

# Land Application Permit

(Sludge Distribution & Marketing and Bulk Land Application)

This Permit Authorizes

## Williamsburg Recycling, LLC

Permission to distribute & market and land apply composted sewage sludge located at a

***Facility Along Island Rd. just off Highway S-45-45 near the intersection of Highway 21 and Highway 41 in Williamsburg County***

in accordance with limitations, monitoring requirements and other conditions set forth herein. This permit is issued in accordance with the provisions of the Pollution Control Act of South Carolina (S.C. Code Sections 48-1-10 *et seq.*, 1976) and Regulation 61-9.

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**Shawn M. Clarke, P.E., Director  
Water Facilities Permitting Division  
Bureau of Water**

***Issue Date: TBD  
Effective Date: TBD***

***Expiration Date<sup>1</sup>: TBD  
Permit No.: ND0086185***

<sup>1</sup> This permit will continue to be in effect beyond the expiration date if a complete timely re-application is received pursuant to Regulation 61-9.505.6 and signed per Regulation 61-9.505.22



S.C. Department of Health and  
Environmental Control

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**PART I**

**A. SLUDGE STABILIZATION, SLUDGE QUALITY, AND MONITORING REQUIREMENTS**

**1. Sludge Stabilization (Pathogen and Vector Attraction Reduction)**

- a. Only non-hazardous sludge solids that are generated at the approved domestic wastewater treatment plants listed below and treated to **Class A** - EQ standards by composting may be used in this distribution and marketing and bulks land application program. If the permittee needs to add new sludge sources to this approval list, written requests will be evaluated by the Department.

**Table 1**

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

\* The amount of sludge received in dry tons/year cannot exceed the permitted annual amount as referenced in Table 1 above for Williamsburg Recycling, LLC.

♦ This amount will be confirmed based on the Department's receipt of acceptable results from representative samples collected from finished product processed utilizing only sludge received during the public comment period, from customers identified in Table 2 (per Part 1.A.a.b and c below) during the public notice period of this permit.

**Note: Facility capacity is limited to the number of digesters operating. 1 digester operating means the facility may receive 3250 dry tons and 2 digesters operating means the facility may receive 6500 dry tons annually.**

- b. Composted sludge (or derived material) must achieve the Process to Further Reduce Pathogens (PFRP). The following processes shall be monitored to meet the PFRP classification for composting:

Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of Salmonella, sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or prepared for sale or given away in a bag or other container.

-AND-

Using the in-vessel composting method, the temperature of the sewage sludge is maintained at 55 degrees Celsius or higher for 3 consecutive days.

- i. Time (per batch basis)
- ii. Temperature (per batch basis)

- c. Composted sludge must achieve the Vector Attraction Reduction (VAR) requirement. The following process shall be monitored to meet the VAR requirement:

Sewage sludge shall be treated in an aerobic process for 14 consecutive days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

- i. Date/Time (per batch basis)
- ii. Temperature (per batch basis)

- d. Any sludge not meeting the PFRP and VAR requirements may not be used in this distribution and marketing program and must be either processed again to achieve the PFRP/VAR classifications or

disposed of at an approved landfill per Part 1.C or by other Department approved methods. The Department must issue written approval prior to alternative disposal activities.

**2. Application Rates and Procedures**

- a. Only sludge solids that are document to meet **Class A** sludge requirements and a Vector Attraction Reduction requirement may be land applied on the approved sites at the following average rate (**Subject to adjustment for specific crop requirements**):

**Table 2**

Sludge Source*	Permit No.
DSM Nutritional Products <sup>†</sup>	18846-IW
City of Charleston Plum Island WWTP	SC0021229
Mount Pleasant Waterworks (MPW)	SC0040771

**\*Note: The permittee may not accept any sludge sources from any other facility without prior Department approval. The amount of sludge received in dry tons/year cannot exceed the permitted amount for Williamsburg Recycling, LLC. (e.g., Table 1)**

**†Sludge from DSM Nutritional Products shall only be received when the material can be mixed with sludge material from either the City of Charleston Plum Island WWTP or Mount Pleasant Waterworks (MPW).**

**3. Sludge Quality (Distribution & Marketing Program or Bulk Land Application)**

- a. The sludge or derived material must meet the following limits for the elements listed below to be suitable for use under this approval:

**Table 3**

Pollutant	Ceiling Concentrations (mg/kg, dry weight basis)	Cumulative Pollutant Loading Rate (kg/ha)	Pollutant Concentration Monthly Average (mg/kg, dry weight basis)	Annual Pollutant Loading Rate (kilograms per hectare per 365-day period)
Arsenic	75	41	41	2.0
Cadmium	85	39	39	1.9
Copper	4300	1500	1500	75
Lead	840	300	300	15
Mercury	57	17	17	0.85
Molybdenum	75	Not Applicable	Not Applicable	Not Applicable
Nickel	420	420	420	21
Selenium	100	100	100	5.0
Zinc	7500	2800	2800	140
<b>From 61-9.503</b>	<b>Table 1, Section 503.13</b>	<b>Table 2, Section 503.13</b>	<b>Table 3, Section 503.13</b>	<b>Table 4, Section 503.13</b>

- b. Bulk sludge or derived material found to exceed the pollutant concentration levels or the Ceiling Concentrations (in the above table) may not be sold or given away or land applied and must be disposed of by a method approved by the Department. (e.g., Landfill. See Part I.C)
- c. Bulk sludge or derived material found to exceed the cumulative pollutant loading rates (in the above table) may not be land applied and must be disposed of by a method approved by the Department (e.g., Propose new land application fields, landfill. See Part I.C)
- d. Sludge or derived material found to exceed a Monthly Average Pollutant Concentration for a pollutant listed in the table above shall not be sold or given away if any Annual Pollutant Loading Rate for a pollutant listed in the table above will be exceeded. The procedure used to determine the annual whole sludge application rate is presented in **Part III.A.f** of this permit.

- e. The sludge or derived material labeling system for bagged and bulk material for distribution and marketing must include application information. The label or information sheet must be approved by the Department prior to use. Specific information concerning the labeling system can be found in **Part III.A.a.** of this permit.
- f. If the Department becomes aware of nuisance conditions such as odors associated with the composting operation, additional control measures will be required.
- g. For Bulk Land Application (Table)

**Table 4**

Sludge Characteristics	Maximum Loading Rate	Operational Conditions
Agronomic Rate Total allowable rate	Based on published lime and fertilizer recommendations (such as Plant Nutrient Element Management of Agricultural Soils in South Carolina by Clemson University 2007), but not to exceed 240 lbs/PAN/acre.	Agronomic rates (not to exceed 240 lbs/PAN/acre) cannot allow hydraulic loading rates to be exceeded. Rates shall be adjusted based on timing of on crop nutrient needs. Comply with <b>Nutrient Management Plan</b> (Schedule of Compliance: Part I.G.3 and 4) once approved.
Additional stipulations	Application measures will be taken to minimize the possibility of runoff and to promote a uniform application.	Generator shall be responsible for maintaining spill control and rain event plans (e.g., addressing shutting down operation during unforeseen inclement weather).

