

Effective Date: March 31, 2017  
Expiration Date: March 31, 2022

*(3/3/17 Draft)*

**OHIO ENVIRONMENTAL PROTECTION AGENCY**

**GENERAL PERMIT AUTHORIZATION TO BENEFICIALLY USE BIOSOLIDS INCINERATOR  
ASH**

Upon receipt of written notification from the Director of the Ohio Environmental Protection Agency (Director) that coverage is granted, the Applicant, as defined in Section B of this Permit, is authorized by the Director to beneficially use biosolids incinerator ash (BIA), also known as sewage sludge incinerator ash, in accordance with the conditions specified in this Permit and applicable provisions of Ohio Administrative Code (OAC) Chapter 3745-599. Only BIA as defined in Section B of this Permit and as identified in the Applicant's Notice of Intent (NOI) is authorized for beneficial use under this Permit as an ingredient in a soil blend for agronomic benefit, as a compost additive or as structural fill. All other beneficial uses of BIA must be separately approved by the Director.

BIA is generated during the firing of dewatered sewage sludge in an incinerator. Incineration reduces biosolids to a residue primarily consisting of ash, which is approximately 20 percent of the original volume. BIA is a silty material with some sand-size particles. The specific particle size range and properties of the ash depend on the raw waste water composition, type of incineration system and the chemical additives introduced in the wastewater treatment process. BIA may be beneficially used as an ingredient in a soil blend for agronomic benefit, as a compost additive or as structural fill

Coverage under this Permit may be granted only upon payment of applicable fees and submittal of a complete and accurate Notice of Intent (NOI), a sampling plan, and an analysis demonstrating eligibility of the BIA for beneficial use under this Permit. Permit coverage does not become effective until the Permittee receives written notification from the Director that coverage is granted.

Coverage under this General Permit shall expire at midnight on the expiration date set forth above. A Permittee may continue activities authorized by this Permit beyond the date of expiration only as provided in OAC Rule 3745-599-220(G).

Pursuant to the authority of the Director under Ohio Revised Code (ORC) Chapters 6111 and 3734 and OAC Chapter 3745-599, any coverage granted under this Permit is subject to compliance with applicable provisions of OAC Chapter 3745-599 and all terms and conditions contained within this Permit. The Permittee's beneficial use of BIA in accordance with this Permit and in compliance with OAC Chapter 3745-599 and other applicable laws is unlikely to adversely impact the public health or safety or the environment.

Coverage under this Permit does not relieve the Permittee of the duty to comply with all applicable federal, state, and local laws, ordinances, and regulations. Nothing herein shall be construed to release any party, including but not limited to the owner(s) of property upon which the beneficial use of BIA as an ingredient in a soil blend, compost additive or structural fill occurs, from the obligation to comply with all applicable laws governing the placement or use of BIA on the property.

Director

DRAFT

## A. Description and Eligibility Requirements

1. This Permit authorizes the beneficial use of BIA as an ingredient in a soil blend for agronomic benefit, as a compost additive, or as structural fill.
2. Only BIA that meets all of the following criteria is eligible for beneficial use under this Permit:
  - a. The BIA conforms to the definition in Section B of this Permit;
  - b. The BIA does not contain constituents that exceed any of the limits specified in Table 1 of this Permit (Table 1);
  - c. The BIA is not a hazardous waste under OAC 3745-51-03
3. For the purposes of this Permit, BIA that satisfies the constituent concentration limits set forth in Table 1 of this Permit is a beneficial use byproduct as defined in OAC Rule 3745-599-02(B)(2).
4. An applicant may apply for an individual beneficial use permit in accordance with OAC Rule 3745-599-310 for beneficial use of BIA not eligible for coverage under this General Permit.

## B. Definitions

OAC Rule 3745-599-02 contains definitions applicable to the Beneficial Use OAC Chapter 3745-599 and this Permit. The following definitions are specific to this Permit.

“Applicant” means the person applying for coverage under this Permit.

“Agronomic benefit” means the promotion or enhancement of plant growth and includes but is not limited to increases in soil fertility and moisture retention.

“Biosolids Incinerator Ash” means ash generated by municipal waste water treatment facilities during the firing of dewatered sewage sludge in an incinerator.

“Compost Additive” means a supplemental material mixed with or otherwise added with compostable feedstock and bulking agents to create a favorable condition for the composting process.

“Notice of Intent” (NOI) means the form used to request coverage under a beneficial use general permit.

“Permittee” means an applicant who has been granted coverage under this Permit.

“Soil Blend” means a mixture of soil and BIA that does not exceed fifty percent BIA by volume. The soil blend shall not contain solid waste, construction and demolition debris, pulverized debris, sludge, slag, unfinished compost, contaminated soils, shall be non-putrescible, and have

good cohesiveness, and relatively uniform texture.

“Structural Fill” means a screened material used to create a stable base meeting engineering specifications for use as engineered fill, mechanically stabilized earthen (MSE) walls, or granular fill. This does not include filling of limestone or sandstones quarries, gravel pits, valleys, open pits or other industrial mineral mining excavations.

