

## Brianna Rives

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**From:** Nickolaus Lytle  
**Sent:** Tuesday, January 24, 2023 10:25 AM  
**To:** Brianna Rives  
**Subject:** FW: [EXTERNAL] Compost permit  
**Attachments:** Chestnut Hill Soil Conservation Center - 20221117 (002).pdf; Tier I Composting Facility Criteria Response Template 2023.docx

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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**From:** Nickolaus Lytle  
**Sent:** Tuesday, January 24, 2023 10:23 AM  
**To:** johnsherrillmd@gmail.com  
**Cc:** Robert Wadley <Robert.Wadley@tn.gov>; Nicholas Stengel <Nicholas.Stengel@tn.gov>  
**Subject:** FW: [EXTERNAL] Compost permit

John,

I revisited your application after our talks to see where we are. To get you to a “complete” compost application , please address all items in the attached Tier I composting criteria template. So for every item in red, give a response, it will be short for some, and may take a paragraph or two for others.

The end of the documents contains “other requirements” These are items that you’ll need to include in addition to the responses, the heavy lift being the site plan.

We can walk you through some of this, and I included Robert Wadley, our composting technical guy, who can assist as well.

Let us know if you have any questions. Also we are still open to a site walk though as well.



**Nick Lytle |**  
**Solid Waste Permits Manager**  
Division of Solid Waste Management  
Tennessee Tower, 14<sup>th</sup> Floor  
312 Rosa L. Parks Ave., Nashville, TN 37243  
**Cell. 615-854-4581 (PLEASE NOTE OLD LANDLINE HAS BEEN DISCONNECTED)**  
[nickolaus.lytle@tn.gov](mailto:nickolaus.lytle@tn.gov)  
[tn.gov/environment](http://tn.gov/environment)

Begin forwarded message:

**From:** John Sherrill <[johnsherrillmd@gmail.com](mailto:johnsherrillmd@gmail.com)>  
**Date:** January 19, 2023 at 9:48:32 AM CST  
**To:** Nicholas Stengel <[Nicholas.Stengel@tn.gov](mailto:Nicholas.Stengel@tn.gov)>  
**Subject:** [EXTERNAL] Compost permit

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Mr. Stengel,

I am wanting to move forward with my composting permit. Yesterday, I spoke with Mr. Lytle who indicated that I need to ask you for a site inspection prior to any earth work being done on the location. Can this be arranged? Also, based upon my application submitted to date, do I need to provide more detail?

Thanks,

John Sherrill  
931-265-5541

Sent from [Mail](#) for Windows

## **Rule 0400-11-01-.02 Criteria: Tier One Composting Facilities**

**By each red response prompt, describe in detail how each criteria will be met or reference where in the operations manual or application material each is addressed if applicable.**

(2) Facility Standards - Unless specifically noted otherwise, the standards of this paragraph shall apply to all compost facilities subject to a permit as provided at paragraph (3) of Rule 0400-11-01-.02 and Tier One permit by rule facilities.

### **(a) General Facility Design and Operating Standards**

1. All compost facilities shall meet the following design standards in order to operate in a manner that is protective of human health and the environment:

(i) The feedstock receiving, processing and storage areas must be clearly defined and the maximum throughput and capacity specified.

**Response:**

(ii) The composting facility shall have all-weather access roads. The facility shall be designed such that access to the composting facility shall be limited to authorized entrances, which shall be secured from public access when the facility is not in operation.

**Response:**

#### **(iii) Contact Water Collection**

(I) The facility shall have a contact water collection system that is properly managed.

**Response:**

(II) Contact water shall be reused in the process or otherwise properly managed as per all applicable laws and rules.

**Response:**

(iv) Litter Control - Fencing and/or other control shall be provided to confine loose waste to the area designated for storage or processing: Accidental dispersal from the designated areas shall be recovered daily.

**Response:**

#### **(v) Personnel Facilities - There shall be provided:**

(I) A building or other shelter which is accessible to facility personnel which has adequate heating and light.

**Response:**

(II) Potable water for washing and drinking.

**Response:**

(III) Toilet facilities.

**Response:**

#### **(vi) Operating Equipment - The facility shall have on-site operational and**

monitoring equipment capable of maintaining the waste processing as designed.

**Response:**

(vii) Endangered Species - Facilities shall be located, designed, constructed, operated, maintained, closed, and cared for during the post-closure care period in a manner that does not:

- (I) Cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife; or

**Response:**

- (II) Result in the destruction or adverse modification of the critical habitat of endangered or threatened species.

**Response:**

(viii) Location in Floodplains- Facilities shall not be located in a 100-year floodplain, unless the demonstration is made to the Commissioner as required at subparagraph (2)(n) of Rule 0400-11-01-.04.

**Response:**

(ix) Wetlands - The facility shall not be located in a wetland unless the demonstration is made to the Commissioner as required at subparagraph (2)(p) of Rule 0400-11-01-.04.

**Response:**

(x) Buffer Zone Standards for Siting New Facilities - All waste management areas shall be located so as to conform to the distance standards at subparagraph (3)(a) of Rule 0400-11-01-.04.