**4. Operation and Monitoring Requirements**

- a. The permittee shall provide the Department with an **annual** certification of the content of the treated sludge. Testing must conform to the regulatory requirements set forth in R.61-9.503 and all laboratory testing completed for all aspects of reporting must be performed by a DHEC certified laboratory. (This includes any sampling conducted at the permittee’s wastewater treatment plants or any off-site sampling.)
  - I. TCLP Test (Reference Federal Register/Vol. 55/No. 61/Thursday/March 29, 1990/Pages 11798-11877). The metals and organics portion of the test must be completed. A certification statement that pesticides and herbicides are not present in reportable quantities in the sludge or derived material must be provided. The TCLP analysis of the sludge or derived material must be based on a representative sample.
  - II. Total polychlorinated biphenyls (PCBs) present. PCBs greater than 50 milligrams per kilogram (mg/kg) of total solids (dry weight basis) should not be land applied (per 40 CFR Part 503). Alternate disposal method(s), as approved by the Department, is required. For PCBs less than 50 mg/kg of total solids (dry weight basis), the permittee must follow existing requirements as identified and established by the Department (Regulation 61-9.503 Appendix C). The permittee shall sample at least quarterly (based on calendar year quarters) for PCBs using EPA SW-846 Method 8082A with an appropriate sample preparation method approved for use by the Department based on the matrix of the sample in accordance with Regulation 61-9.503 Appendix C.

If levels of PCBs are greater than or equal to one (1) milligram per kilogram (mg/kg dry weight), but less than ten (10) milligrams per kilogram (mg/kg dry weight basis), confirmation sludge sampling must be done as soon as practicable, and the results provided to the Department within five (5) calendar days of receipt by the permittee.

If levels of PCBs are greater than or equal to ten (10) milligrams per kilogram (mg/kg dry weight basis), confirmation sludge sampling must be done as soon as practicable, and the results provided to the Department within five (5) calendar days of receipt of the results by the permittee. In addition, representative soil sampling of land application sites that may have received sludge during the monitoring period must be conducted within 30 days of knowledge of the confirmation sampling that confirms sludge PCB levels equal to or greater than ten (10) milligrams per kilogram (mg/kg dry weight basis). The results of the soil must be provided to the Department within five (5) calendar days of receipt by the permittee. The Department may require any further action as deemed necessary and consistent with applicable laws.

- III. All site monitoring information compiled in the calendar year prior to the report date.
- b. The permittee shall sample at the appropriate frequency noted below and provide a quarterly report of the following to the Department.
  - i. The sludge shall be sampled quarterly (four times per year) for the parameters noted in 40 CFR Part 503 and R.61-9.503, Table 3 of 503.13 Pollutant Concentrations. If the limits can not be met, then the sludge may not be land applied and must be disposed of in a method approved by the Department. This information must be documented and submitted.
  - ii. The permittee shall on a quarterly basis evaluate whether the sludge can comply with any one of the vector attraction reduction requirements outlined in 40 CFR Part 503 and R.61-9.503, Subpart D Pathogen and Vector Attraction Reduction.
  - iii. The permittee shall on a quarterly basis evaluate whether the sludge can meet any one of the pathogen reduction requirements outlined in 40 CFR Part 503.32 and R.61-9.503(Pathogens). The permittee shall identify whether the sludge can comply with Class A pathogen reduction requirements.
- c. Operational records shall be kept on a daily basis and a summary of the data shall be reported quarterly in a format to be acceptable to the Department. The operational records may be summarized graphically. The following information shall be included in the operational records:
  - i. Date/Time
  - ii. Temperature
  - iii. Number of windrow turnings (Required if using windrow method)
  - iv. Batch number (or pile location)
  - v. Identify carbon source used and the amount of carbon source utilized
  - vi. Identify if the sludge source included a carbon source with the sludge.
- d. The sampling frequency may be increased or reduced in the future subject to the Department's review of the sampled data.

## **B. RECORDKEEPING AND REPORTING**

1. Quarterly Reports
  - a. Quarterly Reports shall be submitted online in ePermitting through an electronic schedule 'Sludge Report' for reporting results, which should include the following items (Notes: All information within the quarterly reports shall be submitted within the annual report (Part I.B.2) via ePermitting):
    - i. The information found in Part 1.A.4 above should be included in each quarterly report.
    - ii. The permittee shall submit a report summarizing quarterly compiled data for the facility, as follows:
      1. Sludge received.

2. Composted sludge prepared.
3. Composted Sludge applied.
4. List of fields and total dry tons of composted sludge applied to each field.
5. Sludge application rate calculations for all fields on which land application occurred.
6. Results of any Groundwater monitoring required by the Department (If applicable).

**Table 5**

Measurement Frequency	Sampling Period	Reporting Deadline
Quarterly (Samples must be taken at least 60 days apart.)	January 1 <sup>st</sup> – March 31 <sup>st</sup>	April 28 <sup>th</sup>
	April 1 <sup>st</sup> – June 30 <sup>th</sup>	July 28 <sup>th</sup>
	July 1 <sup>st</sup> – September 30 <sup>th</sup>	October 28 <sup>th</sup>
	October 1 <sup>st</sup> – December 31 <sup>st</sup>	January 28 <sup>th</sup>

2. Annual Sludge Reports

- a. All **annual reports** shall be received by the Department no later than **February 19th** of each year, for the period of January 1 through December 31 of the previous calendar year. This will coincide with the reports which may be required for submittal to EPA Region 7, under the conditions of the Federal sludge regulations. All annual reports must be reported online in ePermitting through an electronic schedule ‘Sludge Report’ for reporting results. All annual reports should include the following information, but is not limited to:
  - i. General Information
    1. Permittee Name, NPDES Permit Number, Bureau of Water Site ID (if applicable).
    2. Contact Person and contact information.
    3. Monitoring Period Dates (from and to dates).
    4. Information identified in Part I.A.1.a, b, c and d (Clearly identify the Class of sludge and the option used for vector attraction reduction and alternative used for pathogen reduction.).
    5. Information identified in Part II.A.c (Oil and Hazardous Substances).
    6. Information identified in Part II.B (Reporting requirements).
    7. Information identified in Part III.A.b (Off-site storage requirements).
    8. The annual report shall also include an evaluation of the operation of the site with regards to the Nutrient Management Plan (NMP).
  - ii. Class A sludge derived material production shall be recorded and maintained by the permittee. This information must be updated and included in the annual reports:
    1. Total Class A sludge or derived material produced (dry tons).
    2. Total Class A sludge or derived material to storage piles (dry tons).
    3. Total Class A sludge or derived material to landfill (dry tons). (The landfill must be approved per Part 1.C. Alternative Sludge Disposal).
    4. Total Class A sludge or derived material sold or given away (dry tons).
    5. Total composted sludge used by the Permittee (dry tons).
    6. Total sludge to land application (dry tons).
  - iii. Sludge and Compost production shall be recorded and maintained by the permittee. This information must be updated and included in the annual report:
    1. Total sludge received from Facilities identified in Part 1.A.2.a (dry tons). (Identify the name of the facility and the amount received).
    2. The name and address of person(s)company receiving compost.
    3. The total amount of compost given to each identified in ii above.