### C. Application Requirements

1. Prior to submission of an NOI, the Applicant shall develop and implement a sampling plan in accordance with Section C.3, determine the concentration of the constituents listed in Table 1 (sample results), and a statistical evaluation of the sample results, for the BIA from each generator from which the Applicant intends to obtain BIA for beneficial use under this Permit.
2. To obtain coverage under this Permit, an Applicant shall, in accordance with OAC Rule 3745-599-210, submit to the Director the following:
  - a. One copy of a complete and accurate NOI on a form provided by the Director. Each NOI form shall be signed by the Applicant;
  - b. The analysis of the sampling results and statistical evaluation of the sampling results performed in accordance with the sampling plan for the BIA from each generator from which the Applicant intends to obtain BIA for beneficial use under this Permit; and
  - c. The results of an analysis performed in accordance with the sampling plan to determine the concentration of the constituents listed in Table 1 for the BIA from each generator from which the Applicant intends to obtain BIA for beneficial use; and
  - d. The application package shall include a \$200 application fee.
  - e. The application shall be submitted to the following address:

Ohio Environmental Protection Agency  
Division of Materials and Waste Management  
Attn: Beneficial Use Unit  
P.O. Box 1049  
Columbus, Ohio 43216-1049

Table 1

Constituent <sup>12</sup>	Totals Analysis (mg/kg)	Leaching Analysis (mg/L)
Aluminum (Al)	77000	4
Antimony (Sb)	31	0.12
Arsenic (As)	41	0.2
Barium (Ba)	15000	40
Boron (Bo) <sup>3</sup>	16000	-
Cadmium (Cd)	39	0.1
Total Chromium (Cr) <sup>3</sup>	(TBD)	2
Copper (Cu)	1500	26
Lead (Pb)	300	0.3
Mercury (Hg)	10	0.04
Molybdenum (Mo) <sup>3</sup>	75	-
Nickel (Ni)	420	-
PCBs <sup>3</sup>	(TBD)	0.01
Selenium (Se)	100	0.25
Silver (Ag)	390	2
Zinc (Zn)	2800	100

3. The sampling plan shall at a minimum require the following:
- a. Samples of BIA from each generator shall be collected using a strategy to obtain representative samples as described in *Test Methods for Evaluating Solid Waste*,

<sup>1</sup> [1] Al, Sb, Ba, Bo, Hg, Ag: US EPA Regional Screening Levels, Residential Soil; As, Cd, Cu, Pb, Se, Ni, Mo, Zn: US EPA 40 Code of Federal Regulations Part 503 Pollutant Concentrations (Table 3 of 503.13).

<sup>2</sup> Al, Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, PCBs, Ag Zn: TCLP Analysis limits for beneficial use of biosolids incinerator ash are 20 times the drinking water standard (Maximum Contaminant Levels (MCLs) or Secondary MCLs); Se is 5 times the drinking water standard

<sup>3</sup> Further consideration is being taken into account with regard to this constituent.

*Physical/Chemical Methods* (SW 846)<sup>4</sup>. The samples from each generator shall be separately analyzed.

- b. Each sample shall be analyzed for total metals as described in SW 846, for the constituents listed in Table 1.
  - c. Each sample shall be analyzed for leaching potential using the Toxicity Characteristic Leaching Procedure (TCLP) Method 1311 or the Synthetic Precipitation Leaching Procedure (SPLP) Method 1312 as described in SW 846, for the constituents specified in Table 1.
  - d. The sample result for each constituent shall be included in a statistical evaluation. In order to be eligible for beneficial use under this Permit the Applicant shall demonstrate that the 95% Upper Confidence Limit of the mean for each constituent in BIA does not exceed the limits specified in Table 1.
  - e. The Permittee shall not make available or distribute for beneficial use any BIA that exceeds any constituent(s) limit specified in Table 1 of this Permit.
4. Coverage under this Permit becomes effective when the Applicant receives written notification from the Director that coverage is granted. The Permittee shall conduct all activities authorized by this Permit in accordance with this Permit, the NOI, and OAC Chapter 3745-599.

#### **D. Operating Conditions**

1. When there is a change in the generating process, the Permittee shall determine constituent concentrations listed in Table 1 through additional sampling and analysis, performed in accordance with the sampling plan developed pursuant to Section C.3. of this Permit, and demonstrate through a statistical evaluation of the sampling analysis that the 95% UCL of the mean for each constituent does not exceed the limits specified in Table 1.
2. The Permittee shall cease beneficial use of the BIA pursuant to this Permit if it is determined that the concentrations or leaching potential of constituents in the BIA exceeds the limit for any of the constituents listed in Table 1.
3. After coverage under this Permit is granted, the Permittee shall provide to the Director an NOI and analytical results of the BIA for any additional generator from which BIA is to be

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<sup>4</sup> EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)," as amended through July 2016.

