

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart D. ENVIRONMENTAL HEALTH AND SAFETY

ARTICLE IX. RESIDUAL WASTE MANAGEMENT

CHAPTER 287. RESIDUAL WASTE MANAGEMENT—GENERAL PROVISIONS

Subchapter A. GENERAL

§ 287.1. Definitions.

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Coproduct—

[(i)] A material generated by a manufacturing or production process where the manufacturing process employs the same inputs or ratio of inputs throughout, or a spent material generated by a process that is constant over time, of a physical character and chemical composition that is [consistently] statistically equivalent to the physical character and chemical composition of an intentionally manufactured product or produced raw material, if the use of the material presents no greater threat of harm to human health and the environment than the use of the product or raw material. A material is determined to be a coproduct under § 287.8 (relating to coproduct determinations). [A material may not be compared, for physical character and chemical composition, to a material that is no longer determined to be waste in accordance with § 287.7 (relating to determination that a material is no longer a waste). A coproduct determination, which shall be made in accordance with § 287.8 (relating to coproduct determinations), only applies to materials that will be applied to the land or used to produce products that are applied to the land, including the placement of roadway aggregate, pipe bedding or construction materials, or that will be used for energy recovery as is with a minimum BTU value of 5,000/lb. as generated or as fired. If the proposed coproduct material is oil, a determination may only be made for oil refined from crude oil or synthetically produced oil, not contaminated by physical or chemical impurities, that will be used for energy recovery if the material has a minimum heat content (BTU value) comparable to the petroleum fuel it will replace.

(ii) The term only applies to one of the following:

(A) If the material is to be transferred in good faith as a commodity in trade, for use in lieu of an intentionally manufactured product or produced raw material, without processing that would not be required of the product or raw material, and the material is not accumulated speculatively. Sizing, shaping or sorting of the material will not be considered processing for the purpose of this definition.

(B) If the material is to be used by the manufacturer or producer of the material in lieu of an intentionally manufactured product or produced raw material, without processing that would not be required of the product or raw material, and the material is not accumulated speculatively. Sizing, shaping or sorting of the material will not be considered processing for the purpose of this definition.

(iii) If no product or produced raw material exists for purposes of chemical and physical comparison, the Department will review, upon request, information provided and determine whether the material is a coproduct because it is an effective substitute for an intentionally manufactured product or produced raw material, based on the criteria in subparagraph (ii) and whether the material presents a threat of harm to human health and the environment in accordance with § 287.8.

(iv) A waste may become a coproduct after processing if it would otherwise qualify as a coproduct.

(v) Persons producing, selling, transferring, possessing or using a material who claim that the material is a coproduct and not a waste shall demonstrate that there is a known market or disposition for the material, and that they meet the terms of this definition and § 287.8. In doing so, they shall provide appropriate documentation, such as contracts showing that a second person uses the material as an ingredient in a production process, to demonstrate that the material is not a waste.]

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§ 287.8. Coproduct determinations.

(a) [In addition to meeting the conditions of the definition of “coproduct” in § 287.1 (relating to definitions),] Applicability. A coproduct determination is limited to the following:

(1) Materials that will be applied to the land or used to produce products that are applied to the land, including the placement of roadway aggregate, pipe bedding or construction materials.

(2) Materials that will be used for energy recovery as is with a minimum BTU value of 5,000/lb. as generated or as fired.

(a.1) Eligibility criteria. A coproduct determination must meet the following eligibility criteria:

(1) A material may not be compared, for physical character and chemical composition, to a material that is no longer a waste as determined in accordance with § 287.7 (relating to determination that a material is no longer a waste).

(2) A material may not be compared to clean fill as the term is defined in § 287.1 (relating to definitions).

(3) A coproduct may not be used as valley fill, to fill open pits from coal or noncoal mining, or solely to level an area or bring an area to grade where a construction activity is not completed promptly after the placement of material.

(4) If the proposed coproduct material is oil, a determination may only be made for oil refined from crude oil, or synthetically produced oil, that is not contaminated by physical or chemical impurities and will be used for energy recovery if the material has a minimum heat content (BTU value) comparable to the petroleum fuel it will replace.

(5) The material is transferred in good faith as a commodity in trade and complies with the following:

(i) The material is for use instead of an intentionally manufactured product or produced raw material.

(ii) The material can be used without processing unless the processing that is used is also required of the intentionally manufactured product or produced raw material.

(iii) The material is not accumulated speculatively.

(iv) The material is an effective substitute for an intentionally manufactured product or produced raw material.