4. The name of the application site and the amount of sludge applied to each site listed in Part 1.D. Approved Site Locations.
5. The total amount of sludge applied to each site since the initiation of the land application permit.

**Table 6**

Measurement Frequency	Sampling Period	Reporting Deadline
Annually	January 1 <sup>st</sup> – December 31 <sup>st</sup>	February 19 <sup>th</sup>

3. Monitoring Reports

- a. Compost monitoring results obtained at the required frequency shall be reported and submitted through ePermitting no later than 11:59 PM on the 28<sup>th</sup> day of the month following the end of the monitoring period. If the permittee encounters technical difficulties using the report schedule, contact DHEC at epermittinghelp@dhec.sc.gov for technical assistance.
- b. Groundwater Monitoring (If groundwater monitoring is required)
  - i. Groundwater monitoring results obtained at the required frequency shall be reported on a Groundwater Monitoring Report Form (DHEC 2110) or the format the analyzing laboratory utilizes, postmarked no later than the 28<sup>th</sup> day of the month following the end of the monitoring period and must be submitted through ePermitting.
  - ii. Groundwater monitoring results obtained at the required frequency shall be reported on a Groundwater Monitoring Report (GMR). The GMR must be submitted through ePermitting no later than 11:59 PM on the 28<sup>th</sup> day of the month following the end of the monitoring period.
  - iii. The permittee shall use the GMR schedule in ePermitting. If the permittee encounters technical difficulties using the GMR schedule, contact DHEC at epermittinghelp@dhec.sc.gov for technical assistance. Please contact the Compliance Manager for your permit to obtain approval to submit paper GMRs until the technical issue is resolved.
- c. Records of monitoring required by the permits related to sludge use and disposal activities must be kept at least five (5) years (or longer as required by 40 CFR Part 503 and R.61-9.503).
- d. Sludge monitoring procedures shall be those specified in 1) 40 CFR Part 502; 2) 40 CFR Part 136; or 3) other procedures specified in the sludge permit (in that order of "preference" depending on the availability and applicability of a particular method at the time the sludge permit is issued).
- e. The permittee must maintain the Sludge Annual Agronomic Loading Rate Worksheet (DHEC Form 0874) for any repetitive land application of the compost. This worksheet should be maintained in a common location and be available for review.
- f. The permittee shall submit the results of all sludge monitoring if done more frequently than required by the approval.

**C. ALTERNATE SLUDGE DISPOSAL**

1. **Sludge Transportation and Disposal**

Sludge solids will be removed from this facility and transported to **Republic Services** under the following conditions:

- a. All containers for sludge collection and transportation shall be structurally sound in every respect and shall be so constructed as to prevent leakage or spillage of any kind while in the process of pumping, storage, or transit.



- b The total volume of waste transported shall not exceed the available capacity at the landfill per year as agreed upon in the letter dated July 15, 2021.
- c The hauling of sludge may be revoked or suspended after notice and opportunity for a hearing when, in the opinion of the South Carolina Department of Health and Environmental Control, the Permittee has failed to comply with the permitting, hauling, transportation, or disposal requirements.
- d To the extent provided under Federal and State law, the Permittee is responsible for the handling, transportation, and disposal of all sludge from the various source(s) transported to the approved disposal site. This responsibility includes, but is not limited to spills, accidents, unauthorized leaks, or other hazards which may occur.

**D. APPROVED SITE LOCATIONS - EASLER FARMS (16774)**

- a. The composted sludge solids may be applied to the following approved sites: **(Williamsburg County and Clarendon County\* - Owner Marty Easler)**

ID No. / Field No.	Lat/Long	Cover Crop	Net Acres
E001A/Field 1	33°29'39.59"N/ 79°45'36.58"W	Cotton	6.95
E001C/Field 4	33°29'42.20"N/ 79°45'54.65"W	Cotton	11.75
E001D/Field 5	33°29'35.86"N/ 79°45'52.91"W	Cotton	10.93
E003A*/Field 1	33°33'44.56"N/ 80° 4'25.40"W	Cotton	2.05
E003B*/Field 2	33°33'43.05"N/ 80° 4'24.63"W	Cotton	3.89
E003C*/Field 3	33°33'35.87"N/ 80° 4'25.98"W	Cotton	6.37
E003D*/Field 4	33°33'27.09"N/ 80° 4'27.25"W	Cotton	6.42
E003E*/Field 5	33°33'15.92"N/ 80° 4'24.97"W	Cotton	12.62
E003F/Field 6	33°32'56.08"N/ 80° 4'19.13"W	Cotton	2.74
E003G/Field 14	33°33'3.82"N/ 80° 4'5.96"W	Cotton	10.19
E003H/Field 7	33°32'44.24"N/ 80° 4'16.82"W	Cotton	5.02
E003I/Field 8	33°32'44.93"N/ 80° 4'12.30"W	Cotton	1.77
E003J/Field 9	33°32'36.28"N/ 80° 4'15.02"W	Cotton	1.86
E003K/Field 10	33°32'36.28"N/ 80° 4'11.64"W	Cotton	2.18
E003L/Field 11	33°32'34.27"N/ 80° 4'2.36"W	Cotton	5.09
E003M/Field 12	33°32'44.89"N/ 80° 3'54.49"W	Cotton	4.54
E003N/Field 13	33°32'49.85"N/ 80° 3'57.30"W	Cotton	3.18
E004A/Field 1	33°29'41.67"N/ 79°54'57.05"W	Cotton	11.38
E004B/Field 2	33°29'23.56"N/ 79°55'3.66"W	Cotton	10.31
E005B/Field 2	33°33'20.66"N/ 79°47'1.34"W	Cotton	3.39
E005C/Field 3	33°32'46.19"N/ 79°47'9.90"W	Cotton	2.95
E005D/Field 4	33°32'38.21"N/ 79°47'19.32"W	Cotton	7.65
E006A/Field 2	33°30'6.69"N/ 79°55'50.38"W	Cotton	8.37
E006B/Field 3	33°30'4.22"N/ 79°55'42.06"W	Cotton	16.79
E006F/Field 7	33°30'11.88"N/ 79°55'13.44"W	Cotton	2.87
E006G/Field 8	33°30'7.07"N/ 79°55'9.66"W	Cotton	10.31
E006I/Field 10	33°30'2.90"N/ 79°55'17.54"W	Cotton	22.27
E006K/Field 12	33°29'52.39"N/ 79°55'9.40"W	Cotton	15.52
E006L/Field 20	33°29'57.22"N/79°55'7.05"W	Cotton	4.75
E006M/Field 13	33°29'48.75"N/ 79°55'42.49"W	Cotton	17.59
E006N/Field 14	33°29'44.81"N/ 79°55'28.49"W	Cotton	22.87
E006O/Field 15	33°29'40.00"N/ 79°55'19.11"W	Cotton	19.58
E006P/Field 16	33°29'37.42"N/ 79°55'9.72"W	Cotton	25
E006S/Field 29	33°29'37.44"N/ 79°55'25.19"W	Cotton	7.4

