



**Proposed Reissuance of  
Williamsburg Recycling, LLC  
Land Application Permit  
ND0086185**

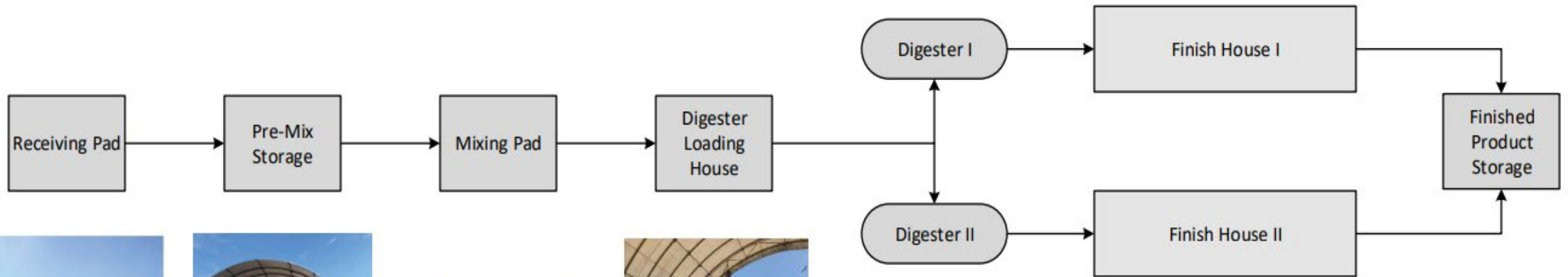
South Carolina Department of Health and Environmental Control  
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# Site Location





# Composting Process



# Odor Abatement Plan Regulation 61-9.503.50

## 503.50. Odor Control Requirements.

The permit holder shall use best management practices normally associated with the proper operation and maintenance of a sludge wastewater treatment site, any sludge storage or lagoon areas, transportation of sludges, and all individual activities permitted under R.61-9.503 to ensure that an undesirable level of odor does not exist.

(a) The permittee shall prepare an odor abatement plan for the sewage sludge treatment sites, any sludge storage or lagoon areas, and land application or surface disposal sites. Permittees that land-apply sludge must prepare the plan within 180 days of the effective date of this regulation (effective date of June 26, 2003). Permittees that have facilities described above that require plans have one (1) year from the June 26, 2003 effective date to prepare the plan. Odor abatement plans must be submitted for new projects with the submission of permit applications. The plan must include the following topics:

(1) Operation and maintenance practices which are used to eliminate or minimize undesirable odor levels in the form of best management practices for odor control;

(2) Use of treatment processes for the reduction of undesirable odors;

(3) Use of setbacks; and

(4) Contingency plans and methods to address odor problems for the different types of disposal/application methods used.

(b) Unless otherwise requested, prior to issuance of a new or expanded land application disposal permit (either NPDES or Land Application), the Department may review the odor abatement plan for compliance with this Part (503.50). The Department may require changes to the plan as appropriate.

(c) No permittee may cause, allow, or permit emission into the ambient air of any substance or combinations of substances in quantities that an undesirable level of odor is determined to result unless preventative measures of the type set out below are taken to abate or control the emission to the satisfaction of the Department. When an odor problem comes to the attention of the Department through field surveillance or specific complaints, the Department may determine, in accordance with section 48-1-120 of the Pollution Control Act, if the odor is at an undesirable level by considering the character and degree of injury or interference to:

(1) The health or welfare of the people;

(2) Plant, animal, freshwater aquatic, or marine life;

(3) Property; or

(4) Enjoyment of life or use of affected property.

(d) After determining that an undesirable level of odor exists, the Department may require:

(1) the permittee to submit a corrective action plan to address the odor problem,

(2) remediation of the undesirable level of odor within a reasonable timeframe, and

(3) in an order, specific methods to address the problem.

(e) If the permittee fails to control or abate the odor problems addressed in this section within the specified timeframe, the Department may revoke disposal/application activities associated with the site or the specific aspect of the sludge management program.



# Odor Abatement Plan

## ODOR ABATEMENT PLAN

WILLIAMSBURG RECYCLING, LLC  
576 ISLAND ROAD  
ANDREWS, SOUTH CAROLINA  
WILLIAMSBURG COUNTY

SUBMITTED: NOVEMBER 2019  
REVISED: MARCH 2020  
REVISED: NOVEMBER 2020  
REVISED: MAY 2021

### PREPARED FOR

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
2600 BULL STREET  
COLUMBIA, SOUTH CAROLINA



Science & Engineering Consultants



# Odor Assessment Form

<b>Odor Assessment Form</b> (Complete a separate form for each odor instance you assess)		
Name of Facility:	Permit Number: ND0086185	Insert Tracking No.
Person(s) / Title(s) Noting Odor:		
<b>OBSERVATIONS</b>		
Date & Time Odor Began: Enter date and time		
Weather (describe):		
Wind Direction:		
If Rainfall: Describe How Many Inches and in What Period of Time:		
Nature of Odor: <input type="checkbox"/> Sewage/Sludge <input type="checkbox"/> Earthy <input type="checkbox"/> Musty <input type="checkbox"/> Other:		
Describe:		
Odor Type (if able to identify):		
For reference: Acetic acid odor: vinegar Ammonia odor: sharp, pungent; somewhat irritating; similar to sweat or cat urine Sulfur odor (hydrogen sulfide): rotten eggs		
<b>SITE ACTIVITIES AT THE TIME</b>		
Receiving	<input type="checkbox"/> No <input type="checkbox"/> Yes (describe):	Other: Explain
Pre-Mixing	<input type="checkbox"/> No <input type="checkbox"/> Yes (describe):	
Loading	<input type="checkbox"/> No <input type="checkbox"/> Yes (describe):	
Digesting	<input type="checkbox"/> No <input type="checkbox"/> Yes (describe):	
Moving Product	<input type="checkbox"/> No <input type="checkbox"/> Yes (describe):	

