



Mink, Stephanie R <stephanie.r.mink@wv.gov>

Fwd: Regulatory Interpretation Request March 6th, 2023

Andrews, Edward S <edward.s.andrews@wv.gov>
To: "Mink, Stephanie R" <stephanie.r.mink@wv.gov>

Tue, Aug 26, 2025 at 9:44 AM

Please post Mr. Ott's email and attachment under "Poplar Searches"/"Empire Green Generation, LLC; Follansbee" with the title of "EPA's Response to DAQ's Interpretation Request".

Thanks
Ed

----- Forwarded message -----

From: **Ott, Steven** <Ott.Steven@epa.gov>
Date: Tue, Aug 26, 2025 at 8:58 AM
Subject: RE: Regulatory Interpretation Request March 6th, 2023
To: edward.s.andrews@wv.gov <edward.s.andrews@wv.gov>
Cc: Dunn, Michael <dunn.michael@epa.gov>, Crowder, Laura M <laura.m.crowder@wv.gov>

Dear Mr. Andrews,

We have reviewed your March 6th, 2024, letter requesting a regulatory interpretation and applicability of 40 CFR Part 60, Subparts AAAA, CCCC, and EEEE, as they might pertain to Empire Green Generation.

Please note that the following applicability determination (attached) is based on the information provided to EPA in your initial correspondence, information resultant of EPA's information request letter to Empire Green Generation pursuant to Section 114 of the Clean Air Act, and guidance from EPA's Office of Enforcement and Compliance Assurance and Office of Air Quality Planning and Standards. Furthermore, please note that EPA's response is a regulatory interpretation, and not a site-specific applicability determination; WVDEP may need additional information from the facility to make a site-specific applicability determination.

If you have any questions or concerns, please reach out.

Best Regards,

Steve Ott

Life Scientist

Air Section

Enforcement & Compliance Assurance Division

U.S. EPA Region 3

215-814-2267

ott.steven@epa.gov



Empire Green_WVDEP RI_Aug2025.pdf

256K



REGION 3

PHILADELPHIA, PA 19103

August 25, 2025

VIA ELECTRONIC MAIL
RETURN RECEIPT REQUESTED

Mr. Edward Andrews, P.E.
Engineer
West Virginia Dept. of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

RE: Regulatory Interpretation Request - Empire Green Generation LLC

Dear Mr. Andrews:

We have received your March 6, 2024 letter requesting a **regulatory interpretation** of 40 CFR Part 60, Subpart CCCC - Standards of Performance for Commercial and Industrial Solid Waste Incineration Units (CISWI). More specifically, Division of Air Quality (DAQ) requested an interpretation regarding the applicability of Subpart CCCC to the streams exiting certain pyrolysis units. DAQ posited several questions, which will be addressed below. Please note that this letter is not a site-specific Applicability Determination for Empire Green Generation LLC (EGG), but rather EPA is treating this request as a request for clarification or regulatory interpretation of the requirements of Subpart CCCC under the Clean Air Act (CAA).

First Question: Should EGG's plastic feedstock be viewed as waste or non-waste?

Response: Subpart CCCC regulates CISWI, which are incinerators that burn "solid waste" as defined in 40 CFR Part 241 and are located at commercial or industrial facilities.

A Commercial Industrial Solid Waste Incinerator is defined to mean the following:

"any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR Part 241. If the operating unit burns materials other than traditional fuels as defined in § 241.2 that have been discarded, and you do not keep and produce records as required by § 60.2175(v), the operating unit is a CISWI. While not all CISWIs will include all of the following components, a CISWI includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI does not include air pollution control equipment or the stack. The CISWI

boundary starts at the solid waste hopper (if applicable) and extends through two areas: the combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI includes all ash handling systems connected to the bottom ash handling system.”

40 CFR Part 241 refers to the definition of solid waste located in 40 CFR 258.2 which provides:

“any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).”

Additionally, municipal solid waste is defined by EPA in 40 CFR Part 60.1465 (Subpart AAAA) to mean:

“household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).”

Furthermore, municipal solid waste is also defined by EPA in 40 CFR Part 60.2977 (Subpart EEEE) to mean:

“refuse (and refuse-derived fuel) collected from the general public and from residential, commercial, institutional, and industrial sources consisting of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials and non-combustible materials such as metal, glass, and rock, provided that:

- (1) the term does not include industrial process wastes or medical wastes that are segregated from such other wastes; and

(2) an incineration unit shall not be considered to be combusting municipal solid waste for purposes of this subpart if it combusts a fuel feed stream, 30 percent or less of the weight of which is comprised, in aggregate, of municipal solid waste, as determined by § 60.2887(b)."

Generally, plastic feedstocks that are garbage, refuse or otherwise discarded are considered "solid waste". Depending on the origin of the plastic feedstock, it may also be considered municipal solid waste.

Second Question: "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)?"

Response: Subpart CCCC describes the requirements a facility must follow if they combust non-hazardous secondary materials, as described in 40 CFR 241.3.

40 CFR 60.2175(v) states:

"For operating units that combust non-hazardous secondary materials (NHSM) that have been determined not to be solid waste pursuant to § 241.3(b)(1) of this chapter, you must keep a record which documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1). If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfies the definition of processing in § 241.2 and each of the legitimacy criteria of § 241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4, you must keep records documenting that the material is a listed non-waste under § 241.4(a)."

