

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

(Draft 03/3/17)

OHIO ENVIRONMENTAL PROTECTION AGENCY

GENERAL PERMIT AUTHORIZATION TO BENEFICIALLY USE ALUMINUM-BASED DRINKING WATER TREATMENT RESIDUALS IN A SOIL BLEND

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 aluminum-based drinking water treatment residuals (alum residuals) in accordance with the conditions specified in this Permit and applicable provisions of OAC Chapter 3745-599. Only alum residuals as defined in Section B of this Permit and as identified in the Applicant's Notice of Intent (NOI) are authorized for beneficial use by placement on land for agronomic benefit as an ingredient in a soil blend under this Permit. All other beneficial uses of alum residuals must be separately approved by the Director.

Before water is made available for public consumption, drinking water treatment facilities must remove particulate and dissolved constituents. Alum (aluminum sulfate) or poly-aluminum chloride are coagulants used to remove particulate and dissolved constituents from raw water. The resulting byproduct is aluminum-based drinking water treatment residuals. Due to the moisture retention and soil-like properties of the material, alum residuals can be beneficially used by placement on land for agronomic benefit as an ingredient in a soil blend.

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

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 alum residuals 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 the property upon which the beneficial use of alum residuals by placement on land for agronomic benefit as an ingredient in a soil blend occurs, from the obligation to comply with all applicable laws governing the placement or use of the alum residuals on the property.

Craig W. Butler
Director

A. Description and Eligibility Requirements

1. This permit authorizes the beneficial use by placement on the land for agronomic benefit of alum residuals as an ingredient in a soil blend, only as described in this Permit.
2. Only alum residuals that meet all of the following criteria are eligible for beneficial use under this Permit:
 - a. The alum residuals conform to the definition in Section B of this permit;
 - b. The alum residuals do not contain constituents that exceed any of the limits specified in Table 1 of this Permit (Table 1);
 - c. The alum residuals are not a hazardous waste under OAC Rule 3745-51-03.
3. For the purposes of this Permit, alum residuals that satisfy the constituent concentration limits set forth in Table 1 of this Permit are 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 alum residuals 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 general 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.

“Aluminum-based drinking water treatment residuals” or “alum residuals” means a dewatered byproduct resulting from the treatment of a water supply for drinking water by the addition of aluminum sulfate or poly-aluminum chloride for coagulation.

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

“Dewatered” means a material with a moisture content not greater than 50% by weight. If the moisture content exceeds 50%, the material must be dried to an acceptable moisture content.

“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 alum residuals that does not exceed fifty percent alum residuals 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, cohesive, and relatively uniform in texture.

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), the pH, and a statistical evaluation of the sample results, for the alum residuals from each generator from which the Applicant intends to obtain alum residuals 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 sample results performed in accordance with the sampling plan for the alum residuals from each generator from which the Applicant intends to obtain alum residuals 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 alum residuals from each generator from which the Applicant intends to obtain alum residuals 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
Office of Fiscal Administration
Attn: Division of Materials and Waste Management
P.O. Box 1049
Columbus, Ohio 43216-1049

Table 1

Constituent ^{1,2}	Totals Analysis (mg/kg)*
Aluminum	77000
Arsenic (As)	41
Barium (Ba)	15000
Cadmium (Cd)	39
Copper (Cu)	1500
Lead (Pb)	300
Manganese (Mn)	1800
Nickel (Ni)	420
Selenium (Se)	100
Zinc (Zn)	2800

* - dry weight basis

3. The sampling plan shall at a minimum require the following:
 - a. Samples of alum residuals 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)³. The samples from each generator shall be separately analyzed.
 - b. Samples shall be analyzed for pH and for total metals as described in SW 846 for the constituents specified in Table 1.
 - c. 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 alum residuals does not exceed the limits specified in Table 1.
 - d. The Permittee shall not make available or distribute for beneficial use any alum residuals that exceed 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 Al, Ba, Mn: US EPA Regional Screening Levels, Residential Soil.

² As, Cd, Cu, Pb, Ni, Se, Zn: US EPA 40 CFR Part 503 Pollutant Concentrations (Table 3 of 503.13)

³ EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)," as amended through July 2016.

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 alum residuals pursuant to this Permit if it is determined that the concentrations of constituents in the alum residuals exceed the limits 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 alum residuals for any additional generators from which alum residuals are to be obtained for beneficial use.
4. The Permittee shall retain the following information for a minimum of five years after beneficial use of the alum residuals 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 alum residuals from each generator managed, and the volume of alum residuals from each generator actually beneficially used annually;
 - c. Records of the location(s) where the alum residuals are stored, blended, or placed on land by the Permittee;
 - d. The sampling plan detailing where and how samples of alum residuals 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 alum residuals.
5. Not later than April first of each year the Permittee shall submit to 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
6. The annual report shall include the following information for the previous calendar year:
 - a. Volume of alum residuals beneficially used under this Permit;
 - b. Volume of alum residuals stored for beneficial use under this Permit as of the date of the annual report;
 - c. Sampling analyses and results of alum residuals 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 alum residuals pursuant to this Permit.

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 or to divert runoff away from waters of the state at sites where alum residuals are 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 establish a blending area to perform blending in a designated work area separate from the intended beneficial use location in order to import and dry the alum residuals, and mix with soil prior to beneficial use and prior to final placement and shall provide prior notice on a plan view drawing to the Director of the designated blending area.
 9. The Permittee shall store, blend, and beneficially use alum residuals 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 material, remediate the site, or to 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 surface water run-on and run-off, and protection of ground 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. The Permittee shall not cause pollution or cause to be placed any alum residuals that have been or are intended to be used in a soil blend in a location where they cause 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.

13. The Permittee shall furnish to the Director, within 10 days of receiving a written request, any records that the Ohio EPA requests to determine whether cause exists for revoking coverage under or determining compliance with this Permit. Additional information requested by Ohio EPA shall be submitted within 10 days of receipt of Ohio EPA's request or such other time period authorized by Ohio EPA.
14. 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.
15. 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.