

State Permit Number: DM 1203-S-03

Effective Date: June 1, 2012

Expiration Date: May 31, 2017



AUTHORIZATION TO CONDUCT
A DISTRIBUTION AND MARKETING PROGRAM
FOR THE UTILIZATION OF SLUDGE OR SLUDGE PRODUCTS

Pursuant to the provisions of 7 Del. C., §6003

Blessing Greenhouses & Compost Facility
9372 Draper Road
Milford, Delaware 19963

is hereby granted authorization to conduct a distribution and marketing program, as specified in this permit, for the utilization of sludge compost generated at the Blessing Greenhouses and Composting Facility.

1. The general requirements, monitoring requirements and other permit conditions are set forth in Parts I, II and III hereof.

Robert G. Underwood, Program Manager
Surface Water Discharges Section
Division of Water
Department of Natural Resources
and Environmental Control

Date Signed

GENERAL DESCRIPTION OF OPERATION

Unless separate approval is granted, as evidenced by a Department of Natural Resources and Environmental Control (Department) writing, Blessing Greenhouses and Compost facility is prohibited from accept any new materials for composting at the Blessing Greenhouses Compost facility. Acceptance of new materials, permitted under this permit, for composting without written Department approval will result in the Department invoking the provisions of Part II, B.6 of this permit.

Materials currently on-site may be composted and distributed in accordance with the limitations of this permit.

The Blessing Greenhouses and Compost Facility operation involves the composting of animal manure, food processing waste, dissolved air flotation solids, hatchery waste, poultry offal, poultry mortalities feathers and sewage sludge from Wastewater Treatment Facilities that Blessing Greenhouses and Compost facility had received written approval from the Department to utilize in compost production.

During composting activities inputs listed above are blended with hay, straw, woodchips and/or yard waste, shredded paper and cardboard, as bulking agents.⁽¹⁾ An approximate 30:1, carbon to nitrogen ratio, is established in the pre-processing compost mix as well as moisture content of approximately 50%. The pre-process compost is staged and composted on a concrete pad located in the south-east corner of the facility. The pre-processing compost pile is turned regularly to ensure uniformity and to ensure aerobic conditions exist.

From the pre-composting area, compost is moved into compost bunkers (or another approved alternative as evidenced by a Department writing) where the compost must achieve Class A process to further reduce pathogens (PFRP) time, temperature and oxygen requirements and vector attraction reductions requirements. Compost is placed over a substrate of wood chips and aeration is achieved by a network of aeration pipes that pump air through the pile. Bunkers are constructed with an impervious liner that isolates the compost from impacting storm water and groundwater.

All leachate is reutilized in the compost mix unless separate written approval is granted to land apply the leachate onto approved lands, at agronomic rates. Accumulated storm water that has not contacted compost may be utilized as irrigation water on lands permitted under agricultural utilization permit AGU 1003-S-05 (issued to Isdell Sanitation and Pumping Service).

Oxygen content of the compost in bunkers is maintained at a minimum of 5% O₂ while achieving time and temperature requirements. Compost is composted for a minimum of 14 days under aeration. During the composting process, a minimum temperature of 40 °C must be maintained and the average temperature of the compost shall be higher than 45 °C during this time period.

⁽¹⁾ Some bulking agents may require a "Beneficial Use Determination" from the Division of Waste Hazardous and Substances, permitting the use of such material as a bulking agent.

Also during this period, the minimum compost must attain a minimum temperature of 55 °C for a minimum time of 3 days (72 hours). Time, temperature and oxygen measurements are documented on the compost pile monitoring sheet in Blessing Greenhouses and Compost facility's PDR.

Next, the compost is cured for a minimum of additional 28 days. Following curing, the pile is broken down, and the cured compost may be screened, milled or otherwise processed to meet specific market specifications prior to distribution and marketing. Custom made, unscreened compost containing wood chips may also be produced.

