

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF POLLUTION CONTROL
NONHAZARDOUS WASTE BRANCH
P. O. BOX 2261
JACKSON, MISSISSIPPI 39225-2261**

APPLICATION FOR AN INDIVIDUAL PERMIT TO OPERATE A COMPOSTING FACILITY WHICH WILL COMPOST HOUSEHOLD GARBAGE AND/OR WASTEWATER SLUDGE OR OTHER SOLID WASTES, AS APPROVED BY THE DEPARTMENT

Part 1. General Data

1. Name of facility: _____

2. Name, address and telephone number of applicant:

(Name)

(Street address, P.O. Box, etc.)

(City) (State) (Zip)

Telephone number: _____

3. Name, address, and telephone number of contract operator (if not applicable, so indicate):

(Name)

(Street address, P.O. Box, etc.)

(City) (State) (Zip)

Telephone number: _____

4. Name, address, and telephone number of the landowner (if same as applicant, so indicate):

(Name)

(Street address, P.O. Box, etc.)

(City) (State) (Zip)

Telephone number: _____

5. Attach a complete copy of the land deed, certified by the county clerk.
6. When the applicant intends to lease rather than own the land on which the facility is located, a notarized statement signed by the owner of the land which acknowledges and concurs in the use of this property as a compost facility shall be attached to the application. (See Attachment A for form).
7. If the applicant or the contract operator (for commercial facilities only) is not a public agency, disclosure information must be included with the application, as required by Section 17-17-501 et seq., Mississippi Code of 1972. The disclosure statement must be submitted on forms supplied by the Department.

Part 2. Property Information and Maps

8. The proposed facility will be located in _____ County.
9. The total property consists of _____ acres and lies in the following topographic sections:

<u>Section</u>	<u>Township</u>	<u>Range</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

10. The actual area for the composting and storage operation (excluding buffer zones and other unused areas) consists of _____ acres.
11. Attach a United States Geological Survey (USGS) topographic quadrangle map of the area which outlines the property boundaries of the site and the approximate composting area within the property boundary. The map may be a high quality photocopy.
12. Attach a site map, drawn to scale, showing the property boundaries, composting area, buffer distances to the property lines, waste unloading area, roads, storage areas for waste, compost, residuals, and other physical characteristics of the site.

Is the buffer zone to the property line less than 200 feet on any side? yes no

If yes, attach a documentation of compliance with Section III.T. of the state regulations.

13. Attach a property owners map indicating the immediately adjacent landowners to the site and a list of the complete names and addresses of these landowners.

Part 3. Local Government Regulation/Solid Waste Management Plans

14. Attach a letter from the appropriate County or City official confirming that the siting of the proposed facility will be in conformance with all local laws, regulations, and ordinances, or that no such laws, regulations, or ordinances are applicable.
15. The proposed facility must be consistent with the approved local solid waste management plan, as submitted to the Department by the local solid waste management authority. Attach a copy of the page(s) of the plan which recognizes the operation of this facility. The Department should be contacted prior to addressing this item.

Part 4. Demonstration of Need

Section 17-17-229, Mississippi Code Annotated, requires each permit application to contain a demonstration of need which shall include the items *in italics* below. This may be achieved by answering questions in items 16 - 18 below:

16. *Verification that the facility for which the permit is sought meets the twenty-year capacity needs identified in the county or regional nonhazardous solid waste management plan which shall take into account the quantities of municipal solid waste generated and the design capacities of existing facilities.*

If the proposed facility is included in and consistent with the local solid waste management plan, then the facility meets the twenty-year capacity needs. Is the proposed facility included in and consistent with the local solid waste management plan? yes no. If not, provide explanations on an attached sheet.

17. *Demonstration that the host jurisdiction and the jurisdiction generating the solid waste destined for the applicant's facility are actively involved in, and have a strategy for meeting the statewide waste minimization goal.*

Certification that the proposed service area of the facility is consistent with a local nonhazardous solid waste management plan.