(v) The process by which the material is generated is consistent and demonstrated as such as part of the coproduct determination.

(vi) Sizing, shaping or sorting of the material is not considered to be processing for the purposes of considering whether a material is a coproduct.

(6) If the material is used by the manufacturer or producer of the material instead of an intentionally manufactured product or produced raw material, it must comply with the following:

(i) The material can be used without processing unless the processing that is used is also required of the intentionally manufactured product or produced raw material.

(ii) The material is not accumulated speculatively, as defined in § 287.1.

(iii) The material is an effective substitute for an intentionally manufactured product or produced raw material.

(iv) The consistency of the process by which the material is generated is adequately demonstrated as part of the coproduct determination.

(v) Sizing, shaping or sorting of the material is not considered to be processing for the purposes of considering whether a material is a coproduct.

(7) If no product or produced raw material exists for purposes of chemical and physical comparison, the Department will review, upon request, information provided and determine whether the material is a coproduct because it is an effective substitute for an intentionally manufactured product or produced raw material, based on the criteria in paragraphs (5) and (6), and whether the material presents a threat of harm to human health and the environment in accordance with this section.

(8) A person producing, selling, transferring, possessing or using a material who claims that the material is a coproduct and not a waste shall demonstrate that there is a known market or disposition for the material, and that the material meets the definition of coproduct in § 287.1 and all applicable requirements in this section. The person shall provide appropriate documentation, such as contracts showing that a second person uses the material as an ingredient in a production process, to demonstrate that the material is not a waste.

(a.2) Legitimate reuse of a material as a coproduct.

(1) Reuse of a material as a coproduct must be legitimate. Reuse that is not legitimate is disposal.

(2) To determine if the reuse of a material as a coproduct is legitimate, a person shall address all the requirements of this paragraph.. If a material is reused as a coproduct in a manner that is not legitimate, the material is a residual waste and must be properly disposed of following the applicable requirements under Article IX.

(i) The material must be used as an effective substitute for a commercial product or produced raw material to be legitimately reused as a coproduct.

(ii) The value of the material for reuse as a coproduct must be demonstrated. The material is valuable if it is sold to a third party or reused by the generator as an effective substitute for a commercial product or produced raw material.

(iii) The generator and any third party must manage the material as a valuable commodity when it is under their control, including storing material in a manner that prevents dispersal or runoff. At a minimum, the material must be managed in a manner consistent with the management of the analogous commercial product or produced raw material or in an equally protective manner. Where there is no analogous product, the material must be managed as valuable commodity. The release of materials to the environment is disposal.

(a.3) Evaluation. A person performing a coproduct determination shall evaluate the following:

(1) The efficacy of the material to show that it is an effective substitute for an intentionally manufactured product or produced raw material and will not have detrimental impacts, including damage to infrastructure, risk to public health or safety, harm to livestock or fauna, and risk to waters of the Commonwealth, and the like). Efficacy can be demonstrated through either of the following:

(i) Research and development or empirical testing, such as laboratory tests, field performance or comparative analyses, that generates sufficient data or information to convey effective performance of the material as a functional substitute for an intentionally manufactured product or produced raw material.

(ii) Compliance with technical or industry standards for the use of the material, as demonstrated through analytical or mechanical testing.

(2) The consistency of the process by which the material is generated.

(3) The chemical composition and threat of harm to the environment and public health in accordance with this section. Ongoing analysis is required at least every five (5) years to demonstrate that materials remain consistent chemically and physically. The analysis must include a statistical evaluation showing that the chemical composition of the materials continues to be statistically consistent based upon a 95% upper confidence level, determined using the EPA's Test Methods for Evaluating Solid Waste (EPA SW-846) as guidance for the statistical treatment of data. A proposed coproduct may not present a greater threat of harm to human health and the environment than use of an intentionally manufactured product or produced raw material. A greater threat of harm is presented if one of the following is met:

[(1)] (i) For comparison of the proposed coproduct with a product or produced raw material, hazardous or toxic constituents are present at elevated levels unless an assessment of hazardous and toxic constituents **in accordance with subsection (b)** demonstrates that the constituents are not biologically available.

[(2)] (ii) For a proposed coproduct where no product or produced raw material will be replaced, an assessment of hazardous and toxic constituents **in accordance with subsection (c)** demonstrates that the constituents are not biologically available.

(b) Evaluation by Comparison. If the proposed coproduct is being compared to an intentionally manufactured product or produced raw material, a person performing a coproduct determination shall demonstrate that the use of a proposed coproduct does not present a greater threat of harm to human health and the environment by performing the following:

(1) An evaluation to determine which, if any, hazardous or toxic constituents are present in the proposed coproduct at levels exceeding those found in the material it is replacing.