All finished compost shall be stored on an impervious surface and be covered during active rainfall. The finished compost may be distributed to the general public, landscapers and nurseries as described in the limitations section of this permit. Compost produced at the Blessings Greenhouses Compost Facility will be marketed as "Blessings Blends" compost or "Blessings Blends" fertilizer in accordance with a label approved by the Delaware Department of Agriculture and Department of Natural Resources and Environmental Control. All product labels for compost produced at this site must be submitted to the Department for approval prior to distribution and marketing. The approved label must be supplied to the end user listing the approximate fertilization value; directions for anticipated use; and, precautions that must be followed to prevent leaching during storage or runoff of the product from the application area. Unless conclusive evidence to the Department's satisfaction indicates that the compost does not contain sludge with a sanitary waste component, as evidenced by a Department writing, the label must indicated that the compost contains "sewage sludge". A license for the distribution and marketing of a soil amendment and/of fertilizer must be obtained from the Delaware Department of Agriculture prior to the sale of any finished product.

FACILITY LOCATION

The location of the composting facility is a combination of parcels leased and rented to Blessing Greenhouses (Bruce Blessing). The total Blessing Greenhouses composting facility consists of approximately 23 acres.

The site is located on the west side of Draper Road (County Road 221) approximately 500 feet north of Thirteen Curves Road (County Road 222), in Cedar Creek Hundred, Sussex County approximately 5 miles north east of Milton, Delaware.

Tax parcel number 2-30-15.00-34.00 and a portion of tax parcel number 2-30-15.00-35.00



The distribution and marketing program shall be conducted in accordance with the following documents:

1. The Department's Guidance and Regulations Governing the Land Treatment of Wastes (October, 1999);
2. The Department's Regulations Governing Storm Water Discharges Associated with Industrial Activities;
3. Title 40 of the Code of Federal Regulations, Part 503, Standards for the Use and Disposal of Sewage Sludge;
4. The Department's Regulations Governing Solid Waste;
5. The Sampling and Analytical Methods Manual submitted December 29, 2005;
6. The Project Development Report dated November 1, 2011;
7. The application for renewal of DM 1102-S-03 dated January 26, 2012; and,
8. The March 2012 Agreement and Secretary's Order entered between Blessing Greenhouses and Composting Facility.

A. PROGRAM LIMITATIONS

During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to conduct a Distribution and Marketing Program for sludge compost generated at the Blessing’s Greenhouse Composting Facility. The program limitations are specified below:

Only sludge compost that satisfies PFRP requirements may be distributed under this permit. In order to satisfy the minimum requirements for PFRP conditions, the material within each aerated static pile must be maintained at operating temperatures of 55 °C or greater for a minimum of three (3) days under aerobic conditions. Additionally, either the density of fecal coliform in the material shall be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the material shall be less than three (3) MPN per four (4) grams of total solids (dry weight basis) at the time the material is prepared for sale.

In addition, in order to satisfy vector control requirements, each aerated static pile must be maintained at a minimum temperature of 40°C for a minimum of 14 days and the average temperature of the compost shall be higher than 45°C during this time period. Aerobic conditions are achieved when the oxygen level within each aerated static pile is maintained at or above 5%.

Off-spec compost shall not be distributed. The compost shall be deemed to be off-spec if the sludge compost fails to meet PFRP conditions, or any of the following constituent concentrations are exceeded on a dry weight basis:

Arsenic	41 mg/kg	Cadmium	39 mg/kg	Chromium	1200 mg/kg	Copper	1500 mg/kg
Lead	300 mg/kg	Mercury	17 mg/kg	Molybdenum	*	Nickel	420 mg/kg
PCB's	10 mg/kg	Selenium	36 mg/kg	Zinc	2800 mg/kg	-	-
Fecal Coliform	1000 colonies/gm (MPN)		Salmonella Density (sp)	3/4gm (MPN)			

* Reserved. (No limit has been established for this parameter at the time of permit issuance.)

Utilization of off-spec compost must receive separate authorization from the Department prior to distribution or disposal.

The permittee shall resample the sludge compost and submit to the Department additional analysis if there has been a significant variation (greater than 25%) from the baseline established in the permit application data. Based upon a review of the data submitted the Department may require the permittee to make changes in the product literature, may limit the allowable end uses, or may otherwise modify or revoke this permit.