E006T/Field 30	33°29'32.39"N/ 79°55'17.30"W	Cotton	6.26
E006U/Field 31	33°29'30.35"N/ 79°55'8.45"W	Cotton	7.73
E007B/Field 2	33°33'37.66"N/ 79°47'57.47"W	Cotton	4.79
E007E/Field 5	33°33'7.60"N/ 79°48'7.15"W	Cotton	8.14
E007F/Field 6	33°33'6.00"N/ 79°48'0.23"W	Cotton	14.95
E007G/Field 8	33°33'5.01"N/ 79°48'36.52"W	Cotton	9.43
E007H/Field 9	33°32'57.59"N/ 79°48'38.90"W	Cotton	9.14
E007L/Field 13	33°32'42.57"N/ 79°48'50.19"W	Cotton	8.12
E008A/Field 1	33°27'34.31"N/ 79°50'27.10"W	Cotton	6.6
E008B/Field 2	33°27'40.11"N/ 79°50'13.14"W	Cotton	10.82
E008C/Field 3	33°27'26.78"N/ 79°49'48.38"W	Cotton	9.72
E008D/Field 4	33°27'26.36"N/ 79°49'38.37"W	Cotton	5.21
E008E/Field 5	33°27'15.62"N/ 79°49'26.33"W	Cotton	5.61
E008F/Field 6	33°27'7.72"N/ 79°49'32.25"W	Cotton	4.72
E008G/Field 7	33°27'6.42"N/ 79°49'42.59"W	Cotton	6.70
E008H/Field 8	33°27'2.72"N/ 79°49'48.98"W	Cotton	16.3
E008I/Field 9	33°26'55.29"N/ 79°49'31.76"W	Cotton	22.15
E0011A/Field 1	33°29'18.55"N/ 79°53'59.66"W	Cotton	2.61
E0011C/Field 3	33°29'12.53"N/ 79°53'45.69"W	Cotton	2.65
E0011D/Field 4	33°29'18.06"N/ 79°53'38.08"W	Cotton	9.75
E0011F/Field 6	33°29'26.07"N/ 79°53'45.04"W	Cotton	5.8
E0011K/Field 11	33°29'37.02"N/ 79°53'33.24"W	Cotton	10.81
E0011M/Field 13	33°29'40.14"N/ 79°53'56.60"W	Cotton	8.37
E0012A/Field 1	33°28'50.74"N/ 79°54'58.66"W	Cotton	12.04
E0012B/Field 2	33°28'57.06"N/ 79°55'0.47"W	Cotton	2.92
E0012D/Field 4	33°29'13.14"N/ 79°54'53.96"W	Cotton	3.4
E0012E/Field 5	33°29'14.91"N/ 79°54'41.29"W	Cotton	10.72
E0012F/Field 6	33°29'2.71"N/ 79°54'45.60"W	Cotton	9.92
E0012G/Field 7	33°29'18.11"N/ 79°54'55.79"W	Cotton	17.32
E0012H/Field 8	33°29'9.44"N/ 79°54'41.32"W	Cotton	6.02
E0012K/Field 11	33°28'54.17"N/ 79°54'59.74"W	Cotton	8.28
E0012L/Field 12	33°28'48.99"N/ 79°55'4.70"W	Cotton	6.08
E0013A/Field 1	33°29'21.50"N/ 79°55'47.59"W	Cotton	17.3
E0013C/Field 3	33°29'7.14"N/ 79°55'24.66"W	Cotton	4.52
E0013D/Field 4	33°29'1.14"N/ 79°55'22.37"W	Cotton	17.14
E0014A/Field 1	33°27'27.61"N/ 79°49'17.04"W	Cotton	11.27
E0014B/Field 2	33°27'22.18"N/ 79°49'20.09"W	Cotton	6.43
E0014C/Field 3	33°27'19.23"N/ 79°49'13.42"W	Cotton	5.53
E0014D/Field 5	33°27'21.56"N/ 79°49'2.06"W	Cotton	6.15
E0014E/Field 6	33°27'15.38"N/ 79°49'5.18"W	Cotton	7.03
E0014F/Field 7	33°27'25.27"N/ 79°48'52.01"W	Cotton	3.73
E0014G/Field 8	33°27'20.94"N/ 79°48'43.45"W	Cotton	21.56
E0016A/Field 2	33°31'50.42"N/ 79°58'38.69"W	Cotton	7.06
E0016B/Field 3	33°31'53.88"N/ 79°58'44.79"W	Cotton	9.63
E0016C/Field 4	33°31'59.88"N/ 79°58'47.05"W	Cotton	7.06
E0017A/Field 1	33°34'17.43"N/ 79°48'15.34"W	Cotton	10.58
E0017B/Field 2	33°34'16.27"N/ 79°48'7.35"W	Cotton	14.02
E0017C/Field 3	33°34'9.73"N/ 79°48'0.03"W	Cotton	6.41

E0018A/Field 1	33°30'10.35"N/ 79°53'16.02"W	Cotton	6.2
E0018B/Field 2	33°30'19.39"N/79°53'19.69"W	Cotton	16.29
E0019A/Field 1	33°29'25.56"N/ 79°54'7.08"W	Cotton	14.1
E0020A/Field 1	33°32'28.47"N/ 80° 3'44.38"W	Cotton	3.97
E0020C/Field 3	33°32'24.40"N/ 80° 3'46.44"W	Cotton	3.22
E0020D/Field 4	33°32'16.24"N/ 80° 3'48.32"W	Cotton	3.98
E0021A/Field 1	33°32'20.90"N/ 80° 2'55.98"W	Cotton	1.88
E0021B/Field 2	33°32'21.31"N/ 80° 2'51.84"W	Cotton	9.49
E0022A/Field 1	33°33'16.32"N/ 80° 0'14.07"W	Cotton	11.46
E0023B/Field 2	33°32'21.97"N/ 80° 1'43.38"W	Cotton	6.01
<b>Total Acres:</b>			<b>811.65</b>

b. Before land applying compost/biosolids to any of the 811.65 acres approved by the Department, the Land Application of Sludge Worksheet must be completed.

