B. The plastic Empire proposes to burn has not been sufficiently processed.

Empire also cannot meet the second prong of the NHSM Rule because the plastic will not be sufficiently processed prior to entering the pyrolysis trains.⁴ “Processing” means any operations that transform discarded NHSM into a non-waste fuel or non-waste ingredient product.⁵ Processing “includes, but is not limited to, operations necessary to: remove or destroy contaminants; significantly improve the fuel characteristics of the material, e.g., sizing or drying the material in combination with other operations; chemically improve the as-fired energy content; or improve the ingredient characteristics.”⁶ Importantly, “processing” does *not* include “[m]inimal operations that result only in modifying the size of the material by shredding.”⁷

In its self-determination, Empire does not address “processing;” however, Empire does address this question in its response to EPA’s Section 114 request. When asked “[h]ow is the plastic processed prior to being delivered to EGG?” Empire responds, “processing consists of sizing and consolidation of waste stream.”⁸ As expressly stated in 40 CFR 241.2, operations that only result in modifying the size of the material do *not*

¹ See 40 CFR 241.2(b).

² See Empire Green Generations Response to Request for Information under Section 114(a) of the Clean Air Act (July 31, 2024) (“Empire’s Section 114 Response”) at 7, available at <https://dep.wv.gov/daq/permitting/Documents/EmpireGreenGeneration-Follansbee/Empire%20Green%20Gen%20Reply%20to%20USEPA%20114%20Ltr%20RFI%208-30-24.pdf>.

³ *Id.*

⁴ See 40 CFR 241.3(b)(4).

⁵ See 40 CFR 241.2.

⁶ *Id.*

⁷ *Id.*

⁸ See Empire’s Section 114 Response at 5.

constitute processing under the NHSM rule. **Thus, when the plastic waste Empire receives enters the pyrolysis trains, it has not been “sufficiently processed” to be exempt from treatment as a solid waste under the NHSM Rule.**⁹

C. Empire cannot show the plastic satisfies all three legitimacy criteria.

Because the discarded plastic Empire would burn is not under its control when it is generated, and that discarded plastic is not sufficiently processed prior to entering Empire’s pyrolysis trains, the NHSM Rule exemption does not apply, and there is no need for EPA to assess whether the plastic meets the legitimacy criteria in 40 CFR 241.3(d). Nonetheless, it is evident that the plastics do not meet the legitimacy criteria.

For NHSM used as a fuel in a combustion unit, the legitimacy criteria requires that the NHSM (1) “be managed as a valuable commodity,” (2) “have a meaningful heating value and be used as a fuel in a combustion unit that recovers energy,” *and* (3) “contain contaminants or groups of contaminants at levels comparable in concentration to or lower than those in traditional fuel(s) that the combustion unit is designed to burn.”¹⁰ For NHSM used as an ingredient in a combustion unit, the legitimacy criteria requires that the NHSM (1) “be managed as a valuable commodity,” (2) “provide a useful contribution to the production or manufacturing process,” (3) “be used to produce a valuable product or intermediate,” *and* (4) “result in products that contain contaminants at levels that are comparable in concentration to or lower than those found in traditional products that are manufactured without the [NHSM].”¹¹ The NHSM must meet *all* criteria to obtain the exemption.

The plastics Empire proposes to combust do not contain levels of contaminants comparable to or lower than the traditional fuel the unit is designed to burn. Clear guidance exists on how to determine whether a fuel is comparable.¹² An applicant should provide the total concentrations of each contaminant after processing but before

⁹ In its response to EPA’s Section 114 request, Empire claims the pyrolysis is “processing” as defined in 40 CFR 241.2. *See* Empire’s Section 114 Response at 5. This assertion ignores that pyrolysis units are subject to regulation under Section 129 of the Clean Air Act as combustion units. *See e.g.* 40 CFR 60.2977. Thus, even if Empire’s pyrolysis unit constitutes the “processing” necessary for the facility to obtain the NHSM Rule exemption, that very “processing” would itself require a Section 129 permit.

¹⁰ 40 CFR 241.3(d)(1).

¹¹ 40 CFR 241.3(d)(2).