Compost may be distributed to the general public, nurserymen, landscapers, golf courses and park managers who intend to utilize the material for end uses such as, but not limited to:

1. Lawn establishment
2. Turf grass maintenance
3. Planting trees and shrubs
4. Tree and shrub maintenance
5. Ornamental mulch
6. Soil blending
7. Potting mix production
8. Organic Soil Amendment

The Department following Departmental review and approval of use-specific product literature may approve additional end uses.

The permittee shall not knowingly allow any customer to use the compost in any manner that is inconsistent with the product literature.

No compost may be stored or applied so as to cause surface or groundwater pollution, storm water run-on/runoff, cause odor, adversely affect the food chain, attract vectors, or adversely affect private or public water supplies.

All stages of compost (pre-compost to final screened material) shall be stored on an impervious surface and may not leach onto pervious surfaces.

All compost leachate will be reutilized in the compost mix unless separate written approval is granted to land applied the leachate onto approved lands, at agronomic rates. Accumulated storm water that has not contacted compost may be utilized as irrigation water on lands permitted under agricultural utilization permit AGU 1003-S-05, issued to Isdell Sanitation and Pumping Service.

See Part III, A, Special Conditions for additional restrictions and limitations.

B. MONITORING REQUIREMENTS

During the period beginning on the effective date of the permit and lasting through the expiration date, the permittee is authorized to conduct a Distribution and Marketing program for compost generated at the Blessing’s Greenhouses Composting Facility. Compost for distribution and marketing shall be monitored by the permittee as specified below.

B.1 COMPOST

Parameter	Measurement	Sampling Frequency	Sample Type
Moisture content	percent	Quarterly	Composite
Total Nitrogen as N (dry weight basis)	percent	Quarterly	Composite
Organic Nitrogen as N (dry weight basis)	percent	Quarterly	Composite
Ammonium as N (dry weight basis)	percent	Quarterly	Composite
Nitrate Nitrogen as N (dry weight basis)	percent	Quarterly	Composite
Phosphorus (dry weight basis)	percent	Quarterly	Composite
Potassium (dry weight basis)	percent	Quarterly	Composite
Volatile solids	percent	Quarterly	Composite
Fecal Coliform (Colonies/gm)	MPN	Quarterly	Composite
Salmonella (sp) (Colonies/4gm)	MPN	Quarterly	Composite
pH	S.U.	Quarterly	Composite
Aluminum (dry weight basis)	mg/kg	Quarterly	Composite
Arsenic (dry weight basis)	mg/kg	Quarterly	Composite
Cadmium (dry weight basis)	mg/kg	Quarterly	Composite
Chromium (dry weight basis)	mg/kg	Quarterly	Composite
Chlorides (dry weight basis)	mg/kg	Quarterly	Composite
Copper (dry weight basis)	mg/kg	Quarterly	Composite
Iron (dry weight basis)	mg/kg	Quarterly	Composite
Lead (dry weight basis)	mg/kg	Quarterly	Composite
Mercury (dry weight basis)	mg/kg	Quarterly	Composite
Molybdenum (dry weight basis)	mg/kg	Quarterly	Composite
Nickel (dry weight basis)	mg/kg	Quarterly	Composite
Selenium (dry weight basis)	mg/kg	Quarterly	Composite
Sodium (dry weight basis)	mg/kg	Quarterly	Composite
Zinc (dry weight basis)	mg/kg	Quarterly	Composite
PCB's (dry weight basis)	mg/kg	Quarterly	Composite
Toxicity Characteristic Leaching Procedure	mg/L	Semiannually	Composite

*Sludge compost samples shall be collected at the following location: In the finished compost piles using core sampling techniques, prior to distribution. All sludge compost samples shall be collected and analyzed in accordance with the Quality Assurance Program contained in the Project Development Report prior to distribution. See Part I, F.1. for reporting requirements.

B.2 SLUDGE COMPOST STABILIZATION PROCESS MONITORING

PFRP stabilization is achieved when the temperature of the overall pile reaches and is maintained at a minimum of 55 °C for a minimum of 3 days. In addition, either the density of fecal Coliform in the finished product shall be less than 1,000 MPN/g (dry weight basis) of total solids or the density of Salmonella or less than 3 MPN/4g (dry weight basis) of total solids at the time the material is prepared for sale.