**E. GROUNDWATER REQUIREMENTS**

1. Once the groundwater monitoring plan, has been approved, if applicable the monitoring requirements will be included in this section.

**F. PROVISIONS FOR EXCESS SLUDGE, ON-SITE/OFF-SITE STORAGE, AND STORMWATER**

1. Storage of sewage sludge, excluding sludge treatment, for more than two (2) years constitutes surface disposal (Regulation 61-9.503.22.(a)(1)(i)). No sludge at any time shall be stored at any South Carolina application site, unless written approval has been obtained from the Department.
  - a. The design storage capacity of sewage sludge will not be permitted to exceed two (2) years at the treatment facility design conditions, or
  - b. Accumulation of sewage sludge in a wastewater treatment unit to greater than fifty (50) percent of the capacity of the unit or to an average depth of greater than design depth constitutes surface disposal of sludge under this regulation, or
  - c. Storage of sewage sludge that adversely impacts the overall facility operation and maintenance or results in an excessive sludge inventory, may result in a facility being identified as a surface disposal site.
  - d. If Off-site storage is necessary, the Department must be alerted prior to storage to review the request and give a formal approval.
2. No more than 6-months of compost can be stored on-site at any time, without ceasing the sludge deliveries.
  - a. Conditions of sludge storage must be approved by the Department as required and identified in the schedule of compliance.
  - b. Any tarp that covers and is underneath the processed sludge must be nonporous as to prevent any leaching and runoff.

**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. (Note: Legacy material is considered any material onsite as of the effective date of this permit.)
      1. If any legacy material is disposed of at a landfill a receipt documenting the disposal of the material should be submitted to the Department.
      2. Within 9-months of the effective date of this permit, the permittee must have removed all legacy material from the site.
        - a. Compliance will be determined by the Department via a DHEC drone flight on the effective date of this permit and a drone flight 9-months from the effective date.
      3. Legacy material which is disposed of via a land application field needs to be treated to class A standards, shown to meet vector attraction requirements and pathogen requirements and must be beneficially useable. If the material meets all of these standards and requirements, the Department must be notified of which sites it will be land applied on, when and the total amount that is being land applied.
      4. Legacy material shall have 3 to 4 composite samples taken from each windrow to confirm material.
        - a. Samples shall be taken through the utilization of a hand auger or a boring tool.
  - c. If the leachate system is not in place and/or approved by the Department, the permittee should provide a Preliminary Engineering Report (PER) identifying how this will be accomplished within 3 months of the effective date of this permit. A schedule should be included in the PER to

identify the time required to complete the system.

- i. The PER should include, but is not limited to, the proposed disposal method of wastewater collected via the leachate system.
    - ii. This PER can include information requested in item b above.
  - d. Identify if there are any proposed changes to the amount of compost processed if final material is stockpiled (including staging areas) on site. Also identify how additional concerns about odor generation from stockpiles will be addressed (in addition to your current odor abatement plan). This should include (but is not limited to) confirming that cover is provided in these areas. Concrete padding must be installed in any stockpiled or staging areas on site. This must be included in the PER note in item c. above.
2. Within 9-months of the effective date of this permit, the permittee must submit a composting permit application to BLWM.
  3. Daily Ammonia monitoring located at the down wind fence line is required. Records of daily maximum provided monthly (1/month) shall be submitted via the schedule of compliance in ePermitting.
    - a. Monitoring will be located in the schedule of compliance for 1/month reporting of daily monitoring
    - b. 1 meter will be utilized and shall be moved to wherever the wind is blowing on the fence line.
    - c. Measuring for 25 PPM or more.
  4. Within 30 days of the effective date of this permit, the permittee must submit a monitoring well application to execute the groundwater portion of the proposed site assessment plan, results of which are due 30 days later. Application shall be submitted in ePermitting and adhere to the requirements of regulation 61-71, monitoring well standards.
  5. Within 30 days of the effective date of this permit, submit an updated **Nutrient Management Plan** (NMP) via ePermitting.

**PART II**

**A. GENERAL REQUIREMENTS**

a. Duty to Comply

1. The permittee must comply with all conditions of this permit. Any permit non-compliance constitutes a violation of the Act and the South Carolina Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for the denial of a permit renewal application.

b. Civil and Criminal Liability

1. Any person who violates a term, condition or schedule of compliance contained within this permit is subject to the actions defined by Sections 48-1-320 and 48-1-330 of the South Carolina Pollution Control Act.
2. Except as provided in permit conditions on "Bypassing" (Part II.C.2.), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for non-compliance.
3. It shall not be an acceptable defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. It is the responsibility of the permittee to have a treatment facility that will meet the final effluent limitations of this permit. The approval of plans and specifications by the Department does not relieve the permittee of responsibility for compliance.

c. Oil and Hazardous Substance Liability

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Act, the South Carolina Pollution Control Act or applicable provisions of the South Carolina Hazardous Waste Management Act and the South Carolina Oil and Gas Act.

d. Permit Modification (if applicable)

1. The permittee shall furnish to the Department within a reasonable time any relevant information which the Department may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with the permit.
2. Upon sufficient cause, this permit may be modified, revoked, reissued, or terminated during its term, after public notice and opportunity for a hearing. Modifications deemed to be minor will not require public notice.
3. The filing of a request by the permittee for a permit modification, or a notification of planned changes or anticipated non-compliance, does not stay any permit condition.

e. Toxic Pollutants

1. Notwithstanding Part II.A.4. above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitations for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

f. State Laws

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

g. Property Rights

1. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

h. Severability

1. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

i. Onshore and Offshore Construction

1. This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

**B. REPORTING REQUIREMENTS**

a. Change in Discharge

1. All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any planned facility expansions, production increases, or process modifications which will result in a new or different discharge of pollutants must be reported by submission of a new ND application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Department of such changes. Following such notice, the permit may be modified to specify and limit any pollutant not previously limited.

b. Twenty-Four Hour Reporting

1. The permittee shall report any non-compliance that meets the criteria in item 2 below. Any information shall be provided orally or electronically to the local DHEC office as soon as possible but no later than 24 hours from the time the permittee/system owner becomes aware of the circumstances. During normal working hours (8:30 AM - 5:00 PM Eastern Standard Time) call the appropriate regional office in the table below.

<b>County</b>	<b>DHEC Region</b>	<b>Phone No.</b>
Georgetown, Horry, Williamsburg	Pee Dee Region BEHS Myrtle Beach	843-238-4378
Clarendon, Kershaw, Lee, Sumter	Pee Dee Region BEHS Sumter	803-778-6548

\* After hour reporting should be made to the 24-hour Emergency Response telephone number 1-888-481-0125.

