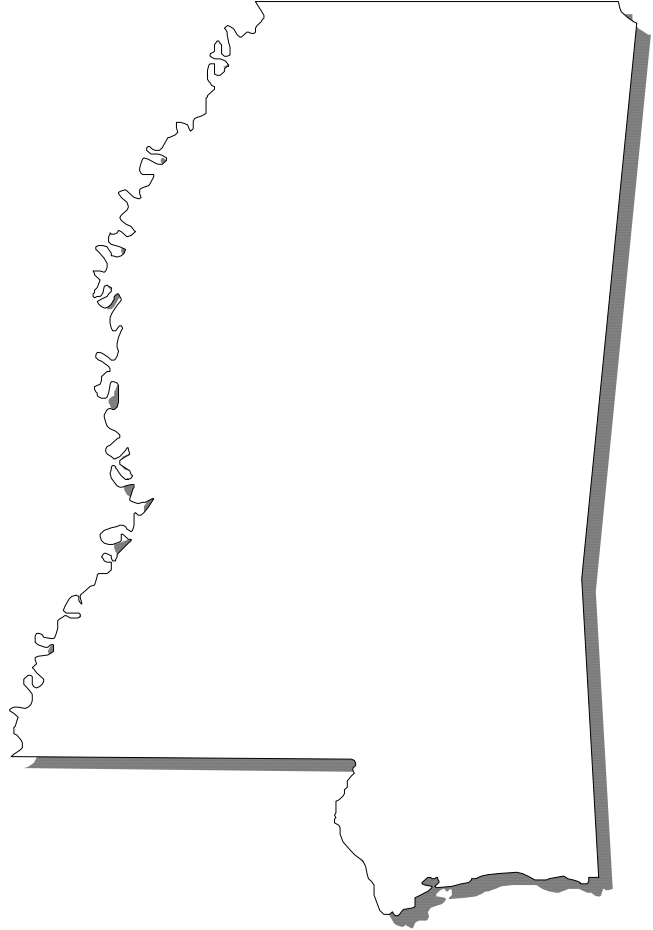


REGULATIONS FOR THE BENEFICIAL USE OF NONHAZARDOUS SOLID WASTE



STATE OF MISSISSIPPI



**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF POLLUTION CONTROL**

**P. O. Box 2261
Jackson, Mississippi 39225**

Adopted June 30, 2005

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I. General Information

A. Purpose, Scope and Applicability

1. As per Section I.B.5 of the Mississippi Nonhazardous Solid Waste Management Regulations, the Mississippi Department of Environmental Quality may make determinations that allow for the beneficial use of eligible nonhazardous solid wastes in the state.
2. These regulations shall apply to any person, organization, industry, business, agency, or institution that intends to obtain, distribute and/or use an eligible solid waste or by-product for the purposes of beneficial use in a manner for which the material was not specifically manufactured.

B. Exclusions

1. These regulations do not apply to the recovery of common residential or commercial recyclable materials such as steel, aluminum, plastic, glass, paper, cardboard, wood or other materials that are post-consumer materials or pre-consumer off-specification materials where such materials are processed and/or managed as recyclable commodities.
2. These regulations do not apply to compost materials developed in compliance with Section IX of the Mississippi Nonhazardous Waste Management Regulations.
3. These regulations do not apply to uses of solid wastes in beneficial fill activities as described in Section I.B.6 of the Mississippi Nonhazardous Waste Management Regulations.
4. Hazardous wastes are excluded from consideration for beneficial use under these regulations as defined by the Mississippi Hazardous Waste Management Regulations and Subtitle C of the Federal Resource Conservation and Recovery Act. Furthermore, solid wastes or by-products proposed for beneficial use must be nonhazardous in the post-manufactured or generated state without first modifying or treating the by-product to render it nonhazardous.

C. Definitions

The definitions provided herein are for the purposes of these requirements. All other relevant words for which no definition is provided by these requirements are used as defined by the Mississippi Nonhazardous Solid Waste Management Regulations.

“Application” means a written request to the Department for consideration of a by-product for a Beneficial Use Determination, submitted on forms provided by the Department with appropriate supporting documentation.

“Beneficial Use” means the legitimate use of a solid waste in the manufacture of a product or as a product, for construction, soil amendment or other purposes, where the solid waste replaces a natural or other resource material by its utilization.

“Beneficial Use Determination” means a written determination issued by the Mississippi Department of Environmental Quality to an applicant after review and approval of an application, to allow the legitimate beneficial use of a solid waste or by-product as a product.

“By-Product” means a solid waste material that is generated as a result of the manufacture of a primary product that, barring any form of alternate or beneficial use of that material, would otherwise be discarded at a landfill or other solid waste disposal facility.