**Response:**

2. All compost facilities shall meet the following operational standards:

- (i) Contingency operations shall identify proper management of all waste in the event of equipment failure, facility disaster, or receipt of unauthorized material such as oil, hazardous waste, etc.

**Response:**

- (ii) Fire Safety

- (I) No open burning is allowed.

**Response:**

- (II) The facility shall have, on-site and continuously available, properly maintained fire suppression equipment capable of controlling accidental fires. If available, local firefighting service shall be acquired.

**Response:**

- (iii) Communication - The facility shall have available during operating hours equipment capable of summoning emergency assistance as needed.

**Response:**

(iv) Dust Control - The operator must take dust control measures as necessary to prevent dust from creating a nuisance or safety hazard to adjacent landowners or to persons engaged in supervising, operating, and using the site. The use of any dust suppressants (other than water) must be approved in writing beforehand by the Department.

**Response:**

(v) The owner/operator of a compost facility permitted pursuant to paragraph (1) of Rule 0400-11-01-.02 shall file with the Commissioner a performance bond or equivalent cash or securities, payable to the State of Tennessee. Such financial assurance shall be in an amount determined by the Commissioner to be adequate to insure 30 days operation and proper closure of the facility. The types of financial assurance instruments that are acceptable are those which are specified in subparagraph (3)(d) of Rule 0400-11-01-.03. Such financial assurance shall meet the criteria set forth in T.C.A. § 68 211 116 and at subparagraph (3)(b) of Rule 0400-11-01-.03.

**Response:**

(vi) Facility operations manager, person responsible for the day-to-day operation, must be able to document training in the basics of compost facility operations within the first year of supervising the facility. Training must consist of classroom and hands-on course work and conclude with a certificate of completion that must be kept on site at all times. Appropriate compost operations training must be approved by the Department.

**Response:**

(vii) Facilities must follow a Composting Facility Operations Plan (CFOP) — reviewed and approved as part of the permit application — that describes operational procedures (methods and practices) to comply with the intent of regulations to protect human health and the environment and not create nuisances. This includes measures to control nuisance odors, vectors, fires, contact water and stormwater, provisions for the annual maintenance of the all-weather composting pads, as well as provisions for prompt equipment repair or replacement when needed. The CFOP must be internally reviewed annually to ensure it continues to reflect current procedures, equipment and feedstock(s). The CFOP must be updated when there is a change to procedures (including equipment) or the types of feedstocks processed, and reflect how the facility will continue to comply with the intent of the rules. The CFOP must be available to the permitting authority upon request. The Department shall be informed in writing of any proposed changes to the CFOP for approval prior to implementation.

**Response:**

(viii) Facilities shall be maintained in a clean and sanitary condition, e.g., free of unsecured trash at end of each operating day.

**Response:**

(ix) Operators of composting facilities shall comply with all local rules, regulations, and ordinances pertaining to their facilities.

**Response:**

(x) Contact water generated shall be directed to a containment, recycling, and/or treatment system sized to handle at a minimum a 24-hr 25-yr storm event.

Response:

(xi) Storage of finished compost on site is limited to 12 months of production, unless approved by the Department on a case-specific basis.

Response:

(xii) No material may be stored in excess of the designated capacity.

Response:

(xiii) Non-compostable waste shall be removed or stored in a waste container and/or containment area, and disposed or recycled at a permitted solid waste facility in a timeframe approved in the CFOP.

Response:

(xiv) The composting area shall be maintained and repaired, as needed.

Response:

(xv) Closure - The facility must meet closure requirements described herein. The facility is finally closed by removal of all solid wastes and solid waste residues for proper disposal. The operator must notify the Commissioner in writing of his completion of closure of the facility. Such notification must include a certification by the operator that the facility has been closed by removal of all the solid waste and residues. Within 21 days of the receipt of such notice the Commissioner shall inspect the facility to verify that closure has been completed. Within 10 days of such verification, the Commissioner shall approve the closure in writing to the operator. Closure shall not be considered final and complete until such approval has been made.

Response:

(xvi) The facility shall have a sign at the entrance of the facility that lists the following: name of facility; operating permit number; hours of operation; and emergency contact information.

Response:

(xvii) The facility must manage and process feedstocks in a timeframe that minimizes odors, contact water, release of feedstock liquids, fire and scavenging by vectors.

**Confirm the proposed facility meets the regulatory design and operating standards for each of the items below to qualify as a Permit-by-Rule Tier I Compost Facility. Add explanation and/or compliance method as needed, or reference supplemental information or operations plan pages.**