Vector Attraction Reduction requirements must be met by maintaining compost at a minimum of 40 °C for a minimum of 14 days and the average temperature of the compost shall be higher than 45°C during this time period during the composting process.

<u>Parameter</u>	<u>Unit Measurement</u>	<u>Sampling Frequency</u>	<u>Sample Type</u>
Temperature	Degrees Centigrade	2x's Daily*	In-Situ
Detention Time	Days	Daily	In-Situ
Oxygen Content	Percent	Daily	In-Situ

* Temperature and oxygen readings shall be obtained from at least 4 locations per bunker and at least 4 hours apart.

Temperature, oxygen and detention time monitoring of the sludge compost aerated static pile, as required above, shall be summarized in the quarterly and annual report. However, if aerobic conditions are not achieved, or if any of the four temperature probes fail to indicate that the required operating temperature or oxygen content is being maintained, the permittee shall indicate the exact time and duration of the period(s) that aerobic conditions, desired operating temperatures or detention time were not achieved. Any compost that fails to achieve PFRP and/or vector attraction reduction requirements must be recomposted prior to distribution.

NOTE: Temperature and oxygen monitoring results and detention time monitoring for each compost pile shall be recorded on the compost pile monitoring log, in section 5 of the November 1, 2011 PDR. See Part I, F.1, for reporting requirements.

B.3 GROUNDWATER MONITORING

<u>Parameter</u>	<u>Measurement</u>	<u>Sampling Frequency</u>	<u>Sample Type</u>
Depth to Water	hundredth of feet	Quarterly	In-Situ
Temperature	°C	Annually	In-Situ
pH	S.U.	Annually	In-Situ
Nitrate Nitrogen as N	mg/kg	Annually	Grab
Total Dissolved Solids	mg/kg	Annually	Grab
Specific Conductivity	umhos/cm	Annually	Grab
Fecal Coliform	#/100ml	Annually	Grab

NOTE: All groundwater sampling activities shall be performed in compliance with the Department's Field Manual for Groundwater Sampling (March, 1988) and in accordance with procedures approved by the Department. Groundwater samples shall be collected and analyzed individually from all screen intervals in monitoring wells 1 (DNREC well IDs 235556, 235559, 235562, 235565 and 235568), monitoring well 2 (DNREC well IDs 235557, 235560, 235563, 235566, and 235569), monitoring well 3 (DNREC IDs 235558, 235561, 235564, 235567, and 235570, and monitoring well 4 (DNREC IDs 235551, 235552, 235553, 25554, 23555).

The Department may modify the sampling frequency based upon review of continuing or additional analyses.

C. SCHEDULE OF COMPLIANCE

1. Items not completed in the "AGREEMENT AND SECRETARY'S ORDER" (ASO) between the Department and Blessing Greenhouses and Compost facility, must be completed within the timeframes listed in the ASO. Upon completion of any item listed in the ASO, the permittee shall notify the Department in writing that specific compliance requirements have been satisfied. **Within thirty (30) days** of receipt of said completion notification, the Department shall physically inspect the facility and issue Blessing either a written completion approval or a list of any outstanding activities/requirements that require completion before approval can ensue. If the latter, the Department shall provide Blessing written notification of the specific default and allow Blessing thirty (30) calendar days from the receipt of default notice to cure said default. Failure to correct said default(s) will result in the Department invoking the provisions of Part II, B.6 of this permit.
2. Blessing Greenhouses and Compost Facility shall submit documentation indicating the proposed maximum amount of compost material that will be on-site (after selling current stockpiles). The maximum amount of precompost material, (compost that does not meet exceptional quality (EQ) requirements) which may be present on-site, will be determined by a cost estimate to properly dispose all compostable materials on-site. A bond or acceptable financial assurance mechanism, acceptable to the Department as evidenced by a Department writing, must be in place for the total of the cost estimate. **Within thirty (30) days** of the effective date of this permit, a submittal documenting the maximum permitted amount of

precompost that Blessing Greenhouses and Compost Facility proposes to have on-site and a detailed cost estimate must be submitted for Department review and approval. **Within thirty (30) days** of Department approval of the cost estimate and proposed bond amount, a bond for the specified bond amount must be in place. Exceedance of the maximum amount of pre-compost, unscreened compost and/or finished compost covered by the bond may result in the Department invoking the provisions of Part II, B.6 of this permit.

