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OHIO ENVIRONMENTAL PROTECTION AGENCY

**GENERAL PERMIT AUTHORIZATION TO BENEFICIALLY USE SEWAGE SLUDGE
INCINERATOR ASH**

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

SSIA 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 twenty percent of the original volume. SSIA 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. SSIA may be beneficially used as an ingredient in a soil blend for agronomic benefit, as an ingredient in a compost product, or as structural fill.

Coverage under this Permit may be authorized only upon payment of applicable fees and submittal of a complete and accurate NOI, a sampling plan, and an analysis demonstrating the SSIA is eligible for beneficial use under this Permit, in accordance with the terms and conditions of this Permit. Permit coverage does not become effective until the Permittee receives a written notification from the Director that coverage is authorized.

Coverage under this Permit shall expire at midnight on this Permit's expiration date. 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 SSIA 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 person, including but not limited to the owner(s) of the land upon which the SSIA is placed, from the obligation to comply with all applicable laws governing the placement or use of SSIA on the property.


Craig W. Butler
Director

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By:  Date: 10/6/17

Terms and Conditions

A. Description and Eligibility Criteria for Coverage

1. This Permit authorizes the beneficial use of SSIA by placement on the land as an ingredient in a soil blend for agronomic benefit, as an ingredient in a compost product, or as structural fill, all of which shall not exceed thirty percent SSIA by volume.
2. Only SSIA that meets all of the following criteria is eligible for beneficial use under this Permit:
 - a. The SSIA conforms to the definition of "Sewage Sludge Incinerator Ash" in Section B of this Permit;
 - b. The SSIA or material blended with SSIA in accordance with Condition C.4.e. does not contain constituents that exceed any of the limits specified in Table 1 of this Permit (Table 1);
 - c. The SSIA is not a hazardous waste as defined by ORC Chapter 3734.01, OAC Rule 3745-50-10(A), and OAC Rule 3745-51-03. This demonstration shall be made using either generator knowledge or analysis using the Toxicity Characteristic Leaching Procedure (TCLP) Method 1311 and OAC Chapter 3745-51-24 Table 1 for regulatory levels.
3. For the purposes of this Permit, SSIA 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 SSIA not eligible for coverage under this General Permit.

B. Definitions

Unless otherwise stated in this Permit, the terms used in this Permit shall have the same meaning as used in OAC Chapter 3745-599. The following definitions are specific to 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.

"Applicant" means the person applying for coverage under this Permit.

"Compost" means a humus-like organic material resulting from the biological decomposition of solid waste.

"Compost Product" means compost that meets applicable compost product quality standards as defined in OAC Rule 3745-560.

"Notice of Intent" (NOI) means the form prescribed by the Director for use when requesting coverage under a beneficial use general permit.

"Permittee" means an applicant for whom the Director has approved coverage under this Permit.

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

“Soil Blend” means a mixture of soil and SSIA in which SSIA does not exceed thirty percent by volume. Soil blends may include compost product but shall not include nor be comingled with solid waste, construction and demolition debris, pulverized debris, sludge, slag, unfinished compost or contaminated soils. Soil blends are non-putrescible, cohesive, and relatively uniform in 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 earthen mounds, or road base. Structural fill does not include material used for filling 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.4, determine the concentration of the constituents listed in Table 1 (sample results), and perform a statistical evaluation of the sampling analysis for the SSIA from each generator from which the Applicant intends to obtain SSIA 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 an application package to the Director containing the following:
 - a. One copy of a complete and accurate NOI on a form provided by the Director, including a demonstration that the Applicant satisfies all of the Eligibility Criteria for Coverage in Section A of this Permit. Each NOI form shall be signed by the Applicant;
 - b. The sampling plan developed and implemented in accordance with Section C.4 for the SSIA from each generator from which the Applicant intends to obtain SSIA for beneficial use under this Permit; and
 - c. The results and the statistical evaluation of the sampling analysis performed in accordance with the sampling plan for the SSIA from each generator from which the Applicant intends to obtain SSIA for beneficial use; and
 - d. The application fee of \$200.
3. 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
4. The sampling plan shall at a minimum contain the following:
 - a. Samples of SSIA from each generator shall be collected using a strategy to obtain representative samples as described in *Test Methods for Evaluating Solid Waste*,