Every approved local solid waste management plan has an approved waste minimization strategy included in the plan. If the jurisdiction (excluding out-of state jurisdictions) generating the solid waste destined for the facility (the proposed service area) has an approved local solid waste management plan, the first requirement above is met. The service area for the proposed facility must be consistent with the service area as specified in the approved local solid waste management plan for this facility. List below the service area of

the facility (by city, county and/or state):

18. *The extent to which the proposed facility is needed to replace other facilities.*

Many of the state's landfills were forced to close in 1993 and 1994 due to the Subtitle D regulations. Disposal at the remaining landfills became more expensive and in most cases, involved a long haul out of the county. As a result, it has become economically and environmentally advantageous to find alternate or supplemental disposal/management methods for solid waste and rubbish waste. Is this situation representative for your facility? yes no. If not, provide on an attached sheet a description of the extent to which the proposed facility is needed to replace other facilities.

Part 5. Plan of Operation

19. Attach a list of the type, description, and characteristics of the wastes to be composted, and an estimate of the quantities (in tons/day) of wastes expected to be managed at the proposed facility.
20. Attach a list of the anticipated sources of the wastes.
21. Include a description and estimated quantities of any bulking agents that would be mixed with the proposed waste stream for composting.
22. a. Attach engineering drawings and specifications, showing the boundaries of the property and composting area, buffer distances to the property lines, waste unloading area, receiving area, composting area, curing area, roads, storage areas for waste, compost and residuals and other physical characteristics of the site. In addition, engineering detail drawings should be provided for the composting operation, surface water control features and storage areas.
- b. Include engineering detail drawings (plan and profile) of the structures for the proposed composting facility to include construction type (metal, wood, etc.), any open side, and maximum storage capacity.
23. Attach a plan of operation, at a minimum, to include the following items:
- a. A list of the individual(s) responsible for making the decisions critical to the composting process such as turning, wetting, screening, etc. They should have knowledge of the biological process at work and the expertise and the knowledge capable of operating the facility in compliance with state regulations and requirements.

- b. Plans for prohibiting unauthorized wastes from entering the facility. The placement of a waste receptacle shall normally be required for the disposal of unauthorized wastes.
- c. A narrative description of the operation from the point of waste unloading, through all steps of the composting operation, to the point of compost distribution. The plan must show that all waste delivered to the facility will be confined to a designated delivery or receiving area, processed within 72 hours or removed and be disposed of at another appropriate facility. The receiving area and the composting area must be covered with a roof capable of preventing rainfall from directly contacting the waste or compost. Final curing areas are not required to be roofed.
- d. Plan for fire prevention and actions to be taken in the event of an accidental fire.
- e. A description of the site security and monitoring provisions at the site (e.g., gates, perimeter fences, enclosed buildings, etc.). The plan must indicate that an attendant will be onsite at all times access to the site is unsecured.
- f. Plan for odor prevention.
- g. A description of the type of residuals and recyclables expected to be generated and how each will be stored and managed.
- h. A description of surface water control features, including run-on, run-off, leachate control systems and measures to prevent any washing or escape of waste from the property. Washdown water, leachate and any other contaminated water generated in the facility other than domestic wastewater shall be directed to sumps for use within the process. No discharge of contaminated water shall occur unless specifically allowed by the issuance of a wastewater permit.
- i. Plans for installation of a sign to identify the site.
- j. The design and performance specifications of the principal components of the facility, such as shredders, separating equipment, aeration devices, screens, composting pads, curing areas, leachate recirculation systems, etc.
- k. Procedures for obtaining weight or volume measurements of waste entering the facility, any waste quantities removed as being unacceptable, quantities and qualities of compost produced, and quantities removed from the facility. Also provide discussion of record keeping.
- l. An estimate of the maximum storage capacity for all areas where waste, compost, residuals and recyclables will be stored. Also provide maximum length of storage for recyclables and residuals.

