



Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

April 22, 2021

Eric Buschur
Buckeye Fibers, LLC
1588 Cranberry Rd.
St. Henry, Ohio 45883

Re: Buckeye Fibers, LLC
Permit - Short Term
Approval
Beneficial Use
Mercer County
BENU022824

Buckeye Fibers, LLC
Exemption
Approval
Beneficial Use
Mercer County
BENU022824

**Subject: Buckeye Fibers, LLC
LAMP Permit Approval and Exemption
Paper Sludge from Wausau Paper**

Effective Date: April 22 2021

Expiration Date: September 5, 2023

The Ohio Environmental Protection Agency ("Ohio EPA") has reviewed the request to amend the September 5, 2018 land application management plan permit ("LAMP Permit") issued to Buckeye Fibers, LLC ("Buckeye Fibers"). The September 5, 2018 LAMP Permit authorizes the land application of paper sludge from the Wausau Paper facility in Middletown, Ohio to agricultural fields for agronomic benefit. This LAMP Permit is issued to amend and supersede the September 5, 2018 LAMP Permit, to authorize not only the land application of the paper sludge, but to also allow the land application of paper sludge mixed with mycelium produced by Tate and Lyle PLC., located at 5600 Brentlinger Drive, Dayton, Ohio 45414.

Paper sludge is a source of organic matter and calcium. Mycelium is a feed ingredient derived from fungi. Mycelium is the vegetative part of a fungus or fungus-like bacterial colony and is generated during the production of citric acid. Buckeye Fibers intends to add mycelium to the paper sludge to improve the Carbon/Nitrogen ratio.

This LAMP Permit, issued pursuant to Chapters 3734 and 6111 of the Ohio Revised Code ("ORC"), authorizes Buckeye Fibers to land apply up to 200 tons of paper sludge or paper sludge mixture per acre per year, onto agricultural fields for agronomic benefit. The Director of Ohio EPA

(“Director”) has determined that amending the September 5, 2018 LAMP Permit is unlikely to adversely affect public health or safety or the environment. Therefore, pursuant to ORC Section 3734.02(G), the Director hereby exempts Buckeye Fibers from the licensing, permitting, and state solid waste disposal fee provisions of ORC Chapter 3734 and the rules adopted thereunder, specific to the land application of paper sludge and paper sludge mixture authorized by and in compliance with this LAMP Permit. Pursuant to the authority of the Director under ORC Chapters 3734 and 6111, this LAMP Permit for Buckeye Fibers is approved subject to compliance with all conditions below.

CONDITIONS

1. For purposes of this LAMP Permit “paper sludge mixture” means a combination of paper sludge from the Wausau Paper facility in Middletown, Ohio and mycelium produced by Tate and Lyle PLC, that does not exceed fifty percent (50%) mycelium by volume.
2. This LAMP Permit authorizes Buckeye Fibers to land apply for agronomic benefit only paper sludge and paper sludge mixture that are managed and applied in accordance with this LAMP Permit. This authorization shall not be construed to authorize any other use of paper sludge or paper sludge mixture.
3. Application of paper sludge and paper sludge mixture under this LAMP Permit shall not exceed either of the following:
 - a. No more than 50 wet tons of paper sludge or paper sludge mixture may be applied per acre in a single application; and
 - b. No more than 200 wet tons of paper sludge or paper sludge mixture may be applied per acre each year.
4. Buckeye Fibers shall ensure that all paper sludge and paper sludge mixture is incorporated into the soil prior to each additional land application of paper sludge or paper sludge mixture.
5. Only paper sludge and paper sludge mixture that are not a hazardous waste as defined by ORC Chapter 3734, Ohio Administrative Code (OAC) Rule 3745-50-10(A), and OAC Rule 3745-51-03, are eligible for land application under this LAMP Permit. All other paper sludge and paper sludge mixture land applications must be separately approved by Ohio EPA. Analysis submitted to Ohio EPA by Buckeye Fibers on September 6, 2017, demonstrated the paper sludge authorized for land application pursuant to this LAMP Permit is not a hazardous waste.
6. Buckeye Fibers shall provide a copy of this LAMP Permit to each recipient of any paper sludge or paper sludge mixture intended for land application.
7. Prior to land application of paper sludge or paper sludge mixture pursuant to this LAMP Permit, Buckeye Fibers shall obtain written consent from the property owner and provide a copy of this written consent to Ohio EPA upon request.
8. Paper sludge and mycelium are solid wastes and Buckeye Fibers would be required to obtain a permit and license under ORC Chapter 3734 and the rules promulgated thereunder to permanently place paper sludge or paper sludge mixture upon the land. The