Physical/Chemical Methods (SW 846)¹. 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 (UCL) of the mean for each constituent in the SSIA does not exceed the limits specified in Table 1.
- e. SSIA that contains constituents at levels that exceed any of the constituent concentration limits specified in Table 1 of this Permit, provided the exceedances do not constitute the SSIA being a hazardous waste (see Condition A.2.c. of this Permit), may be blended with a compost product and/or soil that neither contains nor is commingled with solid waste, construction and demolition debris, sludge, slag, unfinished compost, or contaminated soil, resulting in a blended material, not exceeding thirty percent SSIA by volume, that is non-putrescible, cohesive, and relatively uniform in texture. The blended SSIA material shall be representatively sampled and analyzed for the constituents in Table 1 in accordance with the sampling plan.
- f. A blended material containing SSIA shall not exceed the limits in Table 1 prior to distribution or beneficial use.

¹ EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)," as amended through September 2017.

Table 1

Constituent^{2 3}	Totals Analysis (mg/kg)	Leaching Analysis (mg/L)
Aluminum (Al)	77000	N/A
Antimony (Sb)	31	0.06
Arsenic (As)	41	0.1
Barium (Ba)	15000	20
Boron (Bo)	16000	N/A
Cadmium (Cd) ⁴	35	0.05
Total Chromium (Cr)	N/A	1
Copper (Cu)	1500	13
Lead (Pb)	300	0.15
Mercury (Hg) ⁴	7.8	0.02
Molybdenum (Mo)	75	N/A
Nickel (Ni)	420	N/A
Selenium (Se)	100	0.25
Silver (Ag)	390	1
Zinc (Zn)	2800	50

- 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 strict accordance with this Permit, the NOI, and OAC Chapter 3745-599.

D. Operating Conditions

- The Permittee shall beneficially use SSIA by placement on the land as an ingredient in a soil blend for agronomic benefit, as an ingredient in a compost product, or as structural fill in strict accordance with the terms and conditions in this Permit. Issuance of this Permit does not constitute assurance that the beneficial use of SSIA by placement on the land as an ingredient in a soil blend, as an ingredient in a compost product, or as structural fill, as defined in Section B of this permit, will comply with all Ohio laws and regulations.
- When there is a change in the generating process, the Permittee shall determine constituent

²Al, Sb, Ba, Bo, Ag: US EPA Regional Screening Levels, Residential Soil; As, Cu, Pb, Se, Ni, Mo, Zn: US EPA 40 Code of Federal Regulations Part 503 Pollutant Concentrations (Table 3 of 503.13).

³Sb, As, Ba, Cd, Cr, Cu, Pb, Hg, Ag, Zn: TCLP Analysis limits for beneficial use of SSIA are 10 times the drinking water standard (Maximum Contaminant Levels (MCLs) or Secondary MCLs); Se is 5 times the drinking water standard

⁴Totals limits for Cd & Hg are compost quality standards from OAC 3745-560-220(A)

concentrations listed in Table 1 through additional sampling and analysis, performed in accordance with the sampling plan developed pursuant to Section C.4. 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.

3. The Permittee shall cease beneficial use of the SSIA from any generator pursuant to this Permit if it is determined that the SSIA no longer satisfies the Eligibility Criteria for Coverage in Section A of this Permit.
4. After coverage under this Permit is granted, the Permittee shall provide to the Director an NOI and analytical results of the SSIA for any additional generators from which SSIA is to be obtained for beneficial use.
5. The Permittee shall retain the following information for a minimum of five years after beneficial use of the SSIA under this Permit 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 SSIA from each generator managed, and the volume of SSIA from each generator actually beneficially used annually;
 - c. Records of the location(s) where the SSIA is stored, blended, or placed on land by the Permittee;
 - d. The sampling plan detailing where and how samples of SSIA from each generator were collected, dates that the annual samples were collected, and the list of constituents for which samples were analyzed; and
 - e. All laboratory analyses of the constituent concentrations in the SSIA.
6. Not later than April first of each year the Permittee shall submit to the Ohio EPA 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
7. The annual report shall include the following information for the previous calendar year:
 - a. Volume of SSIA beneficially used under this Permit;
 - b. Volume of SSIA stored for beneficial use under this Permit as of the date of the annual report; and
 - c. Sampling analyses and analytical results of SSIA beneficially used under this Permit.
8. The Permittee shall use Best Management Practices, as defined in OAC Rule 3745-599-02,

