

# Land Application Permit

## (Class A Sludge Distribution and Marketing)

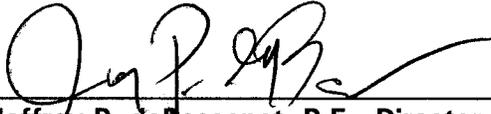
### This State Permit Certifies That

**BIOENERGY TECHNOLOGIES OF BERKELEY COUNTY, LLC**

has been granted permission to distribute and market  
Class A-EQ sewage sludge from a facility located at

**371 Oakley Road  
Moncks Corner, SC 29461 in  
Berkeley County**

In accordance with limitations, monitoring requirements and other conditions set forth in Parts II, III, and I hereof. This permit is issued consistent with the provisions of the Pollution Control Act of South Carolina (S.C. Code Sections 48-1-10 *et seq.*, 1976) and with Regulation R61-9.



Jeffrey P. deBessonnet, P.E., Director  
Water Facilities Permitting Division  
Bureau of Water

Issued: June 28, 2013

Expires: July 31, 2023

Effective: August 1, 2013

Permit No.: ND0087939

<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



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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 or derived material that are generated at the approved domestic wastewater treatment plants listed below and treated to Class A - EQ standards by pasteurization may be used in this distribution and marketing program. If the permittee needs to add new WWTP sludge sources to this approval list, written requests will be evaluated by the Department:

i.

Facility Name	Permit #	Production (dry metric tons)
BCW&SA/Lower Berkeley WWTP	SC0046060	3,000
Charleston Water System/Plum Island WWTP	SC0021229	6,000
Pilgrims Pride	SC0000795	300
<b>Total Annual Sludge Source</b>		9,300 dmt

**\*Note: The permittee may not accept any WWTP sludge sources from any other facility without prior Department approval.**

- b. Pasteurized 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 pasteurization:

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

-AND-

Using the pasteurization method, the temperature of the sewage sludge (or derived material) is maintained at 70 degrees Celsius or higher for 30 minutes or longer.

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

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

The mass volatile solids in the sewage sludge (or derived material) shall be reduced by a minimum of 38 percent.

-OR-

When the mass volatile solids in the sewage sludge (or derived material) cannot be reduced by a minimum of 38 percent, vector attraction can be demonstrated by digesting a portion of the previously digested sewage sludge (or derived material) anaerobically in the laboratory in a bench scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. When at the end of the 40 days, the volatile solids in the sewage sludge (or derived material) at the beginning of that period is reduced by less than 17 percent, VAR is achieved.

- i. Volatile Solids Reduction (VSR) (per batch basis)
  - ii. Temperature (per batch basis); when applicable
  - iii. The permittee shall document and retain records of the operational parameters or application methods used to achieve the vector attraction reduction requirements.
- d. Any sludge or derived material not meeting the PFRP and/or 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 or by other Department approved methods. The Department must issue written approval prior to alternative disposal activities or change of methods specified in Part I.A.1.b&c.

**2. Sludge Quality (Distribution & Marketing Program)**

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

<b>Pollutant</b>	<b>Ceiling Concentrations (mg/kg, dry weight basis)</b>	<b>Pollutant Concentration Monthly Average (mg/kg, dry weight basis)</b>	<b>Annual Pollutant Loading Rate (kilograms per hectare per 365 day period)</b>
Arsenic	75.0	41.0	2.0
Cadmium	85.0	39.0	1.9
Copper	4300.0	1500.0	75.0
Lead	840.0	300.0	15.0
Mercury	57.0	17.0	0.85
Molybdenum	75.0	Not Applicable	Not Applicable
Nickel	420.0	420.0	21.0
Selenium	100.0	100.0	5.0
Zinc	7500.0	2800.0	140.0
<i>From 61-9.503</i>	<i>Table 1, Section 503.13</i>	<i>Table 3, Section 503.13</i>	<i>Table 4, Section 503.13</i>

- b. Sludge or derived material found to exceed the pollutant concentration levels of the Ceiling Concentrations (in the above table) may not be sold or given away and must be disposed of by a method approved by the Department. (e.g. landfill. See Part I.B)
- c. 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.7 of this permit.
- d. 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.1. of this permit.
- e. If the Department becomes aware of nuisance conditions such as odors associated with the pasteurization operation, additional control measures may be required