- m. A description of the composting method (windrow method, aerated static pile method, or in-vessel method) to be utilized, including estimated retention times, frequency of turning, pile height (if applicable), temperatures to be achieved and frequency of aeration.
- n. A discussion on methods and frequency of monitoring C:N ratio, % moisture and bulk density.
- o. A description of the proposed disposition of the compost.
- p. A contingency plan for disposing or managing the waste in the event of any necessary shutdown or other incident which would cause the waste, residuals or recyclables to be stored beyond the durations allowed by sections IX.E.2.b. and IX.E.2.d. of the State of Mississippi Nonhazardous Waste Management Regulations.
- q. Plans for testing, monitoring, recording and reporting, in accordance with section IX.E.3. of the State of Mississippi Nonhazardous Waste Management Regulations.
- r. Specifications for site preparation must be included in the engineering design report developed for the site, such as clearing and grubbing, berm construction, drainage control structures, access roads, screening, fencing, etc.

Part 6. Siting Requirements for All Composting Facilities

24. Is the proposed composting facility located within the 100 year floodplain?

yes no

If yes, attach a demonstration that the facility will not restrict the flow of the 100 year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health or the environment.

25. Attach a letter from the U.S. Army Corps of Engineers regarding the wetlands determination of the proposed facility location. If the facility is within wetlands, also attach documentation of approval for the proposed composting operation, as required by federal law.

26. For proposed facilities located in southern Hancock, Harrison or Jackson counties, attach a letter from the Mississippi Department of Marine Resources regarding the coastal wetlands determination of the proposed facility location. If the facility is within coastal wetlands, also attach documentation of approval for the proposed composting operation, as required by state law.

27. Is the facility located in an area which may result in recurring washout of waste, such as within a drainage ditch, along the banks of a drainage channel, along the banks of any surface water, or similar area?

yes no

28. Attach documentation from the U.S. Fish and Wildlife Service and/or the Mississippi Department of Wildlife, Fisheries and Parks stating that the operation of the facility in the proposed location will not affect a federally or state listed endangered or threatened species, or attach documentation that the proposed operation is in compliance with all statutes, rules and regulations within the jurisdiction of the U.S. Fish and Wildlife Service and the Mississippi Department of Wildlife, Fisheries and Parks concerning listed endangered or threatened species.
29. Attach a letter from the Mississippi Department of Archives and History regarding the impact of the siting of the proposed operation to any cultural resource listed in, or eligible for listing in, the National Register of Historic Places. If the initial determination is that a significant and adverse impact will occur, attach documentation of appropriate mitigation.
30. Compost facilities must be located in an area in which the uppermost aquifer is at least five feet below the base of the liner. The liner shall consist of either (1) adequate naturally occurring low permeability soils present immediately below the receiving, composting and curing areas to a depth of at least five feet and at least three feet laterally, or (2) a constructed liner, such as a concrete pad, as approved by the Department. Attach a natural geology information to include the following, as a minimum:

- a. Logs of soil borings conducted in the proposed composting area. The borings, report, and evaluation shall be conducted or supervised by a qualified and experienced geological consultant, geologist or engineering firm. Continuous boring shall be completed through the interval intended for use as liner material. The borings should be to a depth sufficient to characterize the five feet liner and the zone 20 feet below the base of the liner (25 feet below the top of the liner), and should be as evenly spaced as possible throughout the proposed area. The minimum number of borings shall be as specified the chart below, unless otherwise approved by the Department. Additional borings may be required for substantial sediment variation within the property. The boring logs shall be numbered, and shall include boring procedure, mean sea level elevations, depth to groundwater, and sediment classification of all soils according to the Unified Classification System (ASTM designation D-2487). The liner should be clearly marked on each boring log. A topographical base map shall also be included noting the location of each boring log.

<u>Composting area acreage</u>	<u>Minimum number of borings</u>
15 or below	5
>15 to 25	7
>25 to 35	8
>35 to 50	10
>50	by department consultation

- b. Liner permeability information. Permeability tests of the liner material shall be conducted. Samples should be taken for each varying liner material, but should generally not be less than one test per every three borings, as evenly spaced as possible. Any sampling techniques that would result in undisturbed and continual representation of liner material is acceptable. Permeability of the liner material shall be no greater than 1×10^{-7} cm/sec.