“Department” means the Mississippi Department of Environmental Quality.

“Distributor or Supplier” means the person, organization or business engaged in the provision of a by-product to an end user.

“End user” means the person, organization or business that will utilize a by-product in a manner consistent with these regulations and with the conditions of a Beneficial Use Determination issued under these regulations.

“Generator” means the person, organization, business, industry, agency or institution whose daily activities or business results in the production of a by-product.

“Putrescible Waste” means solid wastes, which are capable of being decomposed by micro-organisms with sufficient rapidity to cause nuisances from odors or gases.

“Solid waste” means any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

“Standing Use Determination” means a Beneficial Use Determination approved by the Department for a specific by-product/use combination or for a category of by-product/use combinations that are contained or conducted in such a manner that does not offer potential for adverse environmental or public health impacts. Uses with standing determinations do not require a use specific application nor review and approval by the Department under these regulations.

II. Procedures for Beneficial Use Determinations

A. Eligibility Requirements

1. Solid wastes or by-products may be eligible for consideration for a Beneficial Use Determination from the Department where such materials meet the following requirements:
 - a. The material, proposed for beneficial use, must be a “by-product” as defined in Section I.C of these regulations.
 - b. The solid waste or by-product proposed for beneficial use must be adequately characterized to confirm that the proposed use is adequately protective of the environment and human health and that the by-product possesses physical and/or chemical properties which make the material suitable for the intended use.
 - c. The solid waste or by-product, proposed for beneficial use, must not be a putrescible waste as defined in Section I.C or have other similar characteristics for potential nuisance.
2. The proposed beneficial use must conform to the following use specific standards to be eligible for consideration for a Beneficial Use Determination from the Department.
 - a. Unless otherwise approved by the Department, a proposed beneficial use must employ a by-product in such manner that the by-product serves as a suitable replacement for a raw material or other feedstock and, through its use, provides a benefit comparable to the material it is proposed to replace.
 - b. The beneficial use must not solely serve the purpose of discarding or disposing of the material, as determined by the Department.
 - c. A proposed beneficial use of a by-product must have a demonstrated use and/or market. For unproven uses, a demonstration project or effort may be considered and approved by the Department to verify the legitimacy of the intended beneficial use. Applications that propose speculative accumulation of a by-product for unproven uses or for uses with no currently available market or end use shall not be approved by the Department.

B. Application Procedures

1. An application for a Beneficial Use Determination must be submitted to the Department for review and consideration, on forms provided by the Department, prior to implementation of the intended use for any intended beneficial use of an eligible by-product, except for Category I determined uses described in Section III.A of these Regulations.

2. An application for a Beneficial Use Determination may be submitted to the Department by the generator, distributor or supplier, or end user of a by-product, as appropriate. Applications submitted by persons other than the generator must be accompanied by written consent for the proposed use from the generator or other owner of the material.
3. Upon the review and conclusion that an application is consistent with these regulations, the Department shall issue a Beneficial Use Determination to the applicant. At such time, one or more of the following conditions shall apply:
 - a. By-products approved for beneficial use shall be considered a solid waste and subject to the transportation and storage conditions of Section V of the Mississippi Nonhazardous Solid Waste Management Regulations until the moment that the by-product is utilized and/or packaged for use as stipulated in the Beneficial Use Determination.
 - b. Upon utilization of the material, a by-product for which a Beneficial Use Determination has been issued shall no longer be subject to the Mississippi Nonhazardous Solid Waste Management Regulations, provided the by-product is utilized in a manner consistent with the terms and conditions of the Beneficial Use Determination.
 - c. The placement, dumping or other use of a by-product in a manner inconsistent with the Beneficial Use Determination may be considered as unauthorized dumping under the Mississippi Solid Waste Law and the responsible party may be subject to enforcement actions by the Department.
 - d. Beneficial Use Determinations issued by the Department are only valid for uses conducted within the state of Mississippi.
 - e. The issuance of a Beneficial Use Determination does not exempt the generator, supplier, end user and/or the registrant from compliance with applicable water quality and air quality regulations when managing or beneficially using a by-product under these regulations.
 - f. Should the beneficial use of a by-product result in conditions that create environmental or public health problems, the generator, distributor or supplier, or end user of the material may share responsibility for needed corrective actions.
4. For applications that are found to be inconsistent with these regulations by the Department, the following conditions shall apply:
 - a. The Department shall notify the applicant in writing of the denial; and
 - b. By-products for which a Beneficial Use Determination is denied by the Department are considered solid wastes and shall remain subject to the Mississippi Nonhazardous Solid Waste Management Regulations.