obtained for beneficial use

4. The Permittee shall retain the following information for a minimum of five years after beneficial use of the BIA has occurred and the Permittee shall make the information available to the Director or an authorized representative of Ohio EPA upon request:
  - a. Records of the name, address, and telephone number of each generator;
  - b. The annual volume of BIA from each generator managed, and the volume of BIA from each generator actually beneficially used annually;
  - c. Records of the location(s) where the BIA is stored, blended, or placed on land by the Permittee;
  - d. The sampling plan detailing where and how samples of BIA were collected, dates that the annual samples were collected, and the list of constituents for which samples were analyzed;
  - e. All laboratory analyses of the constituent concentrations in the BIA.
5. Not later than April first of each year the Permittee shall submit to the Director an annual report. The annual report shall be sent to the following address:

Ohio Environmental Protection Agency  
Division of Materials and Waste Management  
Attn: Beneficial Use Unit  
PO Box 1049  
Columbus, OH 43216-1049
6. The annual report shall include the following information for the previous calendar year:
  - a. Volume of BIA beneficially used under this Permit
  - b. Volume of BIA stored for beneficial use under this Permit as of the date of the annual report;
  - c. Sampling analyses and results of BIA beneficially used under this Permit.
7. The Permittee shall use Best Management Practices, as defined in OAC Rule 3745-599-02, when storing, blending, and beneficially using BIA. The Best Management Practices shall include, at a minimum, the following:
  - a. Storage, blending, and beneficial use locations shall be at least 300 feet from wells and surface waters used for drinking water or watering livestock;
  - b. Storage, blending, and beneficial use locations shall be at least 100 feet from other surface waters of the state as defined in ORC Section 6111.01(H);
  - c. The Permittee shall create surface diversions to catch any solids in runoff and to divert runoff away from waters of the state at sites where BIA is placed on land;

- d. Storage, blending, and beneficial use locations shall not occur within a drinking water source protection area as defined in OAC Rule 3745-9-01;
  - e. Storage, blending, and beneficial use locations shall not be within 1000 feet of a sensitive groundwater area, such as karst terrain, a sand and gravel pit, a limestone, or sandstone quarry;
  - f. Storage, blending, and beneficial use locations shall not be in a wellhead protection area with less than ten feet of low permeable clayey glacial till, or a one hundred gallon-per-minute aquifer with less than ten feet of low permeable clayey glacial till;
  - g. The Permittee shall take measures to control fugitive dust and other air emissions that may result from activities authorized through this Permit.
8. The Permittee shall store, blend, and beneficially use BIA pursuant to this Permit in such a manner that the activities will neither cause a nuisance nor adversely affect public health or safety or the environment. The Director may revoke coverage under this Permit if the Director determines that a nuisance condition or a threat to public health, safety or the environment exists. Immediately upon the effective date of any written notification from the Director of revocation of coverage under this Permit, the Permittee shall cease beneficial use under this Permit. The Director may require the Permittee to remove the material, remediate the site, or to take other action as appropriate to eliminate the nuisance or threat.
  9. The Permittee shall conduct all activities in compliance with all applicable local, state, and federal laws and regulations pertaining to environmental protection, including but not limited to the control of air pollution, leachate, and storm water run-on and run-off and protection of ground water and surface water.
  10. The Permittee shall conduct all activities in compliance with all other applicable local, state, and federal laws and regulations not explicitly identified in this Permit.
  11. The Permittee shall not cause pollution or cause to be placed any BIA that has been or is intended to be used in a location where it causes pollution to waters of the state, except in accordance with an effective National Pollutant Discharge Elimination System (NPDES) permit. Any unauthorized discharge to waters of the state must be reported to Ohio EPA (call 1-800-282-9378) within twenty-four (24) hours of discovery.
  12. The Permittee shall furnish to the Director or an authorized representative of Ohio EPA, within 10 days of receiving a written request, any records that the Director or an authorized representative of Ohio EPA requests to determine whether cause exists for revoking coverage under or determining compliance with this Permit. Additional information requested by the Director or an authorized representative of Ohio EPA shall be submitted within 10 days of receipt of the request or such other time period authorized by the Director or an authorized representative of Ohio EPA.
  13. When the Permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI to the Director, he or she shall promptly submit such facts or correct information.



14. The Permittee shall comply with OAC Rules 3745-599-05 (general exclusions), 3745-599-20 (prohibitions), 3745-599-25 (signatures), 3745-599-35 (legitimacy criteria), 3745-599-60 (approved sampling and characterization procedures), 3745-599-210 (notice of intent to obtain coverage under a general beneficial use permit), and 3745-599-220 (coverage under a general beneficial use permit). If there is a conflict between a requirement in a rule and a condition of this Permit that cannot be reconciled, the Permittee shall notify the Director in writing of the conflict and shall comply with the Permit condition unless directed otherwise by the Director.

#### **E. Site Access**

The Permittee shall allow the Director or an authorized representative of Ohio EPA to:

1. Enter upon the site where a regulated facility or activity is located or conducted or where records are retained by the Permittee under OAC Chapter 3745-599 or the terms and conditions of this Permit.
2. Have access to and copy any records that must be kept under OAC 3745-599 or the terms and conditions of this Permit.
3. Collect samples; take photographs; perform measurements, surveys and other tests; and inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under OAC Chapter 3745-599 or this Permit.