- c. A narrative description of the characteristics of the liner, based on the soil boring results. Alternatively, the liner may be constructed, as approved by the Department.
- d. Groundwater depth information. If groundwater is encountered, temporary piezometers should be installed in at least three borings with well screen set in the same stratigraphic interval. Additional piezometers will be required for sites larger than 25 acres. Readings should be taken 24 hours after installation, and groundwater depth should be carefully measured to ground surface elevations.
- e. A clear demonstration that the base of the liner is at least five feet above the uppermost aquifer within the naturally occurring soil. The demonstration should include a narrative discussion and cross-sectional diagrams showing the liner, watertable, and intended excavations.

Part 7. ADDITIONAL SITING CRITERIA FOR FACILITIES WHICH ARE NOT ADEQUATELY ENCLOSED WITHIN A WALLED AND ROOFED STRUCTURE

(Note: Applicants for facilities adequately enclosed within a walled and roofed structure may skip to Part 8 on page 10.)

31. a. Will the proposed facility be located within 10,000 feet of any airport runway end serving turbojet aircraft?

yes no

- b. Will the proposed facility be located within 5,000 feet from an airport runway end used only by piston-type aircraft?

yes no

If yes for either of the two above, attach documentation of compliance with section III.B. of the state regulations.

32. Will the proposed facility be located within 250 feet of the banks of any river, stream, lake, reservoir, or coastal water?

yes no

33. Is the proposed facility located within 0.5 mile of a national, state, county or city designated park or an outdoor recreational area, such as a golf course or swimming pool, owned by a city, county or other public agency?

yes no

If yes, attach a letter from the person responsible for managing the park or recreational area consenting to a smaller setback distance.

34. Is the proposed facility located within national forest land, a national wilderness area, or national wildlife refuge area, as designated by the appropriate federal agency?

yes no

If yes, attach written consent for the proposed operation from the agency responsible for managing such area.

35. Is the proposed facility located within a state wildlife management area, state game management area, or state natural area, as designated by the Mississippi Department of Wildlife, Fisheries and Parks?

yes no

If yes, attach written consent for the proposed operation from the agency responsible for managing such area.

36. Is the proposed facility located within 0.5 mile of any licensed school, licensed day-care center, licensed hospital, or licensed nursing home, or within 1000 feet of any church?

yes no

The Permit Board may allow a smaller setback distance if a written agreement is obtained from the owner or appropriate representative stating that a smaller setback is acceptable.

Part 8. Additional Requirements Facilities Which Will Compost Municipal Wastewater Sludges

(Note: Applicants for facilities composting wastes other than municipal wastewater sludges may skip to Part 9 on page 10.)

37. Will the final compost be distributed (*i.e.*, sold or given away in a bag or other container)?

yes no

If not, please indicate on an attached sheet how the final compost will be disposed of. The Department may require the applicant to provide additional information depending on the method of ultimate disposal.

If yes, please address items 38 - 40 below.

38. Attach analysis of the final compost for the following parameters (on dry-weight basis):

- | | |
|-------------------|---------------------|
| 1. Total Arsenic | 6. Total Mercury |
| 2. Total Cadmium | 7. Total Molybdenum |
| 3. Total Chromium | 8. Total Nickel |
| 4. Total Copper | 9. Total Selenium |
| 5. Total Lead | 10. Total Zinc |

39. Attach documentation of compliance with Class A pathogen reduction requirements in the EPA sludge regulations 40 CFR 503.32.(a).

40. Attach documentation of compliance with vector attraction reduction requirements in the EPA sludge regulations 40 CFR 503.33.(b).(1) - (8).

Part 9. Signature and Date

I certify that the information provided in this application form is a true and correct representation of that which is requested. I am aware that there are significant penalties for knowingly submitting false information.

I also confirm that I have received a copy, have read and understand those sections of the State of Mississippi Nonhazardous Waste Management Regulations applicable to composting facilities.

(Signature of Applicant)

(Title, if applicable)

(Date)

ATTACHMENT - A

(Landowner should complete this form if land is to be leased)

PROVIDE LEGAL DESCRIPTION OF THE PROPERTY

As owner of the above-described property, I hereby acknowledge that the property described in this permit application is leased for the purpose of operating a compost facility and that as owner of the property, I may be held jointly and severally responsible for maintenance of the site and all liabilities associated with the site upon termination of the operation. The lease agreement for the proposed property will expire on _____.

(Signature of the landowner)

(Date)