40 CFR Part 241.3 provides that certain non-hazardous secondary materials are not solid wastes when combusted, including the following:

"Fuel or ingredient products that are used in a combustion unit and are produced from the processing of discarded non-hazardous secondary materials and that meet the legitimacy criteria specified in paragraph (d)(1) of this section, with respect to fuels, and paragraph (d)(2) of this section, with respect to ingredients. The legitimacy criteria apply after the non-hazardous secondary material is processed to produce a fuel or ingredient product. Until the discarded non-hazardous secondary material is processed to produce a non-waste fuel or ingredient, the discarded non-hazardous secondary material is considered a solid waste and would be subject to all appropriate federal, state, and local requirements." 40 CFR 241.3(b)(4).

As such, the boundaries of a CISWI unit are broad, and generally relies on site specific facts such as whether the facility combusts solid wastes. Combusting plastic feedstock that is a "solid

waste” could make the unit a CISWI unit per Subpart CCCC. However, if feedstocks are processed, as defined in 40 CFR Part 241.2, and determined to be “non-hazardous secondary material” used in a manner specified in 40 CFR Part 241.3, including meeting the applicable legitimacy criteria, they are not “solid wastes,” and thus, not subject to Subpart CCCC. Site-specific information may be required to make a definitive assessment to respond to the question of applicability of Section 129 of CAA.

DAQ also asks whether a waste determination is required for each of the exiting streams from the pyrolysis train, in accordance with 40 CFR Part 241.3. DAQ identifies that the syngas leaving the pyrolysis train is an uncontained gaseous material and by definition not a solid waste. The remaining streams exiting the pyrolysis chamber may need to be evaluated again for their status as a solid waste and if the materials are solid waste, may choose to evaluate the materials to be non-hazardous secondary materials pursuant to 40 CFR Part 241.

Third Question: 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 Subpart EEEE?

Response: As stated above, Subpart CCCC defines CISWI units as:

“...any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR Part 241. If the operating unit burns materials other than traditional fuels as defined in § 241.2 that have been discarded, and you do not keep and produce records as required by § 60.2175(v), the operating unit is a CISWI. While not all CISWIs will include all of the following components, a CISWI includes, but is not limited to, the solid waste feed system, grate system, flue gas system, **waste heat recovery equipment, if any, and bottom ash system** [*emphasis added*]. The CISWI does not include air pollution control equipment or the stack. The CISWI boundary starts at the solid waste hopper (if applicable) and extends through two areas: The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. **The CISWI includes all ash handling systems connected to the bottom ash handling system** [*emphasis added*].”

Other Solid Waste Incinerators are defined to include Institutional Waste Incinerators (units that burn waste originating at an institutional facility; and Very Small Municipal Waste Combustion units, which are units that combust less than 35 tons/day of municipal solid waste (40 CFR Part 60.2977). As such, site-specific information may be necessary to determine quantity and type of waste oxidized (combusted) inside of the vitrifier(s). Additionally, products being combusted need to be evaluated to verify if materials being combusted are municipal solid waste, non-hazardous secondary materials, or hazardous waste as defined by 40 CFR 261. Thus, depending on site-specific information, a process heater that is part of ash handling system could be included in the CISWI unit.

Fourth Question: “Would the vitrifiers be considered an “energy recovery unit” or a “commercial and industrial solid waste incineration unit” under Subpart CCCC?

Response: Subpart CCCC defines CISWI units, and the definition is included in the previous section of this document.

Subpart CCCC applies to “energy recovery unit” (ERU), which is generally defined at 40 CFR Part 60.2265 to mean:

“a combustion unit combusting solid waste (as that term is defined by the Administrator in 40 CFR Part 241) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste.”

40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, defines **process heater** to mean:

“an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. **A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act [emphasis added].** Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.”

The exemptions specified in Section 129(g)(1) of the CAA, and also expressed in Subpart CCCC, are:

- Materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals;
- Qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes; or
- Air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes, and clean lumber and that such ACIs comply with opacity limitations to be established by the Administrator by rule.

Whether a vitrifier is considered an ERU or CISWI under 40 CFR Part 60 subpart CCCC depends on whether the unit meets the definition of an ERU at 40 CFR Part 60.2265 (i.e., whether it is combusting solid waste for energy recovery). This in turn depends on whether the unit is combusting NHSM that is determined not to be “solid waste” under 40 CFR Part 241.3. Additional process specific information may be needed to further clarify applicability. If a vitrifier is determined to be an ERU, the unit may be subject to the requirements of Subpart CCCC, as ERUs are not exempted from that rule.

The West Virginia Division of Air Quality may require further process specific information to clarify applicability of Subparts AAAA, CCCC, and EEEE. The EPA’s responses herein and Regulatory interpretation were coordinated with EPA’s Office of Enforcement and Compliance Assurance and EPA’s Office of Air Quality Planning and Standards.

Please note, the EPA’s responses herein are a Regulatory Interpretation of specific regulations the State cited in its questions to the EPA and do not reflect any specific applicability determination for the Facility of 40 CFR Part 60, Subparts AAAA, CCCC, or EEEE. While the State has posed the above questions relative to EGG, EPA’s responses are only an interpretation regarding the particular relevant regulations mentioned in each question. If you have any questions regarding this response, please contact Steven Ott of the Enforcement and Compliance Assurance Division at (215) 814-2267 or ott.steven@epa.gov.

Sincerely,

Andrea Bain
Acting Division Director
Enforcement and Compliance Assurance Division

cc: Michael Dunn, EPA Region 3, dunn.michael@epa.gov
Laura Crowder, WVDAQ, laura.m.crowder@wv.gov