D. BONDING

1. As a requirement for maintaining this permit, the permittee shall file with the Department a bond or other security on a form approved by the Department. The bond shall be payable to the Department and the obligation of the bond shall be conditioned upon the fulfillment of all requirements related to this permit. Liability under the bond shall remain in effect until the expiration date of this permit. A bond in the amount of \$250,000 shall remain in effect until the Department approves a different bond amount as evidenced by a Department writing. The obligation of the applicant and of any corporate surety under the bond shall become due and payable, and all or any part of any cash or securities shall be applied to payment of the costs of properly fulfilling any requirement of the permit if the Department has:
 - a. Notified the applicant and any corporate surety that the conditions of the permit have not been fulfilled and specified in the notice the particular deficiencies in the fulfillment of the permit conditions;
 - b. Given the applicant and any corporate surety a reasonable opportunity to correct the deficiencies and to fulfill all of the conditions of the permit; and
 - c. Determined that, at the end of a reasonable length of time, some or all of the deficiencies specified in Part I, D.1(a), above, remain uncorrected.

E. MONITORING

1. Representative Sampling
 - a. Samples and measurements taken as required herein shall be representative of the volume and nature of the sludge compost to be distributed and marketed.
 - b. Finished compost must be analyzed for the parameters identified in Part I, B.1 of this permit prior to distribution.
2. Recording of Results

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

- a. The exact place, date and time of sampling and/or measurement;
 - b. The person(s) who performed the sampling and/or measurement;
 - c. The dates and analyses were performed and the time the analyses were begun;
 - d. The person(s) who performed the analyses;
 - e. The results of each analysis, along with the original laboratory report; and
 - f. The analytical methods employed.
3. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for five (5) years. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Department.

F. REPORTING

1. Monthly Report
 - a. Compost product analytical and stabilization process monitoring data obtained during the previous quarter shall be summarized for each month and postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the Department at the following address:

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, DIVISION OF WATER, SURFACE WATER DISCHARGES SECTION, 89 KINGS HIGHWAY, DOVER, DELAWARE 19901 TELEPHONE: (302) 739-9946

When submitting monitoring results, copies of the original laboratory sheets should be included. If more than one sample is analyzed during any quarter, a table showing the range of constituent concentration values shall be prepared and included

with the submittal.

- b. Temperature, oxygen and detention time monitoring of the compost aerated pods, as required in Part I, B.2 of this permit, shall be summarized in the quarterly report.

2. Annual Report

The permittee shall submit to the Department an annual report to include the date, customer, shipping destination and quantity per customer for all compost products distributed during the previous year. The annual report may be submitted electronically or in any format specified by the Department. The annual report shall be due on February 1 of each year, and the information contained in the report shall cover the previous calendar year.

3. Test Procedures

Test procedures for laboratory analyses shall conform to the applicable test procedures identified in Section 1000 of Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes, Title 40, Code of Federal Regulations, Part 503, Subsection 503.8 and to the applicable test procedures identified in the Facility Sampling and Analysis Manual.

G. DEFINITIONS

1. "Composite" means a series of grab samples which have been collected in a manner such that the final sample is representative of the volume and characteristics of the compost to be distributed.
2. "Distribute" means to barter, sell, offer for sale, consign, furnish, provide, or otherwise supply a material as part of a commercial enterprise or giveaway program.
3. "Exceptional Quality Sludge" ("EQ Compost") means compost that has been stabilized (*as per a Process to Further Reduction Pathogens, meets one of the Vector Attraction Reduction Requirements specified and contains lower metal concentrations than the allowable Pollutant Concentration specified Table 402-3 of Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes.*
4. "Finished Compost" means EQ compost that is not contained in a bunker)
5. "Food chain crops" means tobacco, crops grown for human consumption, and crops grown to feed animals whose products are consumed by humans.
6. "Handling" means any way in which sludge compost, treated sludge compost, or any other product containing these materials is dealt with, other than collection, burning, storage, treatment, land application, disposal, or transportation. It includes distribution of treated sludge compost.
7. "Label" means the display of all written, printed, or graphic material on the immediate container, or information accompanying the material.
8. "Landfill" means a natural topographic depression, man-made excavation or diked area formed primarily of earthen materials, which has been lined with man-made materials or remains unlined and which is designed to hold an accumulation of solid wastes.
9. "Pasteurized sludge product" means compost which has undergone processing to meet PFRP standards by increasing temperature to 70°C or greater for a minimum of 30 minutes.
10. "Person" means an individual, trust, firm, joint stock company, federal agency, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, or any interstate body.
11. "PFRP" means process to further reduce pathogens. Also known as Class "A" compost.
12. "Sewage" means water-carried human or animal wastes from septic tanks,