### 3. Operation and Monitoring Requirements

- a. All laboratory testing completed for all aspects of reporting and monitoring must be performed by a SC State certified laboratory and the laboratory certification numbers for each parameter must be included in all reports.
- b. The permittee shall provide the Department with an annual certification of the content of the sludge or derived material:
  - 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. The PCBs shall be less than 50 milligrams per kilogram (mg/kg) of total solids (dry weight basis).
- c. The permittee shall sample and provide a quarterly report of the following to the Department.
  - i. The sludge or derived material shall be sampled monthly (twelve times per year) for the parameters noted in the table in Part I.A.2.a.
  - ii. The permittee shall on a monthly basis evaluate whether the sludge or derived material can meet the pathogen reduction requirements identified in Part I.A.1.b of this permit. The permittee shall identify whether the sludge or derived material can comply with Class A pathogen reduction requirements. Microbiological monitoring for fecal coliform or *Salmonella sp.* to demonstrate

pathogen reduction during a given monitoring period shall be conducted as close to the actual distribution as possible with a two (2) week maximum between the time testing occurs and actual distribution.

- iii. The permittee shall on a monthly basis evaluate whether the sludge or derived material can comply with the vector attraction reduction requirements identified in Part I.A.1.c of this permit.
- iv. 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:
  - 1). Date/Time.
  - 2). Temperature.
- d. The sampling frequency may be increased or reduced to quarterly sampling in the future subject to the Department's review of the sampled data and variability of source and type of feed material.

#### **4. Recordkeeping and Reporting.**

- a. All quarterly reports shall include a three month reporting period based on a calendar year (January-February-March, April-May-June, July-August-September, October-November-December). The quarterly reports are due on or before the 28th day following the end of each reporting period. The first quarterly report after this approval letter may contain a partial submittal from the date of this approval through the end of the reporting period.
- b. Class A sludge or derived material production shall be recorded and maintained by the permittee. This information must be updated and included in the quarterly reports:
  - i. Total Class A sludge or derived material produced (dry tons).
  - ii. Total Class A sludge or derived material to storage piles (dry tons).
  - iii. Total Class A sludge or derived material to landfill (dry tons).
  - v. Total Class A sludge or derived material sold or given away (dry tons).
- c. Since BioEnergy Technologies of Berkeley County, LLC will accept sludge or alternative feedstocks from facilities with design flow greater than 1 MGD, this is a Class I sludge management facility. Class I sludge management facilities (includes but is not limited to all facilities with pretreatment programs, Publicly Owned Treatment Works (POTW) with a design flow rate equal to or greater than 1 Million gallons per day, and POTW's that serve 10,000 people or more) shall submit the following to: United States Environmental Protection Agency Region 4, Clean Water Act Enforcement Section, Water Management Division, 61 Forsyth Street, S.W., Atlanta, Georgia, 30303.

- i. The information in 40 CFR Part 503.17(a) except the information in 40 CFR Part 503.17(a)(3)(ii), 503.17(a)(4)(ii) and 503.17(a)(5)(ii), for the appropriate requirements on February 19 of each year.
- ii. The information in 40 CFR Part 503.17(a)(5)(ii)(A) through (a)(5)(ii)(G) on February 19 of each year when ninety (90) percent or more of any of the cumulative pollutant loading rates in Table 2 of 503.13 is reached at a site. (This will apply only if table 3 of 503.13 is exceeded.)
- iii. All annual reports shall be received by the Department no later than February 19th of each calendar year. This will coincide with the reports which may be required for submittal to EPA Region 4, under the conditions of the Federal sludge regulations.

The requirements to send information to EPA Region IV will remain in effect until the State of South Carolina is delegated the sludge program under 40 CFR Part 123 or 40 CFR Part 501.

- d. Records of monitoring required by the permits related to sludge (or derived material) 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).
- e. Sludge (or derived material) monitoring procedures shall be those specified in 1) 40 CFR Part 502; 2) 40 CFR Part 136; or 3) other procedures specified in the ND permit (in that order of "preference" depending on the availability and applicability of a particular method at the time the ND permit is issued).
- f. The permittee must provide sludge (or derived material) monitoring results on a form(s) approved by the Department.
- g. The permittee shall submit the results of all sludge (or derived material) monitoring if done more frequently than required by the approval.