(2) An evaluation of the total levels of hazardous or toxic constituents, including the constituents in 40 CFR Part 261, Appendix VIII (relating to hazardous constituents) as incorporated by reference in § 261a.1 (relating to incorporation by reference, purpose and scope), to determine whether the total levels of constituents contained in the proposed coproduct exceed the total levels found in the intentionally manufactured product or produced raw material it is replacing. Based on generator knowledge, if a hazardous or toxic constituent is not present, evaluation of total levels is not required.

(3) An evaluation of the levels of leaching of hazardous or toxic constituents, including the constituents in 40 CFR Part 261, Appendix VIII as incorporated by reference in § 261a.1, to

determine whether the levels of leaching from the proposed coproduct exceed the levels of leaching from the manufactured product or produced raw material it is replacing. A leaching procedure shall be performed that is appropriate for the intended use of the proposed product. Based on generator knowledge, if a hazardous or toxic constituent is not present evaluation of leaching levels is not required.

(4) The routes of exposure to humans and ecological receptors shall be identified. These routes of exposure shall include ingestion, inhalation, dermal contact, leaching to the groundwater, plant uptake and surface runoff potential. Mitigating circumstances, such as protective gear worn by workers to reduce exposure during processing or application of the proposed coproduct, shall be identified.

(5) The use of a 95% upper confidence interval, using the “*Test Methods for Evaluating Solid Waste*” (EPA SW-846), may be applied to the comparisons of constituent levels between the proposed coproduct and the intentionally manufactured product or produced raw material it is replacing.

(c) **Evaluation without comparison.** If the proposed coproduct is not being compared to an intentionally manufactured product or produced raw material, a person performing a coproduct determination shall demonstrate that the proposed coproduct does not present a threat of harm to human health and the environment and the hazardous or toxic constituents are not biologically available by performing the following:

(1) An evaluation of the total levels of hazardous or toxic constituents, including the constituents in 40 CFR Part 261, Appendix VIII as incorporated by reference in § 261a.1. Based on generator knowledge, if a hazardous or toxic constituent is not present, evaluation of total levels is not required.

(2) An evaluation of the levels of leaching of hazardous or toxic constituents, including the constituents in 40 CFR Part 261, Appendix VIII as incorporated in § 261a.1. Based on generator knowledge, if a hazardous or toxic constituent is not present evaluation of leaching levels is not required.

(3) The routes of exposure to humans and ecological receptors shall be identified. These routes of exposure include ingestion, inhalation, dermal contact, leaching to the groundwater, plant uptake and surface runoff potential. Mitigating circumstances, such as protective gear worn by workers to reduce exposure during processing or application of the proposed coproduct, shall be identified.

(4) The use of a 95% upper confidence interval, using the “*Test Methods for Evaluating Solid Waste*” (EPA SW-846), may be applied to the analytical results of the constituents evaluated.

(d) Notification to the Department. Before transferring or using the material covered by the coproduct determination, a person who completes a coproduct determination shall provide notice to the Department that contains the following:

(1) The name, address and the telephone number of the person who completed the coproduct determination.

(2) A list of all waste streams covered under the coproduct determination.

(3) An estimate of the tonnages or volumes of each waste stream that will be generated and reused annually.

(4) A list of all reuse avenues for each waste stream covered under the coproduct determination.

(5) A statement that acknowledges that documentation supporting the coproduct determination will be provided to persons selling, transferring, possessing or using the material.

(6) A statement that acknowledges that the coproduct determination includes the evaluations performed in accordance with subsection (a.3) and either subsection (b) or (c) and is representative of the coproduct material as it is currently generated.

(7) This notice shall be updated and provided to the Department if there are changes to any of the information required by this section.

(8) For ongoing use of a material under a coproduct determination, notice in accordance with this section shall be provided to the Department no less than once every three years.

(e) *Recordkeeping requirements.* A person who completes a coproduct determination shall maintain the documentation supporting the determination for as long as the material is managed, as well as a minimum of five years after last managing the material. [This] All documentation associated with a coproduct determination shall be made available to the Department upon request.

(f) *Chain of possession documentation.* A person who completes a coproduct determination shall provide documentation supporting the determination to persons selling, transferring, possessing or using the material. A person managing material associated with a coproduct determination who has been provided with a copy of the determination shall maintain the documentation for as long as the material is managed, as well as a minimum of five years after last managing the material.