Other Obvious Sources of Odor: <input type="checkbox"/> No <input type="checkbox"/> Yes (describe)	
Detail what corrective action will be taken to mitigate the odor and prevent it from occurring again.	
Possible Management Techniques:	
Material handling releases odorous gases, anaerobic conditions can form odorous compounds	Reduce handling activities during stagnant air conditions Create windrows which are sufficiently blended Turn regularly to re-establish porosity
Ammonia odor (high nitrogen level)	Maintain adequate moisture in windrows Avoid over-watering windrows
Sulfur odor (anaerobic conditions)	Increase surface to volume ratios of active windrows
Varying odors in pile	Increase turning frequency, check temperatures, check pH, increase porosity, and/or add bulking agent
Odors generated after turning	Increase bulking agent or reduce pile size
Excessive temperature	Make piles on a one foot bed of bulking agent to increase air flow
<b>Certification by Facility Responsible Official</b>	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
A. Name:	B. Title:
C. Signature:	D. Date Signed:

# Odor Management Techniques

**Table 4.1 Odor Management Techniques**

Possible Cause	Management Approach
Material handling releases odorous gases, anaerobic conditions can form odorous compounds	Reduce handling activities during stagnant air conditions Create windrows which are sufficiently blended Turn regularly to re-establish porosity
Ammonia odor (high nitrogen level)	Maintain adequate moisture in windrows Avoid over-watering windrows
Sulfur odor (anaerobic conditions)	Increase surface volume ratios of active windrows
Varying odors in pile	Increase turning frequency, check temperatures, check pH, increase porosity, and/or add bulking agent
Odors generated after turning	Increase bulking agent or reduce pile size
Excessive temperatures	Make piles on a one foot bed of bulking agent to increase air flow



# On-Site Storage Provisions

## G. SCHEDULE OF COMPLIANCE

1. Within 30 days of the effective date of this permit, the permittee must provide the following information:
  - a. Over the past calendar year, provide the information for the following:
    - i. Amount of sludge received from each approved facility (dry tons).
    - ii. Identify the name and location of the facility/person composted sludge was given or sold to include the individual amount given/sold.
    - iii. Identify the amount stockpiled.
  - b. Identify all of the areas where sludge is stored and that the area(s) is equipped with a leachate surface water and storm water collection system per Part III.A.B states, "*Sludge may be stored in drying piles on site; however, the storage site must be equipped with a leachate surface water and storm water collection system. Leachate from the sludge drying piles and storm water from compost paved pads must not be allowed to discharge to surface waters. Any off-site storage must be approved by the Department.*"
    - i. Identify how any runoff from the piles will be prevented from entering the ditch that runs through the center of the property. An analysis should be completed to ensure the ditch does not contain any existing runoff from sludge storage.
    - ii. For any storage of sludge on site please submit a Preliminary Engineering Report within 3 months of the effective date of this permit requesting approval.
    - iii. Any material currently stored on-site, which includes legacy material, must be shown to meet vector attraction requirements and pathogen requirements prior to land application. If those vector and pathogen requirements are not met, the material must be disposed of by an alternative method denoted in Part 1.C.

## A. SPECIAL OPERATIONAL REQUIREMENTS

- a. A Department approved label shall be provided to all recipients of the Class A material that is to be sold or given away in a bag or other container (load capacity of one metric ton or less). Either a label shall be affixed to the bag or other container in which sludge or derived material that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sludge or derived material sold or given away in an other container for application to the land. The label or information sheet shall contain the following information:
  1. The name and address of the person who prepared the sludge or derived material that is sold or given away in a bag or other container for application to the land.
  2. A statement that application of the sludge or derived material to the land is prohibited except in accordance with the instructions on the label or information sheet.
  3. The annual whole sludge application rate for the sludge or derived material that does not cause any of the annual pollutant loading rates in Table 4 of Regulation 61-9.503.13 to be exceeded (also identified in table in Part I.A.3.a of this permit for Annual Pollutant Loading Rate).
  4. The annual whole sludge application rate for the sludge or derived material that does not cause the agronomic rate for appropriate crops to be exceeded (to be presented in tons/acre or other units approved by the Department).
- b. Sludge may be stored in drying piles on site; however, the storage site must be equipped with a leachate surface water and storm water collection system. Leachate from the sludge drying piles and storm water from compost paved pads must not be allowed to discharge to surface waters. Any off-site storage must be approved by the Department per Part 1.F.

# Proposed Sludge Processing Amount

**Table 1**

Sludge Characteristics	Receiving Facility Limitations	Monitoring Requirements	
		Measurement Frequency	Sample type
Class A (Compost)	1625	Quarterly	Estimate
Class A (Compost)	≤6500**	Annual	Estimate



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# CONTACT US

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