## **B. ALTERNATE SLUDGE DISPOSAL METHOD**

1. Sludge solids or derived material may be removed from this facility and transported to the Berkeley County Water and Sanitation Solid Waste Management Facility Sub-Title D, Class III Landfill under the following conditions:
  - a. All containers for sludge (or derived material) 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 available capacity at the landfill.
  - c. The hauling of sludge or derived material 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 or derived material 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.

**C. SCHEDULE OF COMPLIANCE**

Not applicable to this permit.

**D. GENERAL MONITORING AND REPORTING**

**1. Representative Sampling**

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored sludge (or derived material) and finished product.

**2. Reporting Monitoring Results**

**a. Class A Sludge and Derived Material Monitoring & Reporting**

Class A Sludge or derived material should be monitored and reported per requirements in Part I.A.3 and Part I.A.4.

**b. Soil Monitoring**

Not applicable to this permit.

**c. Groundwater Monitoring (if deemed necessary in the future by the Department)**

Not applicable to this permit at this time.

**d. Submittal of Reports**

- i. All quarterly reports should be postmarked no later than the 28th day of the month following the completed reporting period.
- ii. All annual reports shall be received by the Department no later than February 19th of each calendar year.
- iii. One original and one copy of all reports required by this permit shall be submitted to the:

S.C. Department of Health and Environmental Control  
Bureau of Water/Water Pollution Control Division  
Data & Records Management Section  
2600 Bull Street  
Columbia, South Carolina 29201

**3. Test Procedures**

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.)

**4. Recording of Results**

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. the exact place, date and time of sampling or measurement;
- b. the dates and times the measurements or analyses were performed;
- c. the person(s) who performed the measurements or analyses and the laboratory certification number where applicable;
- d. the results of all required analyses or measurements.

**5. Additional Monitoring by Permittee**

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 pasteurized sludge or derived material or to determine if a single non-complying sample is representative of the long term condition (monthly average).

**6. Records Retention**

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.

**7. Definitions**

- a. "Act" is the Clean Water Act (Formerly referred to as the Federal Water Pollution Control Act) Public Law 92-500, as amended.
- b. "Department" is the South Carolina Department of Health and Environmental Control.

- c. "Derived Material" is the final product when other materials are mixed with the sewage 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 sewage sludge.
- d. "Composite Sample" is one of the following four types of composite samples as specified within this permit:
  - i. A sample 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) 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) 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. Reserved
- e. "Grab Sample" is an individual discrete or single sample 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.
- f. "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. Right of Entry

The permittee shall allow the Commissioner of the Department of Health and Environmental Control, the Regional Administrator of EPA, and/or their authorized representatives:

- a. To enter upon the permittee's premises where a regulated facility or activity and Class A sludge or derived material source is located in which any records are required to be kept under the terms and conditions of this permit; and,
- b. 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.

## **PART II**

### **A. GENERAL REQUIREMENTS**

#### **1. Duty to Comply**

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.

#### **2. Civil and Criminal Liability**

- a. 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.
- b. 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.
- c. 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.
- d. It is the responsibility of the permittee to have a treatment facility that will meet the final Class A Sludge or derived material limitations of this permit. The approval of plans and specifications by the Department does not relieve the permittee of responsibility for compliance.

#### **3. Oil and Hazardous Substance Liability**

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.

#### **4. Permit Modification**

- a. 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.
- b. 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.

- c. 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.

**5. Toxic Pollutants**

Notwithstanding Part II.A.4. above, if a toxic sludge standard or prohibition (including any schedule of compliance specified in such sludge 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 sludge standard or prohibition and the permittee so notified.

**6. State Laws**

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.

**7. Property Rights**

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.

**8. Severability**

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.

**B. REPORTING REQUIREMENTS**

**1. Change in Discharge**

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 limitations or requirements 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.

## **2. Twenty-Four Hour Non-Compliance Reporting**

- a. The permittee shall report any non-compliance with provisions specified in this permit which may endanger public health or the environment. The permittee shall notify the Department orally within 24 hours of becoming aware of such conditions. During normal working hours call (843) 953-0150. After hour reporting should be made to the 24 hour Emergency Response telephone number 1-888-481-0125. The permittee shall provide the following information to the Department in writing, within five (5) days of becoming aware of such conditions:
  - i. A description of the discharge and cause of non-compliance; and,
  - ii. The period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the non-complying discharge.
- b. The following violations shall be included in a 24 hour report when they might endanger health or the environment:
  - i. Any distribution or marketing of material that did not meet requirements identified in Part I.A.1 and Part I.A.2 of this permit.
- c. As soon as the permittee has knowledge of or anticipates the need for a bypass, but not later than ten (10) days before the date of the bypass, it shall notify the Department and provide a determination of the need for bypass as well as the anticipated quality, quantity, time of duration, and effect of the bypass.

