



Application for the Land Treatment of Waste Products (Part V)

Agricultural Utilization Permit

Land Treatment of Biosolids Program

Delaware Department of Natural Resources and Environmental Control
Surface Water Discharges Section

General Information Date: _____

Facility Name: _____ Facility Address: _____

Contact Person : _____ Contact Info: _____

DE Non-Hazardous Liquid Waste Transporters Permit Number: _____

Out of state waste being utilized? Yes No
 If yes, what state(s) _____

Waste Source Characterization (Part V, Section 164)

The following information shall be submitted to the Department to characterize the source of the waste product.

- a. A description of the source and constituent make-up of the waste product(s).
- b. A process flow chart or detailed description which identifies and explains each phase of the waste product generation process.
- c. A description of all major equipment and components used in the process that generates the waste product.
- d. A description of any stabilization or treatment process the waste product will undergo prior to final utilization.
- e. Estimated quantity of waste product(s) to be land applied (annual and monthly basis).
- f. Any waste containing pathogenic agents shall be stabilized as cited in Part III, (B) Section 131 of the Department’s Guidance and Regulations Governing the Land Treatment of Wastes (Biosolids Regulations).
- g. A description of the total waste storage capacity for inclement weather for each waste product.

Waste Constituent Characterization (Part V, Section 165)

The waste generator(s) shall submit to the Department a chemical analysis of the waste product for the parameters found in Appendix A, Table 1 of this form. The Department may require multiple samples to adequately characterize the waste product.

Waste Management Plan (Part V, Section 167)

An application for a Permit, to utilize a waste product for agricultural purposes, shall include a Waste Management Plan for Department review and approval. The Waste Management Plan shall provide:

- a. An explanation of how the waste product will be utilized.
- b. An operation plan to include proposed application rates and identification of land limiting constituents (LLC); the proposed life of the operation; equipment to be utilized for site preparation; method(s) to be utilized for application and incorporation of the waste and runoff controls; and storage capacity and backup disposal plan during periods of time application cannot occur.

Additional Requirements (Part V, Section 171)

The Permit applicant shall provide to the Department the following documents prior to application approval:

- a. Maps of the land application area showing the Tax ID number(s), land boundaries, topography, application setbacks, and location of any watercourses, wetlands, domestic wells, or residences within 1000 feet of the proposed application site(s).
- b. A description of the NRCS soil series for each field, at minimum, using the NRCS Web Soil Survey. In addition a delineation of soil areas which are not suitable for land application of waste must be included. Fields receiving application more than two consecutive years must also include pits, hand augurings, or excavations for every 5 to 10 acres to confirm Soil Conservation Service mapping. See the 1994 version of Part III, B, Subsection 402 (3) (a), (b), and (c) for additional information.
- c. A DNREC approved network of groundwater monitoring wells are required for all application sites receiving application more than two consecutive years.
- d. A minimum, three composite samples for each major soil series for the parameters found in Appendix A, Table 2 of this form. The analysis shall be submitted prior to permit approval and at the frequency indicated in the permit upon issuance.
- e. Vegetative Management Plan that includes:
 - A projected crop rotation plan which shall specify crops to be grown, fertilizer requirements, planting and harvesting schedules, timing of application of the waste, application rate of the waste and final use of the crop. Nutrient application rates must be determined by a Certified Nutrient Consultant.
 - Method and frequency for applying the waste to the site.
 - Methods to manage runoff and control erosion during the life of the project.
 - If the waste product is to be applied to land owned by persons other than the generator of the waste product, the name and address of the landowner and evidence that the landowner has reviewed and approved by the project.
- f. All of the information required above shall be submitted to the Department and include a signed certification statement indicating that “I certify under penalty of law that this document and all attachments is, to the best of my knowledge and belief, true, accurate, and complete.”

Note: The permittee shall conform to any conditions required by County ordinances and policy in addition to permit conditions. County approval shall be obtained prior to Department permit issuance. Additional information related to the to the above requirements can be found in Part V of the Guidance and Regulations Governing the Land Treatment of Waste.



Land Treatment of Waste Products (Part V) Appendix A

Delaware Department of Natural Resources and Environmental Control Surface Water Discharges Section

Table 1 (Waste)

Parameter	Measurement	Sample Type
pH	S.U.	Composite
Moisture content	percent	Composite
Total Nitrogen as N (dry weight basis)	mg/kg	Composite
Organic Nitrogen as N (dry weight basis)	mg/kg	Composite
Ammonia Nitrogen as N (dry weight basis)	mg/kg	Composite
Nitrate and Nitrite Nitrogen as N (dry weight basis)	mg/kg	Composite
Total Phosphorus as P (dry weight basis)	mg/kg	Composite
Potassium (dry weight basis)	mg/kg	Composite
Arsenic (dry weight basis)	mg/kg	Composite
Cadmium (dry weight basis)	mg/kg	Composite
Chromium (dry weight basis)	mg/kg	Composite
Copper (dry weight basis)	mg/kg	Composite
Lead (dry weight basis)	mg/kg	Composite
Mercury (dry weight basis)	mg/kg	Composite
Molybdenum (dry weight basis)	mg/kg	Composite
Nickel (dry weight basis)	mg/kg	Composite
Selenium (dry weight basis)	mg/kg	Composite
Zinc (dry weight basis)	mg/kg	Composite

Table 2 (Soil)

Parameter	Measurement	Sample Type
pH	S.U.	Composite
Plant Available Phosphorus as P	mg/kg	Composite
Plant Available Potassium as K	mg/kg	Composite
Aluminum (dry soil basis)	mg/kg	Composite
Iron (dry soil basis)	mg/kg	Composite
Arsenic (dry soil basis)	mg/kg	Composite
Cadmium (dry soil basis)	mg/kg	Composite
Chromium (dry soil basis)	mg/kg	Composite
Copper (dry soil basis)	mg/kg	Composite
Lead (dry soil basis)	mg/kg	Composite
Mercury (dry soil basis)	mg/kg	Composite
Molybdenum (dry soil basis)	mg/kg	Composite
Nickel (dry soil basis)	mg/kg	Composite
Selenium (dry soil basis)	mg/kg	Composite
Zinc (dry soil basis)	mg/kg	Composite
Cation Exchange Capacity	meq/100grams	Composite
% Organic Matter	percent	Composite

Note: At minimum 3 composite soil sample(s) representing each major soil series shall be collected from each farm for fields that will be utilized more than two consecutive years. Additionally, a description of the soils in accordance with Section 171.1.6 of Part V of the Guidance and Regulations Governing the Land Treatment of Waste is required. Soil chemistry testing must be in accordance with the Methods of Soil Analysis published by the American Society of Agronomy, and in accordance with Part III (B), Section 151 and 152 of Part III, B. of the Department's Guidance and Regulations Governing the Land Treatment Wastes.