Director has determined that granting an exemption from the licensing, permitting, and state solid waste disposal fee provisions of ORC Chapter 3734 and the rules promulgated thereunder when paper sludge or paper sludge mixture is land applied in the quantities and under the circumstances specifically authorized in this LAMP Permit is unlikely to adversely affect public health or safety or the environment.

9. Pursuant to ORC Section 3734.02(G) and OAC Rule 3745-27-03(B), Buckeye Fibers is hereby exempted from the licensing, permitting, and state solid waste disposal fee provisions of ORC Chapter 3734 and the rules adopted thereunder when the paper sludge, mycelium, and paper sludge mixture are stored and land applied as authorized in this LAMP Permit subject to compliance with all conditions in this LAMP Permit.
10. The paper sludge and paper sludge mixture shall be land applied only in accordance with the conditions of this LAMP Permit. Approval of this LAMP Permit does not constitute an assurance that use of paper sludge or paper sludge mixture in accordance with this LAMP permit will be in compliance with all Ohio laws and regulations.
11. Buckeye Fibers is responsible for identifying and obtaining any additional authorizations necessary to land apply paper sludge or paper sludge mixture as described in this LAMP Permit. Except for the applicable solid waste provisions of ORC Chapter 3734 and rules adopted thereunder specifically exempted by this LAMP Permit, issuance of this LAMP Permit to Buckeye Fibers neither relieves Buckeye Fibers of the duty to comply with nor authorizes Buckeye Fibers to conduct activities in violation of any applicable federal, state, or local laws, ordinances, or 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.
12. Buckeye Fibers shall collect and analyze at least one composite sample per year of the paper sludge intended for land application. Buckeye Fibers shall collect and analyze an additional composite sample if a “material change”, as that term is defined in OAC Rule 3745-599-02(M)(2), in the paper sludge is discovered. Buckeye Fibers shall representatively sample and analyze the paper sludge samples as follows:
 - a. The paper sludge samples collected shall be representative of the paper sludge land applied;
 - b. Each composite sample of paper sludge shall be collected by taking a minimum of two discrete samples of paper sludge and compositing the discrete samples into one composite sample for analysis;
 - c. Each sample shall be analyzed for total metals, as described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*¹, for the constituents listed in Table 1 and any additional constituents that Ohio EPA has identified in writing to Buckeye Fibers as requiring testing;

¹ EPA publication SW-846, “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846),” as amended through July 2016.

- d. The reported detection limit for the sample analysis shall be less than the limit specified for each constituent in Table 1 and additional constituents that Ohio EPA has identified in writing to Buckeye Fibers as requiring testing;
- e. One composite sample of paper sludge shall be analyzed for the Resource Conservation and Recovery Act heavy metals (RCRA 8 metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) for leaching potential using the Toxicity Characteristic Leaching Procedure (TCLP) Method 1311 as described in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, to demonstrate that the paper sludge is not a hazardous waste as defined in ORC Section 3734.01, OAC Rule 3745-50-10(A), OAC Chapter 3745-51-03.