## **3. Transfer of Ownership or Control**

A permit may be transferred to another party under the following conditions:

- a. The permittee notifies the Department of the proposed transfer at least thirty (30) days in advance of the proposed transfer date;
- b. 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.

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.

## **4. Expiration of Permit**

The permittee is not authorized to discharge after the expiration date of this permit, unless a completed application for reissuance is submitted no later than one hundred eighty (180) days prior to the expiration date. Permission may be granted to submit an application later than this, but not later than the expiration date of the permit. In accordance with Section 1-23-370 of the code of laws of South Carolina, if a timely and sufficient application is made for any

activity of a continuing nature, the existing permit does not expire until a final determination is made to renew or deny renewal of the existing permit.

#### **5. Signatory Requirements**

All applications, reports or information submitted to the Department shall be signed and certified.

- a. All permit applications shall be signed as follows:
  - i. For a corporation: by a principal executive officer of at least the level of vice-president or by a duly authorized representative;
  - ii. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or,
  - iii. For a municipality, State, Federal or other public agency: by either a principal executive officer or ranking elected official.
- b. 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:
  - i. The authorization is made in writing by a person described above and submitted to the Department;
  - ii. 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.)

#### **6. Availability of Reports**

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, sludge (or derived material) quality 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.

#### **7. Changes in Discharges of Toxic Pollutants or Hazardous Substances**

- a. 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 of:
  - i. 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.

- 1 mg/l for antimony (Sb);
  - 0.500 mg/l for 2,4-dinitrophenol or 2-methyl, -4,6-dinitrophenol;
  - 0.200 mg/l for acrolein or acrylonitrile;
  - 0.100 mg/l for any other toxic pollutant; or,
  - Ten (10) times the maximum concentration value reported in the permit application.
- ii. Any hazardous substance(s) identified under Section 311 of the Act as determined by Federal Regulation 40 CFR 117.
- b. 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.

## C. OPERATION AND MAINTENANCE

### 1. Facilities Operation

- a. The wastewater treatment plant is assigned a classification of Group II-B (Biological) in the Permit to Construct which is issued by the Department. The required operator is a grade of C (Biological).
- b. 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 includes 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 Class A sludge or derived material quality shall be scheduled during non-critical water quality periods and carried out in a manner approved by the Department.
- c. 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 site.

**2. Bypassing**

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 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.

**3. Duty to Mitigate, Halt or Reduce Activity**

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.

**4. Power Failures**

Not applicable to this permit.

**5. Removed Substances**

Solids, sludges, derived material or other residuals removed in the course of screening or control of the sludge 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 ND and/or solid or hazardous waste permit issued by the Department (See Part I.B for specific alternate disposal method approved).

**6. All Weather Access Road**

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

### PART III

#### A. SPECIAL OPERATIONAL REQUIREMENTS

1. A Department approved label shall be provided to all recipients of the Class A material. Either a label shall be affixed to the bag or other container in which sewage 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 sewage 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:
  - a. The name and address of the person who prepared the sewage sludge or derived material that is sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the sewage sludge or derived material to the land is prohibited except in accordance with the instructions on the label or information sheet.
  - c. The annual whole sludge application rate for the sewage 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.2.a of this permit for Annual Pollutant Loading Rate).
  - d. The annual whole sludge application rate for the sewage 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).
2. Sludge or derived material may be stored; however, the storage site must be equipped with a leachate surface water and storm water collection system. Leachate and storm water from paved pads must not be allowed to discharge to surface waters. Any off site storage must be approved by the Department.
3. The permittee is authorized to utilize this approval for the unrestricted distribution and marketing of pasteurized sludge (or derived material) in bags or other containers with load capacities of one metric ton or less.
4. The permittee is not authorized to utilize this approval for unrestricted disposal of pasteurized sludge (or derived material) through land application by the permittee, involving repetitive bulk applications of pasteurized sludge (or derived material) on specific sites such as farmland or pasture by the permittee, however this requirement does not restrict the permittee from utilizing the pasteurized sludge (or derived material) in landscaping or other public works projects or activities.
5. The permittee must provide the Department, for information purposes, a quarterly 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.