water closets, residences, buildings, industrial establishments, or other places, together with such groundwater infiltration, subsurface water, admixture of industrial wastes or other wastes as may be present.

13. "Sewage sludge" means sludge which derives in whole or in part from sewage.
14. "Sludge" means the accumulated semi-liquid suspension, settled solids, or dried residue of these solids that is deposited from (a) liquid waste in a municipal or industrial wastewater treatment plant, (b) surface or ground waters treated in a water treatment plant, whether or not these solids have undergone treatment. Septage is included herein as sludge.
14. "Sludge compost" means a treated sludge produced by subjecting a mixture of sludge and a bulking agent, such as wood chips, to aerobic decomposition in a manner that destroys primary pathogenic and malodorous components.
15. "Solid waste" means any garbage, refuse, rubbish, and other discarded materials resulting from industrial, commercial, mining, agricultural operations and from community activities which does not contain free liquids. Containers holding free liquids shall be considered solid waste when the container is designed to hold free liquids for use other than storage (e.g. radiators, batteries, transformers) or the waste is household waste.
16. "Storage" means the interim containment of sludge compost, treated sludge compost, or any other product containing these materials after removal from the wastewater and before disposal or utilization.
17. "Treatment" means a process which alters, modifies or changes the biological, physical, or chemical characteristics of sludge compost or liquid waste.

Part II

A. MANAGEMENT REQUIREMENTS

1. Noncompliance Notification

The permittee shall report to the Department:

- a. In writing thirty (30) days before any planned change to the compost treatment process or the limited distribution and marketing program, if that change would result in any alterations to the program as represented in the permit application.
- b. In writing thirty (30) days before any anticipated change which would result in noncompliance with any permit condition or Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes or 40 CFR, Part 503, Standards for the Use and Disposal of Sewage Sludge.
- c. Orally within twenty-four (24) hours from the time the permittee became aware of any noncompliance which may endanger the public health or the environment, at (800) 662-8802. In addition, a call must be placed at (302) 739-9946 during normal business, and;
- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any noncompliance unless extended by the Department. This report shall contain:
 - 1) A description of the noncompliance and its cause.
 - 2) The period of noncompliance including to the extent possible, times and dates and, if the noncompliance has not been corrected, the anticipated time it is expected to continue.
 - 3) Steps taken or planned to reduce or eliminate reoccurrence of the noncompliance.
- e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Department. Those facts and the correct information shall be included as a part of this report.

2. Minimize Impacts

The permittee shall take all necessary actions to eliminate and correct any

adverse impact on the public health or the environment resulting from permit noncompliance.

B. RESPONSIBILITIES

1. Renewal Responsibilities

At least 180 days before the expiration date of this permit, the permittee shall submit a new application for a permit or notify the Department of the intent to cease operation of the distribution and marketing program by the expiration date. In the event that a timely and sufficient reapplication has been submitted and the Department is unable, through no fault of the permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit are automatically continued and remain fully effective and enforceable.

2. Entry and Access

The permittee shall allow the Department, consistent with 7 Del. C., Chapter 60, to:

- a. Enter the permitted facility.
- b. Inspect any records that must be kept under this permit.
- c. Inspect any facility, equipment, practice, or operation permitted or required by this permit.
- d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility or land application site.