A follow-up report shall also be provided to DHEC within 5 days of the time the permittee/system owner becomes aware of the circumstances. For all non-compliance meeting the criteria of item 2 below, the '5-Day Reporting' schedule in ePermitting should be used. If the permittee encounters technical difficulties using the reporting schedules in ePermitting, a written submission using DHEC Form 3685 (or submission with equivalent information) should be submitted to the address below. For ePermitting technical assistance, contact DHEC at epermittinghelp@dhec.sc.gov. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the

noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

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Bureau of Water/Water Pollution Control Division  
Data and Records Management Section  
2600 Bull Street  
Columbia, South Carolina 29201

- c. The following shall be included as information which must be reported within 24 hours under this paragraph.
  1. Any non-compliance which may endanger human health or the environment.
  2. Any spill or release that reaches the surface waters of the State.
  3. Any spill or release that exceeds an estimated 500 gallons.
    - i. The Department may waive the written report on a case-by-case basis for reports under item 2 above of this section if the oral report has been received within 24 hours.
- d. Other noncompliance.
  1. The permittee shall report all instances of noncompliance not reported under Part II.L.4 and 5 at the time monitoring reports are submitted. The reports shall contain the information listed in Part II.L.5 of this section.
- e. Other information.
  1. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
- f. Transfer of Ownership or Control
  1. A permit may be transferred to another party under the following conditions:
    - i. The permittee notifies the Department of the proposed transfer at least thirty (30) days in advance of the proposed transfer date.
    - ii. A written agreement is submitted to the Department between the existing and new permittee containing a specific date for the transfer of permit responsibility, coverage, and liability for violations up to that date and thereafter.
  2. Transfers are not effective if, within thirty (30) days of receipt of proposal, the Department disagrees and notifies the current permittee and the new permittee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed.
- g. Expiration of Permit
  1. The permittee is not authorized to discharge after the expiration date of this permit unless permission is granted by the Department (See **Part 1.G.2**).
- h. Signatory Requirements
  1. All applications, reports or information submitted to the Department shall be signed and certified.
    - i. All permit applications shall be signed as follows:
      - a) For a corporation: by a principal executive officer of at least the level of vice-president or by a duly authorized representative.



- b) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or,
- c) For a municipality, State, Federal or other public agency: by either a principal executive officer or ranking elected official.

ii. All reports required by the permit and other information requested by the Department shall be signed by a person described above or by duly authorized representation only if:

- a) The authorization is made in writing by a person described above and submitted to the Department.
- b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

i. Availability of Reports

1. Except for data determined to be confidential under Section 48-1-270 of the South Carolina Pollution Control Act, all reports prepared in accordance with the terms and conditions of this permit shall be available for public inspection at the offices of the Department and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 48-1-340 of the South Carolina Pollution Control Act.
2. Changes in Discharges of Toxic Pollutants or Hazardous Substances.
3. The permittee shall notify the Department as soon as it knows or has reason to believe that any activity has occurred or will occur which would result in the discharge in any outfall of:
4. Any toxic pollutant(s) identified under Section 307(a) of the Act which exceed the highest of the following concentrations and are not limited in the permit.
  - i. 1 mg/l for antimony (Sb);
  - ii. 0.500 mg/l for 2,4-dinitrophenol or 2-methyl, -4,6-dinitrophenol;
  - iii. 0.200 mg/l for acrolein or acrylonitrile;
  - iv. 0.100 mg/l for any other toxic pollutant; or,
  - v. Ten (10) times the maximum concentration value reported in the permit application.
5. Any hazardous substance(s) identified under Section 311 of the Act as determined by Federal Regulation 40 CFR 117.
6. The permittee must notify the Department as soon as it knows or has reason to believe that it has begun or expects to begin to use or manufacture as an intermediate or final product or by-product any toxic pollutant or hazardous substance which was not reported in the permit application.

j. Representative Sampling

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored sludge and finished compost.

k. Test Procedures

1. Test procedures for the analysis of constituents shall conform to regulations published pursuant to State Environmental Laboratory Certification Regulation 61-81 and Section 304(h) of the Act, as

amended. (Federal Register, October 16, 1973; Title 40, Chapter I, Sub-chapter D, Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants." Amended by Federal Register, December 1, 1976, October 8, 1991, and any other amendments that may be promulgated.)

I. Recording of Results

1. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
  - i. the exact place, date and time of sampling or measurement.
  - ii. the dates and times the measurements or analyses were performed.
  - iii. the persons(s) who performed the measurements or analyses and the laboratory certification number where applicable.
  - iv. The results of all required analyses or measurements.

m. Additional Monitoring by Permittee

1. If the permittee monitors for any constituent at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified herein, the results of such monitoring shall be included in the calculation and reporting of the values required in quarterly and annual reports. Such increased frequency shall also be indicated. Additional or accelerated monitoring may be required to determine the nature and source of a non-complying composted sludge or to determine if a single non-complying sample is representative of the long-term condition (monthly average).

n. Records Retention

1. All records and information resulting from the monitoring activities required by this permit including all records of analysis and measurements performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation shall be retained for a minimum of five (5) years, or longer if requested by the Department. The permittee shall furnish to the Department, upon request, copies of records required to be kept by this permit.

o. Definitions

1. "Act" is the Clean Water Act (Formerly referred to as the Federal Water Pollution Control Act) Public Law 92-500, as amended.
2. "Bulk Sludge" is sludge that is not sold or given away in a bag or other container for land application.
3. "Composite Sample" is one of the following four types of composite samples as specified within this permit:
  - i. An influent or effluent portion collected continuously over a specified period of time at a rate proportional to the flow.
  - ii. A combination of not less than eight (8) influent or effluent grab samples collected at regular (equal) intervals over a specified period of time, properly preserved, (See part I.E.4.) and composited by increasing the volume of each aliquot in proportion to flow. If continuous flow measurement is not used to composite in proportion to flow, the following method will be used: Take an instantaneous flow measurement each time a grab sample is collected. At the end of the sampling period, sum the instantaneous flow measurements to obtain a total flow to determine the partial amount (percentage) of each grab sample to be combined to obtain the composite sample.

- iii. A combination of not less than eight (8) influent or effluent grab samples of equal volume but at variable time intervals that are inversely proportional to the volume of the flow. That is, the time interval between aliquots is reduced as the volume of flow increases.
- iv. This is an optional method that may be used with prior Departmental approval if effluent flows, on a daily basis, do not vary more than 15%. A combination of not less than eight (8) influent or effluent grab samples of constant (equal) volume collected at regular (equal) time intervals over a specified period of time, while being properly preserved.