5. A Beneficial Use Determination issued by the Department should not be considered to be an endorsement of the approved use or an endorsement of that by-product and should not be construed as such. Nor should such a determination be considered protection from liability and responsibility created under other applicable laws and regulations. The Department reserves the authority to modify, terminate or rescind any Beneficial Use Determination authorized under these regulations for just cause.
6. Applicants may appeal the denial or the conditions of a Beneficial Use Determination to the Mississippi Commission on Environmental Quality within thirty (30) days of notification of the action. Such appeal shall be made in a manner consistent with Section 49-17-29 (4.b) of the Mississippi Code, Annotated.

III. Beneficial Use Categories

A. Category I uses are uses that have a Standing Use Determination that has been approved by the Department. Category I uses must fulfill the following conditions:

1. Category I uses must be consistent with one of the following Standing Use Determinations approved by the Department:
 - a. Uses of uncontaminated and untreated wood, wood chips, bark, or sawdust where such materials are used as mulch, landscaping, animal bedding, wood fuel production, bulking agents or additives at a permitted composting facility, or other directly comparable uses.
 - b. Rubbish that is legitimately used, reused, recycled or reclaimed, except for rubbish wastes which is composted or which, due to its chemical or physical constituency, would result in an endangerment to the environment or the public wealth, safety, or welfare.
 - c. Uses consistent with and approved under the conditions of the Mississippi Waste Tire Management Regulations as they pertain to the beneficial use of waste tires or waste tire derived materials;
 - d. Contained uses in a regulated environmental system that the Department regulates through an existing permit, order, or regulation. Such uses may include stabilization or solidification of a solid waste for ultimate disposal in a municipal solid waste landfill, alternate cover uses in a municipal solid waste landfill or other type disposal facility, construction uses within a lined landfill cell and other similar uses as determined by the Department;
 - e. Uses in which a by-product is utilized as a contained and/or encapsulated additive in the manufacture of a product; or
 - f. Other uses which have been sufficiently demonstrated by the owner, distributor or supplier or user and subsequently approved by the Department for a Standing Use Determination.
2. The by-product must satisfy Section II.A of these regulations regarding eligibility requirements.
3. For Category I uses, the generator/distributor shall be exempt from the requirements of Sections II.B and IV of these regulations.

B. Category II uses are uses in which the by-product is utilized in engineered construction or other civil engineering uses. Category II determined uses must fulfill the following conditions:

1. The by-product must satisfy Section II.A of these regulations regarding eligibility requirements.
2. An applicant must comply with Section II.B of these regulations for the Department's consideration of a proposed beneficial use.
3. By-Product Characterization - A by-product must be adequately characterized to ensure that the use of the material does not cause environmental or public health problems. At a minimum, the characterization must include a demonstration of the following:
 - a. The applicant must conduct an appropriate analysis of the by-product that identifies the primary chemical constituents and demonstrates the physical characteristics of the material and must submit that analytical data with the application for beneficial use.
 - b. The by-product should not contain constituents that exceed the Beneficial Use Characteristic Standard of Table A in Appendix 1 for the following metals: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver. Where a constituent(s) in the by-product exceeds a Table A standard, the constituent(s) should be analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) to confirm that the material does not exceed the leachability standards of Table B in Appendix 1. The Department may consider the use of an alternate leaching test, upon the written request and demonstration by the applicant that the alternate test provides a comparable and appropriate analysis for the use proposed.
 - c. The Department may establish additional constituent standards for a by-product or may require that the applicant conduct an appropriate risk assessment of the by-product, depending upon the process generating the by-product. In such cases, the additional constituents must be analyzed and reported to the Department.
 - d. Where a by-product does not meet an established beneficial use standard as described in Sections B.3.b and B.3.c, the applicant may propose an alternate demonstration to the Department of the suitability of the by-product, based on an appropriate contaminant risk assessment of the material.
4. The registrant of the by-product must have the certification of a professional engineer licensed in the State of Mississippi that the by-product has physical or chemical properties suitable for the proposed construction or civil engineering use. Where ASTM standards or other recognized standards exist relating to the proposed use, the by-product must comply with those standards.
5. Where appropriate, the Department may adopt written best management practices for more common construction or civil engineering uses of by-products in the state. Upon the development of such best management practices, the registrant must provide a written copy to the end user or users at the point of sale or distribution of the by-product.