Table 1: Constituent Limits

Constituents²	Totals Analysis (mg/kg)
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	11
Nickel	420
Selenium	100
Zinc	2,800

- 13. Buckeye Fibers shall not make available or distribute for land application or use as an ingredient in paper sludge mixture any paper sludge that contains constituents at levels that exceed any of the constituent concentration limits specified in Table 1 of this LAMP Permit or any constituent concentration limit for any additional constituent that Ohio EPA has identified to Buckeye Fibers, in writing, as requiring testing. Analysis submitted to Ohio EPA by Buckeye Fibers on September 6, 2017, demonstrated no constituents in the sample analyzed exceeded the Table 1 limits.
- 14. The following records shall be maintained by Buckeye Fibers for a minimum of 5 years after the land application of paper sludge or paper sludge mixture pursuant to this LAMP Permit, and shall be made available to Ohio EPA upon request:
 - a. Records of the annual volume of paper sludge and paper sludge mixture that are land applied;
 - b. Records of the recipient(s) and the location(s) where Buckeye Fibers' paper sludge, mycelium, and paper sludge mixture were stored or placed on the

² Limit for Mercury is from US EPA Regional Screening Levels; Residential Soil. Those for Arsenic, Cadmium, Copper, Lead, Nickel, Selenium and Zinc are US EPA 40 Code of Federal Regulations Part 503 Pollutant Concentrations (Table 3 of 503.13)

land and the volume of paper sludge and paper sludge mixture provided by Buckeye Fibers to each recipient;

- c. All laboratory reports of all sampling results and analyses of the paper sludge;
 - d. Documentation demonstrating that the paper sludge is not a hazardous waste as defined by ORC Section 3734.01, OAC Rule 3745-50-10(A), and OAC Rule 3745-51-03.
 - e. Written consent from the owner of the property where paper sludge or paper sludge mixture is to be land applied.
15. Not later than January 31st of each year, Buckeye Fibers shall submit an annual report identifying the material characterization and the land application activities involving the paper sludge and paper sludge mixture for the previous calendar year. At a minimum, the annual report shall include the volume of paper sludge and paper sludge mixture stored and land applied, and the analytical results for the most recent year's material characterization.
 16. In the annual report, Buckeye Fibers shall include the following annual certification statement. The certification statement shall be printed out and signed beginning one year after the effective date of this approval and annually thereafter:

"I certify, under penalty of law, that the information contained in this annual report that will be used to determine compliance with the requirements contained in Chapter 6111 of the ORC, and all rules thereunder, for the period beginning (insert date of last certification statement) and ending (insert current certification statement date) was prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."
 17. For the first certification statement, insert the initial effective date of this LAMP Permit as the beginning date for the certified period. The certification statement shall be signed by one of the following persons: In the case of a corporation, by a principal executive officer of at least the level of vice president or the principal executive officer's duly authorized representative, if such representative is responsible for the overall operation of the facility. In the case of a partnership, by a general partner. In the case of a sole proprietorship, by the proprietor. The signature shall constitute personal affirmation that all statements or assertions of fact in the records are true and complete and comply fully with applicable state requirements and shall subject the signatory to liability under ORC Section 2921.13.
 18. Buckeye Fibers shall submit the annual report to one of the following addresses:

For digital submittals, submit files to the Division of Materials and Waste Management's virtual dropbox:

https://fileshare.epa.ohio.gov/filedrop/co_dmwm_submittals

or

For mailings, use the post office box number:

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

or

For deliveries to the building:

Ohio Environmental Protection Agency
Lazarus Government Center
Division of Materials and Waste Management
Attn: Beneficial Use Unit
50 West Town Street
Columbus, Ohio 43215