- 4. "Department" is the South Carolina Department of Health and Environmental Control.
- 5. "Derived Material" is the final product when other materials are mixed with the sludge. The final product must meet the applicable requirements related to pollution limits, pathogen reduction and vector attraction reduction after the materials have been added to the sludge.
- 6. "Grab Sample" is an individual discrete or single influent or effluent portion of at least 100 milliliters collected at a time representative of the discharge and over a period not exceeding 15 minutes and retained separately for analysis. Instantaneous flow measured at the time of grab sample collection shall be used to calculate quantity.
- 7. "Other Container" is either an open or closed receptacle. This includes, but is not limited to a bucket, a box, a carton and a vehicle or trailer with a load capacity of one metric ton or less.
- 8. "Pollution Control Act" (PCA) means the South Carolina Pollution Control Act (PCA), S.C. Code Ann. Section 48-1-10 et seq. (1976).

p. Right of Entry

- 1. The permittee shall allow the Commissioner of the Department of Health and Environmental Control, the Regional Administrator of EPA, and/or their authorized representatives:
  - i. To enter upon the permittee's premises where a regulated facility or activity and effluent source is located in which any records are required to be kept under the terms and conditions of this permit; and,
  - ii. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and to sample or monitor any substances or parameters at any location for the purpose of assuring permit compliance.

**C. OPERATION AND MAINTENANCE**

a. Facilities Operation

- 1. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance include effective performance based on design facility removals, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls as determined by the laboratory certification program of the Department. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit. Maintenance of facilities, which necessitates unavoidable interruption of operation and degradation of effluent quality shall be scheduled during non-critical water quality periods and carried out in a manner approved by the Department.

2. The permittee shall maintain at the permitted facility a complete log of all operations at the facility. The log shall be made available for on-site review during normal working hours. The log shall contain operation and maintenance instructions for all equipment and appurtenances associated with the composting site. The log shall also contain contact phone numbers for the permittee, landowner, site operator, Pee Dee BEHS Myrtle Beach Office, and the Department's EQC Central Office.
3. The permittee shall develop and maintain at the facility a complete Operation and Maintenance Manual for Williamsburg Recycling, LLC. The manual shall be made available for on-site review during normal working hours. The manual shall contain operation and maintenance instructions for all equipment and appurtenances associated with the facility. The manual shall contain a general description of the treatment process(es), the operational procedures to meet the requirements in the first paragraph above, and the corrective action to be taken should operating difficulties be encountered.

b. Bypassing

1. Any intentional diversion from or bypass of waste streams from any portion of this facilities which is not a designed or established operating mode for the facility is prohibited except (a) where unavoidable to prevent loss of life, personal injury or severe property damage, or (b) where excessive storm drainage or run-off would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit and there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or retention of untreated wastes. "Severe property damage" does not mean economic loss caused by delays in production.

c. Duty to Mitigate, Halt or Reduce Activity

1. The permittee shall take all reasonable steps to prevent, minimize or correct any adverse impact on public health or the environment, resulting from non-compliance with this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with this permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided.

d. Power Failures

1. Not applicable to this permit.

e. Removed Substances

1. Solids, sludges, or other residuals removed in the course of screening or control of the septage shall be disposed of in a manner such as to prevent such materials from entering State waters and in accordance with guidelines issued pursuant to Section 405 of the Act, and the terms of a construction or NPDES and/or solid or hazardous waste permit issued by the Department (See Part III for specific disposal method approved).

f. All Weather Access Road

1. The permittee shall maintain an all-weather access road to the composting site and to the related equipment at all times.

### PART III

#### 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 another 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.
- c. The permittee is authorized to utilize this approval for the unrestricted distribution and marketing of composted sludge in bags or other containers with load capacities of one metric ton or less.
- d. The permittee is authorized to utilize this approval for disposal of composted sludge through land application by the permittee, involving repetitive bulk applications of composted sludge on specific sites such as farmland or pasture by the permittee (See Part I.D) , also this requirement does not restrict the permittee from utilizing the pasteurized sludge (or derived material) in landscaping or other public works projects or activities.
- e. The permittee must provide the Department, for information purposes, an annual update regarding bulk distribution or sales of sludge or derived material, in excess of one metric ton per container, which is associated with the distribution and marketing program. At a minimum, this information shall include user's name, address, total quantity of material received and general proposed use information. If the permittee is to land apply bulk sludge or derived material, the information is also required if the permittee has an approved Nutrient Management Plan with the identified components. See Part III.C.1 of this permit.
- f. Regulation 61-9 Section 503.13(a)(4)(ii) requires that the product of the concentration for each pollutant listed in Table 4 of section 503.13 (and found in the table in Part I.A.2.a of this permit) in sludge or derived material sold or given away in a bag or other container for application to the land and the annual whole sludge application rate (AWSAR) for the sludge (or derived material) not cause the annual pollutant loading rate for the pollutant in Table 4 of section 503.13 (and found in the table in Part I.A.2.a of this permit) to be exceeded. This section contains the procedure used to determine the AWSAR for a sludge (or derived material) that does not cause the annual pollutant loading rates in Table 4 of section 503.13 (and found in the table in Part I.A.2.a of this permit) to be exceeded.

The relationship between the annual pollutant loading rate (APLR) for a pollutant and the annual whole sludge application rate (AWSAR) for a sludge (or derived material) is shown in equation (1).

$$\text{APLR} = C \times \text{AWSAR} \times 0.001 \quad (1)$$

Where:

APLR = Annual pollutant loading rate in kilograms per hectare per 365-day period.

C = Pollutant concentration in milligrams per kilogram of total solids (dry weight basis).

AWSAR = Annual whole sludge application rate in metric tons per hectare per 365-day period (dry weight basis).

0.001 = A conversion factor.

To determine the AWSAR, equation (1) is rearranged into equation (2):

$$\text{AWSAR} = \frac{\text{APLR}}{(C \times 0.001)} \quad (2)$$

The procedure used to determine the AWSAR for a sludge (or derived material) is presented below.

**PROCEDURE:**

1. Analyze a sample of the sludge (or derived material) to determine the concentration for each of the pollutants listed in Table 4 of section 503.13 (and found in the table in Part I.A.2.a of this permit) in the sludge or derived material.
2. Using the pollutant concentrations from Step 1 and the APLRs from Table 4 of section 503.13 (and found in the table in Part I.A.2.a of this permit), calculate an AWSAR for each pollutant using equation (2) above.
3. The AWSAR for the sludge (or derived material) is the lowest AWSAR calculated in Step 2.