- C. Category III determined uses are uses in which the by-product is utilized as a soil amendment, soil amendment additive, or direct application to the land. Category III determined uses must fulfill the following conditions:
1. The by-product must satisfy Section II.A of these regulations regarding eligibility requirements.
 2. An applicant must comply with Section II.B of these regulations for the Department's consideration of a proposed beneficial use.
 3. By-Product Characterization – A by-product must be adequately characterized to ensure that the proposed use of the material does not cause environmental or public health problems. At a minimum, the characterization must include a demonstration of the following:
 - a. The applicant must conduct an appropriate analysis of the by-product that identifies the primary chemical constituents and demonstrates the physical characteristics of the material and must submit that analytical data with the application for beneficial use.
 - b. The by-product should not contain constituents that exceed the Beneficial Use Characteristic Standard of Table A in Appendix 1 for the following metals: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver. Where a constituent(s) in the by-product exceeds a Table A standard, the constituent(s) should be analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) to confirm that the material does not exceed the leachability standards of Table B in Appendix 1. The Department may consider the use of an alternate leaching test, upon the written request and demonstration by the applicant that the alternate test provides a comparable and appropriate analysis for the use proposed.
 - c. The pollutant concentrations of a by-product proposed for Category III determined uses should not exceed the secondary soil amendment constituent standards in Appendix 2.
 - d. The Department may establish additional constituent standards for a by-product or may require that the applicant conduct an appropriate risk assessment of the by-product, depending upon the process generating the by-product. In such cases, the additional constituents must be analyzed and reported to the Department.
 - e. Where a by-product does not meet an established beneficial use standard as described in Sections C.3.b and C.3.c, the applicant may propose an alternate demonstration to the Department of the suitability of the by-product, based on an appropriate contaminant risk assessment of the material.
 4. A supplier or distributor must advise end users of the by-product in writing of the acceptable agronomic rate of application and agronomic practices for use of the by-product. Where appropriate, the Department may adopt written best management

practices for more common soil amendment uses of by-products in the state. Upon the development of such best management practices, the registrant must provide a written copy to the end user or users at the point of sale or distribution of the by-product.

5. Prior to a Category III use of the by-product, the applicant must apply for and obtain proper certification from the Mississippi Department of Agriculture and Commerce (MDAC) for the use of the proposed material as a soil amendment, where applicable.

D. Category IV determined uses are all other miscellaneous uses that do not fall into one of the preceding categories. Such uses must fulfill the following conditions:

1. The by-product must satisfy Section II.A of these regulations regarding eligibility requirements.
2. An applicant must comply with Section II.B of these regulations for the Department's consideration of a proposed beneficial use.
3. Based upon the conditions of the proposed use, the Department may require that the applicant comply with part or all of the conditions in Sections III.B or III.C of these regulations.

IV. Reporting Requirements

Beneficial Use Determinations issued under Sections III.B, III.C and III.D of these regulations are subject to annual reporting requirements, unless otherwise determined by the Department. Such reporting requirements are as follows:

- A. The registrant to whom a beneficial use determination was issued shall be required to submit an annual report to the Department, unless otherwise stated. All annual reports shall be submitted to the Department no later than February 28 of each year, for activity conducted during the previous calendar year. At a minimum, the report must contain the following information:
 - 1. The approximate quantity of the by-product used and/or distributed for use during the previous calendar year for the approved use(s);
 - 2. An appropriate physical and chemical characterization of the approved by-product. If the process generating the by-product has not changed, a signed certification from the generator or other party approved by the Department stating that the physical and chemical characteristics of the by-product are consistent with the information submitted in the approved application may be submitted in lieu of additional testing;
 - 3. Any other information specified as a reporting condition of the Beneficial Use Determination; and
 - 4. Registrants that have been issued multiple Beneficial Use Determinations for a by-product may submit one composite report for the information described in Section IV.A. The composite report must distinguish the information for each determined use.
- B. In addition to the requirements of IV.A, Registrants issued a Beneficial Use Determination under Section III.C of these regulations shall also submit a copy of the original or the renewed product certification, where applicable, from the Mississippi Department of Agriculture and Commerce (MDAC). The copy of the original or renewed product certification shall be submitted within 21 days of receipt of the certificate from the MDAC.

Beneficial Use Characteristic Standards

Appendix 1

Table A.

Total Metals Thresholds

Contaminant	Regulatory Level (mg/kg)
Arsenic	10.0
Barium	200.0
Cadmium	2.0
Chromium	10.0
Lead	10.0
Mercury	0.4
Selenium	2.0
Silver	10.0

Table B.

Leaching Procedure Thresholds

Contaminant	Regulatory Level (mg/L)
Arsenic	0.5
Barium	10.0
Cadmium	0.1
Chromium	0.5
Lead	0.5
Mercury	0.02
Selenium	0.1
Silver	0.5

Appendix 2

Secondary Soil Amendment Thresholds*

Pollutant	Pollutant Concentration (mg/kg)
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Molybdenum	18
Nickel	420
Selenium	36
Zinc	2800

* Table 3, 40 CFR Part 503.13