when storing, blending, and beneficially using SSIA pursuant to this Permit. The Best Management Practices shall include, at a minimum, the following:

- a. Storage and blending locations shall be at least 300 feet from wells and surface waters used for drinking water or watering livestock;
 - b. Storage and blending locations shall be at least 100 feet from other surface waters of the state as defined in ORC Section 6111.01(H);
 - c. Unless otherwise provided in a permit issued under ORC Chapter 6111, the Permittee shall create surface diversions to catch any solids in runoff and to divert runoff away from waters of the state at each site where SSIA is placed on land;
 - d. Storage and blending locations shall not be within 1,000 feet of a sensitive groundwater area, including:
 - i. Karst terrain;
 - ii. A sand and gravel pit;
 - iii. A limestone or sandstone quarry;
 - iv. A drinking water source protection area with less than ten feet of low permeability clay rich glacial till between the bottom of the fill material and the groundwater;
 - v. An aquifer designated on an Ohio Department of Natural Resources Ground Water Resources map for the county in which the beneficial use activity will take place as capable of yielding one hundred gallons-per-minute or more, which has less than ten feet of separation between the bottom of the fill material and the ground water.
 - e. The Permittee shall take measures to control fugitive dust and other air emissions that may result from activities authorized through this Permit.
9. The Permittee shall store, blend, and beneficially use SSIA pursuant to this Permit in such a manner that the activities will neither cause a nuisance nor adversely affect public health, 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 SSIA, remediate the site, or take other action as appropriate to eliminate the nuisance or threat.
10. 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.
11. 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.

12. To the extent that the SSIA may be considered a solid waste and would require the Permittee to obtain a permit and license under ORC Chapter 3734. and the rules promulgated thereunder, the Director has determined that granting an exemption from the applicable solid waste provisions of ORC Chapter 3734. to use SSIA in the quantities and under the circumstances specifically authorized in this Permit is unlikely to adversely affect public health or safety or the environment. Therefore, pursuant to ORC Section 3734.02(G), the Permittee is hereby exempted from the applicable solid waste provisions of ORC Chapter 3734. and the rules adopted thereunder when the SSIA is managed as authorized in this Permit subject to compliance with all conditions in this Permit.
13. Nothing in this Permit shall be construed as a waiver from the requirements of ORC Chapter 3734. or the regulations promulgated thereunder, except as expressly provided herein. This Permit shall not be interpreted to release the Permittee from responsibility under ORC Chapters 3704., 3734., or 6111.; under the Federal Clean Water Act, the Resource Conservation and Recovery Act, or the Comprehensive Environmental Response, Compensation, and Liability Act; or from other applicable requirements for remedying conditions resulting from any release of contaminants to the environment.
14. The Permittee shall not cause pollution or cause to be placed any SSIA or material blended with SSIA 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 thirty (30) minutes of discovery.
15. The Permittee shall furnish to the Director or an authorized representative of Ohio EPA, within 30 days of receiving a written request, any information 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.
16. 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, the Permittee shall promptly submit such facts or correct such information.
17. 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 Chapter 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.

F. Revocation of Coverage

The Director may revoke coverage under this Permit upon making a determination that any of the Eligibility Criteria for Coverage in Section A are no longer satisfied, that the Permittee has failed to comply with this Permit or OAC Chapter 3745-599, or as otherwise provided in accordance with OAC Rule 3745-599-220.