**B. ADDITIONAL OPERATIONAL REQUIREMENTS**

- a. The permittee must obtain prior Departmental approval of planned changes in the facility when the alteration or addition results in a significant change in the permittee's sludge use or disposal practices and such alteration, addition or change may justify the application of approval conditions that are different from or absent in the existing approval.
- b. The ND permit may be modified or revoked and reissued if there are material and substantial alterations or additions to the approved facility or activity (including a change or changes in the permittee's sludge (or derived material) use or disposal practice) which occurred after the approval issuance which justify the application of approval conditions which are different from or absent in the existing approval.
- c. Periodic inspections may be conducted by Department authorized representatives to ensure compliance with State regulations and permit conditions. Any necessary modification to this permit may be based upon these evaluations.
- d. SCDHEC reserves the right to immediately revoke any part or all of this approval if these conditions are not met or if emergency conditions warrant. The permittee shall suspend all distribution and marketing actions if this approval is revoked.
- e. Sludge solids that are not distributed or marketed may be disposed of under existing approvals or permits that may be in effect. (e.g., Part 1.C Alternative Sludge Disposal)

- f. The permittee will take reasonable steps to prevent or minimize discharge or misuse of sludge or derived material in violation of this approval which may possibly adversely affect human health or the environment.
- g. Any nuisance generated at this facility such as dust, odor, and flies must be abated within a time frame as designated by this Department.
- h. If there is no disposal during a quarter, the permittee shall report "No Application" in report. The permittee must meet sampling frequency requirement of four times/year (4 times/year).
- i. If the State determines that additional treatment of the waste is necessary or new regulations promulgated by either the State or Federal Government require further treatment of the waste, the permittee must comply with this requirement in a time frame specified by The Department.
- j. This approval may be modified to address any standard for sludge (or derived material) use or disposal, or additional controls of a pollutant or practice not currently limited in this permit.
- k. For Land Application (ND) annual billing (under R.61-30.B.(2)(b)) the "actual flow" limit for this wastewater treatment facility shall be identified as the design flow (based on the wastewater plants listed in Part I.A.1.a.i) greater than 2 MGD and less than 5 MGD.

**C. BULK LAND APPLICATION REQUIREMENTS**

- a. The Class A Bulk (Composted) sludge should be land applied to sites listed in Part 1.D per this permit once approved.
- b. The permittee must record sludge (or derived material) monitoring results on a form approved by the Department. The Sludge Agronomic Loading Rate Worksheet (DHEC Form 0874) should be completed prior to each land application event.
- c. Sludge solids that are not land applied may be disposed of under existing permits that may be in effect.
- d. Sites adjacent to public roads must be posted. Posting shall consist of at least four (4) signs, placed approximately at the corners of the site and clearly visible to the public.
- e. Sludge will be transported from Williamsburg Recycling, LLC to the application site in appropriate vessels. Primary responsibility for any leakage will be borne by the Permittee. Transporters shall use all sanitary precautions in the collection, storage transportation, and in transit, be kept covered with an appropriate cover provided with eyelets and rope tie-downs or any other approved method which shall prevent blowing or spillage of loose material or liquid. Should any spillage occur during the transportation of the products, the owner/operator shall take immediate steps to clean up the products.
- f. The application of sludge must be accomplished using calibrated equipment designed for uniform distribution over the site. The permittee is responsible for the land application event.
- g. Buffers zones around the South Carolina approved sites shall be used. Buffers of at least 50 feet should be maintained along roadways and property boundaries; springs, drainage ditches and drinking water wells. Surface water bodies must have buffers of at least 100 feet. For fixed pivot irrigation systems, a reduction or elimination of the buffer for drainage ditches (not waters of the state) is acceptable with prior approval provided there is neither standing water within the ditch or runoff as a result of application from the site via the drainage way.
- h. Surface application of sludge should not occur in areas with slopes greater than 8 percent (row crops) to 10 percent (pasture and forestland). If injection is the method of application, sludge may be applied to areas with slopes greater than 10 percent.

- i. The permittee is responsible for controlling any nuisance conditions that may occur due to operations at the site. The permittee shall take appropriate measures to prevent wind erosion and aerosol drift from the land application site. If the Department becomes aware of nuisance conditions such as odors at the site, the Department will require additional odor control measures be taken.
- j. With exception of the initial application of sludge and providing a limited period of time for infiltration into the soil, there shall be no ponding (free standing water) on the land application sites as a result of sludge application, and the sites must be properly maintained. The sludge must be applied using methods that suppress the chance of runoff occurring. Sludge application during periods of precipitation or wet weather is strictly prohibited. Sludge application after rainfall events should not occur if ponding (free standing water) or the potential of runoff from the site would occur.
- k. Bulk sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.
- l. Bulk sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sludge enters a wetland or other waters of the State, as defined in R.61-9.122.2, except as provided in a permit issued pursuant to section 402 or 404 of the CWA.
- m. Bulk sludge shall be applied to agricultural land, forest, a public contact site, or a reclamation site at a whole sludge application rate that is equal to or less than the agronomic rate for the bulk sludge, unless, in the case of a reclamation site, otherwise specified by the Department.
- n. The Department may require the permittee to limit land application on any site. The Permittee must cease operation on that site when notified in writing by the Department
- o. No sludge at any time shall be stored at any South Carolina application site, unless written approval has been obtained from the Department. (Refer to Part 1.F)
- p. The Permittee shall maintain a record of the method(s) used in "estimating" the loading rate (i.e. pump curves, production charts, water use records, etc.). Records of any necessary calculations must also be kept. This information shall be made available for review by Department personnel.
- q. The permittee shall maintain at the permitted facility a log and record the following for each sludge load:
  - 1. Name of the hauling company (if used)
  - 2. The route used from the treatment site to the application site
  - 3. Volume off loaded
  - 4. The field number receiving the sludge load
  - 5. The time, date, and any site information
    - I. The log shall be made available for review.
    - II. The permittee shall maintain a record of the method(s) used in "estimating" the loading rate (i.e., pump curves, production charts, water use records, etc.). Records of any necessary calculations must also be kept. This information shall be made available for review by Department personnel.
- r. For the bulk land application program, the permittee must maintain the following information (as summary of this information should be submitted with the annual report):
  - 1. Name and address of landowner and location of the application site(s).
  - 2. Name and address of the party managing the site(s) if different than the owner.



3. Site location(s) on detailed maps.
  4. A description of how the management practices in Part 1.A.3 are met for each site on which bulk sewage sludge is applied.
  5. The above information should be available to any DHEC compliance or permitting staff that might request the information and should be in a common location and be readily available for review.
- s. All Land Application fields must utilize year-round crop cover to prevent unutilized inorganic nutrients and organic nutrients which mineralize after harvest leaching to the groundwater or running to surface waters.

#### **D. ODOR CONTROL REQUIREMENTS**

- a. The permittee 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.
- b. The permittee shall prepare an odor abatement plan for the sewage sludge treatment sites, any sludge storage or lagoon areas, and land application sites. The permittee shall prepare the plan in accordance with R.61-9.503.50 (Odor Control Requirements). The plan must include the following:
  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 reduction of undesirable odors.
  3. Use of setbacks.
  4. Contingency plans and methods to address odor problems for the type of disposal/application method used.
- c. The most current odor abatement plan must be on file with the Department after completion. The Department may review the odor abatement plan for compliance with R.61-9.503.50. The Department may require changes to the plan as appropriate.
- d. In accordance with R.61-9.503.50(c), the permittee shall not 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. Should an odor problem come 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.
- e. In accordance with R.61-9.503.50(d), should the Department determine 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.
- f. In accordance with R.61-9.503.50(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.