(b) Tier One Facility Design and Operating Standards

1. Tier One composting facilities may process Type 1 feedstocks only. (Y/N) and describe feedstock.

2. Tier One facilities shall meet the following design standards in order to operate in a manner that is protective of human health and the environment:
  - (i) The composting area should have run on and run off control and slope of 1 to 6 percent as determined by site conditions to direct contact water to the appropriate collection, storage and treatment system. (Y/N)
  - (ii) All composting at Tier One composting facilities shall be conducted on an all-weather composting pad, except for those facilities operating on a seasonal basis only (e.g., fall leaves and spring yard cleanouts). The all-weather pad must meet the following criteria:
    - (I) Except as provided in item (III) of this subpart, the pad surface shall be 5 feet or more from the top of the seasonal high water table of the uppermost aquifer or the top of the formation of a confined aquifer; (Y/N)
    - (II) Soils within the first 5 feet of the surface shall exhibit hydraulic conductivity of  $1.0 \times 10^{-6}$  cm/s. If soil depth to seasonal high water table is 10 feet or greater, a geologic buffer consisting of 10 feet of clay with a maximum hydraulic permeability of  $1.0 \times 10^{-5}$  may be used; (Y/N)
    - (III) If less than 5 feet from the top of the seasonal high water table an improved low permeability surface is required for tipping, mixing and active composting areas. The improved low permeability surface shall consist of concrete, asphalt or other approved material capable of withstanding heavy equipment and preventing contamination of the uppermost aquifer; (Y/N) and
    - (IV) All-weather pad shall be of sufficient slope to direct contact water to the appropriate collection, storage and treatment system. The pad shall also be constructed in such a manner as to prevent run-on of storm water to the extent practicable. (Y/N)
3. Tier One facilities shall meet the following operational standards:
  - (i) Compost processing time and temperatures shall be sufficient to kill weed seeds, reduce pathogens and vector attraction, and produce compost that meets the stability necessary for the intended use. Pathogen and vector attraction reduction compliance achieved as follows:
    - (I) Windrow composting: the compost material must be maintained at a minimum average temperature of 55°C (131°F) or higher for 15 days or longer. During the period when the compost is maintained at 55°C (131°F) or higher, there shall be a minimum of five turnings of the windrow with a minimum of 3 days between turnings. The 15 or more days at or above 55°C (131°F) do not have to be continuous; (Y/N) and
    - (II) Aerated static pile or in-vessel composting process: Material maintained at a minimum average temperature of 55°C (131°F) or higher for three continuous days, followed by at least 14 days with a minimum of 45°C (113°F). (Y/N)

**Other requirements:**

**Confirm each will be addressed by the proposed facility.**

- (4) Records - Facility owner or operators shall record and maintain at the facility for three years the following information regarding their activities for each month of operation of the facility. Records

shall be available for inspection by Department personnel during normal business hours and shall be sent to the Department upon request to include:

- (a) ~~Analytical results on composting testing;~~ (Note: not required for Tier I Facilities)
- (b) The type and quantity of feedstock and the source of feedstock received;
- (c) The quantity of compost produced;
- (d) The quantity of compost removed for use or for disposal, and the market or permitted disposal facility. The operator must identify the market for compost removed for use. The operator must identify the permitted disposal facility for compost removed for disposal; and
- (e) Temperatures measurements throughout the composting process demonstrating that PFRP has been met is applicable.

(5) Design and Construction Plans

- (a) **Master Plan - A master plan shall be provided that is drawn at a scale of not less than 1" = 400' with not more than 20 foot contour interval and which clearly depicts:**

- 1. The boundary of the proposed facility;
- 2. The existing drainage pattern of all site runoff;
- 3. Runoff monitoring stations;
- 4. Primary access roads;
- 5. Wells within one quarter mile of the site boundary;
- 6. The location of all 100-year floodplain boundaries; and
- 7. All residences within one quarter mile of the site boundary (If in an urban area residential properties may be delineated).

- (b) **Design Plans - Design plans shall be provided that are drawn at a suitable scale of not less than 1" = 50 feet and with contour intervals of not greater than five feet, which clearly depicts:**

- 1. All structures;
- 2. Proposed waste processing areas;
- 3. Proposed waste storage areas;
- 4. All drainage appurtenances that control run-on/run-off and the direction of flow;
- 5. The location of all existing and proposed utilities and roads (defining surface material); and
- 6. The location of all contact water collection/treatment structures, piping, storage appurtenances, and any other associated unit.

- (c) **Narrative Description of the Facility and Operation - A narrative description of the facility and operation shall be provided that defines all procedures and activities pertinent to the design and operation of the facility. This narrative shall include, but not necessarily be limited to:**

- 1. A description of how the facility will achieve the compliance of all standards defined in paragraphs (2) (4), and (5) of this rule;



2. A description of the waste handling and processing equipment to be used;
3. A description of the management of run-on/runoff with design calculations of all structures designed to meet the 24hr – 25 yr storm event;
4. A description of the management of the contact water system and the disposition of the contact water;
5. A description of the odor control measures; and
6. A description of the procedures for the final closure of the facility.

(6) Annual Report

Owners and operators of facilities producing compost shall submit to the Department an annual report by March 1 of each year. The report and shall include at a minimum:

- (a) The facility name, address and permit number;
- (b) The reporting year with all quantities expressed in tons (sludge expressed in dry weight);
- (c) The total quantity and type of feedstock received at the facility during the year covered by the report;
- (d) The total quantity of compost produced during the year covered by the report; and
- (e) The total quantity of compost removed for use or for disposal, and the market(s) or permitted disposal facility(s). The operator must identify the market for compost removed for use. The operator must identify the permitted disposal facility for compost removed for disposal.