19. Buckeye Fibers shall use Best Management Practices when storing paper sludge, mycelium, and paper sludge mixture and when land applying paper sludge and paper sludge mixture. The Best Management Practices shall include, at a minimum, the following:
- a. Storage of paper sludge, mycelium, and paper sludge mixture shall be at least 300 feet from occupied buildings unless a reduction in this distance for storage is approved, in writing, by both the land owner and, if applicable, the resident of the occupied building;
 - b. Storage of paper sludge, mycelium, and paper sludge mixture and land application of paper sludge and paper sludge mixture shall be at least 300 feet from wells and surface waters used for drinking water or watering livestock;
 - c. Storage of paper sludge, mycelium, and paper sludge mixture and land application of paper sludge and paper sludge mixture shall be at least 100 feet from other surface waters of the state as defined in ORC Section 6111.01(H);
 - d. Unless otherwise provided in a permit issued under ORC Chapter 6111, creation of surface water diversions to catch any solids in runoff and to divert runoff away from waters of the state at each site where paper sludge, mycelium, or paper sludge mixture are stored prior to land application;
 - e. Taking measures to control fugitive dust and other air emissions that may result from activities authorized through this LAMP Permit.
 - f. Storage of paper sludge, mycelium, and paper sludge mixture shall not be over or within 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 clayey glacial till between the bottom of the paper sludge, mycelium, or paper sludge mixture and the ground water;
 - 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 paper sludge, mycelium, or paper sludge mixture and the ground water.
 - g. Buckeye Fibers shall not apply paper sludge or paper sludge mixture onto frozen ground or snow-covered ground.
 - h. Buckeye Fibers shall not apply paper sludge or paper sludge mixture during precipitation events or when there is a fifty percent chance of a 0.5 inch rain in the next twenty-four hours.
20. Buckeye Fibers shall store paper sludge, mycelium, and paper sludge mixture and land apply paper sludge and paper sludge mixture only in a manner that neither creates a nuisance nor adversely affects public health or safety or the environment. The Director may revoke this Permit if the Director determines that a nuisance condition or a threat to human health, safety, or the environment exists. Immediately upon the effective date of any written notification from the Director of revocation of this Permit, Buckeye Fibers shall cease land application under this LAMP Permit. The Director may require Buckeye Fibers to remove the material, remediate the site, or to take other action as appropriate to eliminate the nuisance or threat.
21. Buckeye Fibers 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 groundwater and surface water.
22. Nothing in this LAMP Permit shall be construed as a waiver from the requirements of ORC Chapter 6111 or the regulations promulgated thereunder, except as expressly provided herein. This LAMP Permit shall not be interpreted to release the Buckeye Fibers from responsibility under ORC Chapters 3704 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.
23. Buckeye Fibers shall not cause pollution or place or cause to be placed any paper sludge, mycelium, or paper sludge mixture where it causes pollution to any waters of the state,

except in accordance with an effective National Pollutant Discharge Elimination System permit. Any unauthorized discharge to waters of the state shall be reported to Ohio EPA within twenty-four hours of discovery.

24. Buckeye Fibers shall provide written notice to the Director within seven days of discovering noncompliance with this LAMP Permit.
25. The Director may add, delete, or change any conditions of this LAMP Permit to protect human health or safety or the environment.
26. This LAMP Permit and the authorization to land apply paper sludge and paper sludge mixture shall expire at midnight on the expiration date shown above. In order to receive authorization to land apply paper sludge and paper sludge mixture beyond the above date of expiration, Buckeye Fibers shall submit such information and forms as are required by Ohio EPA not later than 180 days prior to the above date of expiration.
27. Buckeye Fibers shall allow the Director or an authorized representative of Ohio EPA to enter upon the property where Buckeye Fibers stores or has placed paper sludge, mycelium, or paper sludge mixture, conducts other activities under this LAMP Permit, or retains records under the terms and conditions of this LAMP Permit, for the following purposes:
 - a. To inspect and copy records that must be kept under the terms and conditions of this LAMP Permit.
 - b. To collect samples, perform monitoring, 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 this LAMP Permit.
 - c. For all other purposes for which the Director or an authorized representative of Ohio EPA has rights of access or inspection authority under applicable law.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to ORC Section 3745.04. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Treasurer, State of Ohio." The Commission, in its discretion, may reduce the fee if by affidavit it is demonstrated that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
30 East Broad Street, 4th Floor
Columbus, Ohio 43215

Questions concerning this LAMP Permit should be directed to Ohio EPA's Beneficial Use Unit at (614) 644-2621.

Sincerely,



Laurie A. Stevenson
Director

LAS/PC