3. Provide Information

The permittee shall furnish to the Department within a reasonable time, any information requested, including copies of records, which may be used by the Department to determine whether cause exists for modifying, revoking, reissuing, or terminating the permit, or to determine compliance with the permit or the Guidance and Regulations Governing the Land Treatment of Wastes.

4. Transfer of Ownership or Control

This permit shall be transferable to a new owner or operator provided that the permittee notifies the Department by requesting a minor modification of the permit before the date of transfer and provided that the transferee shows evidence of a legal right to use the site and is otherwise in compliance with all applicable provisions of Part III, (B) of the

Department's Guidance and Regulations Governing the Land Treatment of Wastes.

5. Operation of Facility

The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, control and monitoring, which are installed or used by the permittee to achieve compliance with 7 Del. C., Chapter 60, this permit, or Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes.

6. Permit Revocation and Modification

a. After notice and opportunity for a hearing, this permit may be modified or revoked in whole or in part during its term for causing including, but not limited to, the following:

- 1) Violation of any terms or conditions of this permit;
- 2) Obtaining this permit by misrepresentation or failure to disclose fully all of the relevant facts;
- 3) Any change in operating conditions that requires either a temporary or permanent permit modification; or
- 4) If the Department finds that the public health, safety or welfare requires emergency action, the Department shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, the Department shall provide the permittee a revocation hearing and prior notice thereof. Such hearings shall be conducted in accordance with 7 Del. C., Chapter 60.

b. The Department may revoke this permit if the permittee violates any permit condition, any provisions of Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes, or fails to pay applicable Department fees.

7. 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.

8. 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.

9. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application or 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.

PART III

A. SPECIAL CONDITIONS

1. Monitoring wells
 - a. Groundwater shall be sampled at the following locations and frequencies.

At all screen intervals in monitoring wells 1 (DNREC well IDs 235556, 235559, 235562, 235565 and 235568), monitoring well 2 (DNREC well IDs 235557, 235560, 235563, 235566, and 235569), monitoring well 3 (DNREC IDs 235558, 235561, 235564, 235567, and 235570, and monitoring well 4 (DNREC IDs 235551, 235552, 235553, 25554, 23555 and 15). Groundwater shall be sampled per the frequency listed in Part I, Subsection B.3 of this permit.
 - b. All monitoring wells samples shall be analyzed for the parameters listed in Part I, Subsection B.3.
 - c. Copies of the laboratory reports for all groundwater analytical data and the corresponding sampling logs shall be submitted to the Department within thirty (30) days of receipt of the analytical data. In addition, the elevation of the top of the casing (TOC) for each monitoring well shall be surveyed in reference to a permanently marked, stationary point. After notice and opportunity for a hearing, the Department may modify the list of parameters specified above based on observations of groundwater quality trends in the area. Groundwater monitoring shall continue in effect until the Department determines that it is no longer necessary.
2. In the event that Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes or applicable Federal Regulations are revised, this permit may be reopened and modified accordingly after notice and opportunity for a public hearing.
3. Supersedes Previous Permit

This permit supersedes State Permit Number DM 1102-S-03, effective January 1, 2011.
4. The permittee must comply with the Federal Code of Regulations, Title 40, Part 503, "Standards for the Use and Disposal of Sewage Sludge" in the production, distribution and management of the pasteurized compost sludge products.
5. Each compost pile shall be composted under aeration (at least 5% O₂) for a minimum of 14 days at a minimum temperature of 40 °C with the

average temperature of the compost higher than 45 °C during this time period. Compost shall be cured for an additional 28 days prior to distribution.