¹² *See* EPA Non-Hazardous Secondary Material (NHSM) Regulations 40 CFR Part 241: Guide for Waste/Non-Waste Determinations (May 2021), *available at* https://www.epa.gov/sites/default/files/2021-05/documents/nhsm_guide_5_26_2021.pdf [hereinafter “Guidance”]

combustion.¹³ Empire has not done this. Instead, Empire states the syngas it will produce is “derived from the same base material as the traditional fuel” and makes the baseless assertion that its product is “comparable or lower than traditional fuel for contaminants.”¹⁴

In fact, Empire’s mixed waste stream can be expected to contain additives and contaminants higher than a traditional fuel. Plastics are made by combining fossil fuels with synthetic chemicals—more than 4,200 of these chemicals are known chemicals of concern, meaning they are persistent, bioaccumulative, mobile, and/or toxic, and can be released into air during incineration.¹⁵ Empire’s operations as described suggest a high potential for the release of hydrogen chloride, cadmium, PFAS and other plasticizers, chlorinated and brominated flame retardants, benzene, formaldehyde, mercury, arsenic, dioxins, and brominated dioxins (to name a few).¹⁶ Exposure to this pollution is known to increase the risk of cancer, birth defects, reproductive system damage, developmental issues, cardiovascular problems, respiratory impairment, hormonal irregularities, and neurological problems.¹⁷

Thus, Empire cannot meet the legitimacy criterion requiring its feedstock to “contain contaminants or groups of contaminants at levels comparable in concentration to or lower than those in traditional fuel.”

In addition, Empire has not demonstrated, or even believably alleged, that the plastics will “provide a useful contribution to the production or manufacturing process” or “be used to produce a valuable product or intermediate.” EPA should look closely at Empire’s proposal, which seems to be for a solid waste incinerator that would result in some HCl and char—both of questionable market value—and syngas that Empire would use solely to power its incinerator. From all appearances, Empire

¹³ *Id.*

¹⁴ Empire’s Section 114 Response at 5.

¹⁵ Wagner, M., & Monclús, L. (2024). *State-of-the-science on plastic chemicals: identifying and addressing chemicals and polymers of concern in plastic* at 3, 15. PlastChem, available at <https://plastchem-project.org/>

¹⁶ See Empire’s Section 114 Response at 9; see also Environmental Protection Agency. (2023). Rulemaking Docket: Significant New Use Rules on Certain Chemical Substances. Regulations.gov. <https://www.regulations.gov/docket/EPA-HQ-OPPT-2023-0245>; see also Singla, V. (2022). Issue brief: Recycling Lies. <https://www.nrdc.org/sites/default/files/chemical-recycling-greenwashing-incineration-ib.pdf> at 6.

¹⁷ Landrigan, P. J., et al. (2023). *The Minderoo-Monaco Commission on plastics and Human Health*. *Annals of Global Health*, 89(1), 23. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10038118/>

proposes to run a plastic waste incinerator, but asks EPA to avoid Section 129 application by pointing to waste products that have no genuine market or value.

Accordingly, the plastic Empire would burn cannot meet the legitimacy criteria in the NHSM Rule.

III. The Solids and Liquids Exiting the Pyrolysis Process, that Empire Proposes to Burn, Are Likely Hazardous Wastes

Thus far, this letter has focused on why the plastics Empire would feed into the pyrolysis trains are “waste” triggering Section 129 requirements. In addition, the solids leaving the pyrolysis trains, that Empire generates and then proposes to burn, should be evaluated to assess whether they are hazardous wastes requiring RCRA pre-construction permits. As explained above, plastics contain numerous chemicals of concern that are hazardous to human health and the environment.¹⁸ At least some of these chemicals are likely to be present in the solids resulting from the pyrolysis process.¹⁹ Thus, there is serious concern that Empire is proposing to build a hazardous waste incinerator, and EPA should ensure Empire adheres to all relevant RCRA requirements, including pre-construction permitting.

Conclusion

We appreciate EPA’s close attention to WVDEP’s regulatory interpretation request. As explained above, Empire is proposing to build a waste incinerator. We ask that EPA respond accordingly and issue a determination finding that the plastic Empire receives constitutes waste, thus the facility must be regulated under Section 129 of the CAA. Given the nature of the facility’s feedstock, we further ask that EPA evaluate whether Empire will be generating and incinerating hazardous waste and employ all appropriate regulations for the protection of the community’s health and safety.

Sincerely,

¹⁸ See Wagner, M., & Monclús, L. (2024) *supra* note 17 at 38, 40, 43.

¹⁹ See Singla, V. (2022) *supra* note 15 at 5 (explaining that one “chemical recycling” facility alone, Agilyx, generated nearly 500,000 pounds of hazardous waste in 2019 alone. “This waste consisted primarily of benzene, along with other toxics such as lead, admium, and chromium.”).

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