6. The materials listed in the table below are the approved feedstock covered under this permit. This permit will limit the type of feedstock to non-hazardous and organic materials. If a new feedstock is to be added, administrative approval must be obtained by the Department prior to its use:

Feedstock
WWTP Sludge <sup>a</sup>
Grease Trap Waste
DAF Sludge
Food Waste

- a. The approved WWTP sludge sources are identified in Part I.A.1.a.i of this permit. The sources of the remaining feedstocks have been identified in the Preliminary Engineering Report dated September 2012. Any additional sources to the above feedstock should be provided to the Department.
7. 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 sewage 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 sewage 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 sewage 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 sewage sludge (or derived material) is shown in equation (1).

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

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):

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

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

**PROCEDURE:**

1. Analyze a sample of the sewage 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 sewage 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 sewage sludge (or derived material) is the lowest AWSAR calculated in Step 2.

**B. ADDITIONAL OPERATIONAL REQUIREMENTS**

1. 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 or derived material 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.
2. 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.
3. SCDHEC authorized representatives may conduct periodic inspections to insure compliance with State regulations and approval conditions.
4. 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.
5. Sludge solids or derived material that are not distributed or marketed may be disposed of under existing approvals or permits (e.g. landfill) that may be in effect.
6. 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.

7. This approval may be modified to address any standard for sludge use or disposal or additional controls of a pollutant or practice not currently limited in this approval.
8. Each sludge or feedstock delivery to this site shall be entered into a log recording the sludge or feedstock origin, contact name & address, telephone number, time.
9. Any nuisance generated at this facility such as dust and odor must be abated within a time frame as designated by this Department.
10. If there is no disposal or distribution and marketing during a quarter, the permittee shall report "No Application" in report.
11. 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.
12. 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.
13. 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 5 MGD.

#### **C. ODOR CONTROL REQUIREMENTS**

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

1. The permittee shall prepare an odor abatement plan for the sewage sludge treatment sites, any sludge (or derived material or feedstock) 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:
  - a. Operation and maintenance practices which are used to eliminate or minimize undesirable odor levels in the form of best management practices for odor control.
  - b. Use of treatment processes for reduction of undesirable odors.
  - c. Use of setbacks.
  - d. Contingency plans and methods to address odor problems for the type of disposal/application method used.
2. The odor abatement plan must be submitted to 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.

3. 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 in (a) & (b) above 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:
  - a. The health or welfare of the people;
  - b. Plant, animal, freshwater aquatic, or marine life;
  - c. Property; or
  - d. Enjoyment of life or use of affected property.
4. In accordance with R.61-9.503.50(d), should the Department determine that an undesirable level of odor exists, the Department may require:
  - a. the permittee to submit a corrective action plan to address the odor problem.
  - b. remediation of the undesirable level of odor within a reasonable timeframe, and
  - c. in an order, specific methods to address the problem.
5. 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 or derived material management program.



SOUTH CAROLINA DEPARTMENT OF  
HEALTH AND ENVIRONMENTAL CONTROL  
BUREAU OF WATER  
Application for a Land Disposal (No Discharge or ND) Permit  
(Please Type or Print)

I. **Project Name:** BioEnergy Technologies of Berkeley County, LLC.

II. **County:** Berkeley

III. **Owners Name:** BioEnergy Technologies of Berkeley County, LLC.

Address: 100 N. Main Street

City, State, & Zip: Sumter, SC 29150

Area Code & Telephone #: (888) 822-7774

**RECEIVED**  
JAN 26 2012  
WATER FACILITIES  
PERMITTING DIVISION

IV. **Project Status:** Proposed () or if existing: Permit No.: ND00  
Expansion () or  
Renewal ()

V. **Project Description:** Green power facility which will produce electricity utilizing biogas formed from waste products processed through an anaerobic digester.

VI. **Location of the Wastewater Treatment Plant and Land Disposal Site(s):**

a) Location of the wastewater treatment plant (include a map): **Green Power Facility**

Latitude: N 33°08'14" Longitude: W 80°03'06"

Location Description: 351 Oakley Road near Moncks Corner, SC

b) Location and size (in acres) of the land disposal site(s):

Site 1 Size: 89 acres

Latitude: N 33°07'20" Longitude: W 80°02'07"

Location Description (include a map): Southeast of the proposed BioEnergy facility

Site 2 Size: \_\_\_\_\_ acres

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Location Description (include a map): \_\_\_\_\_