6. If any portion of a compost pile fails to reach the required temperature of 55 °C for a minimum of three (3) days, that portion of the pile shall be separated from the other portions of the compost pile and recomposted prior to distribution.
7. Compost may not be stockpiled in non-permitted areas without first obtaining written approval from the Department.
8. The Department in accordance with the Department's Regulations Governing Solid Waste must approve utilization or disposal of compost at landfill sites in writing before the compost may be transported to the landfill.
9. Off-spec sludge compost that has not met the criteria for PFRP conditions shall be transported only in accordance with a valid Delaware Waste Transporters Permit.
10. The permittee shall require the use of tarps or otherwise assure that all vehicles transporting sludge compost from the facility are properly sealed to retain the sludge compost in the vehicle during transportation.
11. For end-users who may utilize more than 100 tons of sludge compost/year, a plan shall be submitted to the Department which addresses the following:
 - a. The end use(s) of the sludge compost
 - b. Maximum application rates
 - c. Total amount of sludge compost to be utilized
 - d. Storage practices
 - e. Transportation methods
12. The permittee shall maintain a log of all persons that receive more than ten (10) cubic yards of compost on an annual basis. At a minimum, this log shall include the name of the purchaser, the amount purchased, the date of purchase, and the proposed end-use. These logs shall be maintained in accordance with Part I, E.3, of this permit.
13. Product literature sheets, as submitted to the Department in the permit application, shall be distributed to each end-user.

14. Storm Water Plan

The permittee shall continue to develop, implement and maintain a Storm Water Plan (SWP) to minimize the discharge of contaminated storm water from its facility. The SWP shall be implemented and maintained in accordance with the requirements of the State of Delaware Regulations Governing the Control of Water Pollution (RGCWP), Section 9, "The General Permit Program", Subsection 1, "Regulations Governing Storm Water Discharges Associated with Industrial Activity." In particular, the SWP shall address practices including good housekeeping, inspections under wet and dry weather, sediment and erosion control, facility security, and managing runoff.

15. Storm Water Monitoring

a. Quarterly Visual Examinations:

The permittee shall conduct and document Section quarterly visual examinations of storm water discharges associated with industrial activities at the facility as described in Section 9.1.4.3.1 of the State of Delaware **Regulations Governing Storm Water Discharges Associated with Industrial Activities**. The examination(s) must be made at least once in each of the following three-month periods: January through March; April through June; July through September; and October through December. Each examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen and other obvious indicators of storm water pollution. Each examination must be performed during daylight hours and must be made within the first thirty (30) minutes of when runoff or snowmelt begins discharging from the facility. If no storm event resulted in runoff from the facility during a monitoring quarter, the facility is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no runoff occurred.

b. Analytical Monitoring:

The permittee shall sample storm water discharges in accordance with the instructions specified in Section 9.1.4.3.2 of the State of Delaware **Regulations Governing Storm Water Discharges Associated with Industrial Activities**. Monitoring shall be completed semi-annually, occurring at least once in each of the following six-month periods: January through June and July through December. You shall analyze grab samples in accordance with the following parameters:

Parameter	Units	Benchmark Monitoring Concentrations
Total Suspended Solids	mg/l	100.0
Biological Oxygen Demand	mg/l	30.0
Oil and Grease	mg/l	15.0
Ammonia as Nitrogen	mg/l	19.0
Nitrate plus Nitrite Nitrogen	mg/l	0.68
Phosphorus	mg/l	2.0
Total Recoverable Iron	mg/l	1.0
Total Recoverable Lead	mg/l	0.0816
Total Recoverable Zinc	mg/l	0.117
pH	S.U.	6.0-9.0
Enterococcus	Col./100 ml	
Fecal Coliform	Col./100 ml	

* The Department may specify additional monitoring parameters and/or modify the sampling frequency based upon review of continuing or additional analysis.

Where indicated, monitored results shall be compared to Benchmark Monitoring Concentrations. The Benchmark Monitoring Concentration values represent target pollutant concentrations for a facility to achieve through implementation of its Storm Water Plan. Analytical results that exceed Benchmark Concentration values are not a violation; however results that exceed a Benchmark Concentration value are indications that the storm water discharge could potentially cause, or contribute to causing water quality impairment in the receiving water body. The Benchmark Concentration values are also viewed, as a level that if below, the discharge presents little potential for water quality concern.

In the event that analytical results exceed Benchmark Monitoring Concentration values, the facility shall investigate the cause for such exceedance and the results of this investigation shall be documented. The results of the investigation shall identify potential sources of pollution, additional best management practices necessary and revision of the Storm Water Plan. Background concentrations of specific pollutants may also be considered during the investigation.

16. Storm Water Outfall Identification

The permittee shall identify its storm water outfall(s) with a legible sign, indicating outfall designation.