Ohio Administrative Code

Rule 3745-599-340 Initial beneficial use byproduct characterization demonstration for individual beneficial use permits.

Effective: February 11, 2024

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, and test methods referenced in this rule, see rule 3745-599-03 of the Administrative Code titled "Beneficial use - incorporation by reference."]

Initial beneficial use byproduct characterization demonstration. The initial beneficial use byproduct characterization demonstration shall include at a minimum the following:

(A) The name, address, and telephone number of the applicant and the applicant's contact person.

(B) The applicant's determination, if required by rule 3745-52-11 of the Administrative Code, that the beneficial use byproduct is not a hazardous waste.

(C) A description of the physical and chemical characteristics of each beneficial use byproduct as generated, including a description of the generating process, the product generated, and a list of the feedstock, input materials, and raw materials used to generate the beneficial use byproduct.

(D) A list of all constituents reasonably expected to be present in each beneficial use byproduct, available analytical data, and the rationale for including or excluding all reasonably expected constituents on the list. Reasonably expected constituents are all constituents that have the potential to occur at concentrations exceeding regional screening levels as published by the United States environmental protection agency. If an appropriate regional screening level for a constituent is not available, the rationale for including or excluding a constituent shall provide justification for an appropriate screening level.

(E) An analysis for each constituent listed for each beneficial use byproduct in accordance with paragraph (D) of this rule. These listed constituents shall be the constituents of concern for the purposes of the initial beneficial use byproduct characterization demonstration required by rule 3745-599-310 of the Administrative Code and the compliance demonstration as required by rule

3745-599-345 of the Administrative Code.

(F) The identification of the analytical methods selected and an explanation of the rationale for using each selected method. The initial beneficial use byproduct characterization demonstration shall consider the appropriate analytical methods to determine the leaching potential of constituents of concern to the environment.

[Comment: Applicants may refer to the following documents for guidance on how to choose a sampling strategy; determine the appropriate number of samples; evaluate whether a statistically significant set of samples has been acquired; and conclude that a statistically determined confidence interval (if practical) has represented the average properties of a beneficial use byproduct.

Battelle Memorial Institute, "Visual Sample Plan Version 7.7 User's Guide."

United States environmental protection agency, "Beneficial Use Compendium: A Collection of Resources and Tools to Support Beneficial Use Evaluations, EPA 530-R-16-009."

United States environmental protection agency, "Methodology for Evaluating the Beneficial Use of Industrial Non-Hazardous Secondary Materials, EPA 530-R-16-011."

United States environmental protection agency, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012."

United States environmental protection agency, "RCRA Waste Sampling Draft Technical Guidance, Planning, Implementation, and Assessment, EPA 530-D-02-002."

United States environmental protection agency "Statistical Software ProUCL 5.2 for Environmental Applications for Data Sets with and without Nondetect Observations, EPA-600-R-07-041."

United States environmental protection agency, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)."]

(G) A description of the representative sampling strategy for the initial beneficial use byproduct

characterization demonstration using sampling methods in accordance with rule 3745-599-60 of the Administrative Code. The description of the sampling strategy shall include at a minimum the following:

(1) An explanation of whether the representative sampling strategy characterizes the beneficial use byproduct by volume or characterizes the beneficial use byproduct as generated through time.

(2) The location and the number of all grab samples, composite samples, and incremental samples taken to define the average properties of the beneficial use byproduct. The number and location of samples shall be chosen so as not to miss areas of high chemical concentration.

(3) A narrative explaining whether a sufficient number of samples were collected by the applicant to ensure that the collected samples truly represent the average properties of the entire beneficial use byproduct. In the case of simple random sampling using grab samples, the applicant shall perform a statistical analysis of the data. If composite or incremental samples were used for the sampling method, and a statistical analysis is not practical, the applicant shall demonstrate to the satisfaction of the director that the sampling method is valid and defensible for the purpose for which the data was collected.

(H) A description of the sample handling techniques and shipping procedures selected to maintain the sample integrity, including sample preservation and chain of custody. The description shall also set forth the quality control procedures and sampling protocols used to obtain representative samples of the beneficial use byproduct.

(I) A written discussion of the analytical results used to justify the beneficial use of the beneficial use byproduct for the beneficial use specified in the individual beneficial use permit application that contains at a minimum the following:

(1) All raw data and analytical results gathered in accordance with the initial beneficial use byproduct characterization demonstration.

(2) A summary table of all the raw data and the data analysis included in a computerized database or electronic spreadsheet.

(3) The analytical report containing enough detailed information so that the reported statistical analyses are reproducible.

(4) A description of the statistical or empirical data evaluation methods to determine the representative average properties of the beneficial use byproduct.

(5) A data validation report performed by a person not employed by the laboratory performing the initial beneficial use byproduct characterization demonstration.