State Permit Number AGU 2502-S-03
Effective Date: TBD
Expiration Date: TBD

AUTHORIZATION TO OPERATE A LAND TREATMENT SYSTEM

FOR THE

AGRICULTURAL UTILIZATION OF SLUDGE

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

Sussex County Council
P.O. Box 589
Georgetown, Delaware 19947

is hereby granted a permit to operate a land treatment system for the agricultural utilization of treated sludge generated at the following wastewater treatment facilities:

- Inland Bays Regional Wastewater Facility (Millsboro, DE)
- Other wastewater treatment plants as approved by the Department in writing

This permit is limited to the application of stabilized sludge from the above facilities to approved portions of the James Wells Farm.

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

_____ _____

Gordon Woodrow, Program Manager
Commercial and Government Services Section
Division of Water
Department of Natural Resources
and Environmental Control

Date Signed

Part I

A. GENERAL DESCRIPTION OF OPERATION

The operation involves the transportation of Process to Significantly Reduce Pathogens (PSRP) “Class B” stabilized wastewater treatment facility sludge from the wastewater treatment facility listed above to the James Wells Farm.

Stabilized wastewater treatment facility sludge will be delivered to the site in accordance with all conditions required by Delaware Waste Transporters Permit No. WH-298 where it will be land applied at up to an agronomic rate. The sludge shall be applied by means of land application followed by incorporation within 6 hours of application.

Sludge stabilization will be achieved by an approved alternative found in Part III, (B), Section 133 of the Guidance and Regulations Governing The Land Treatment of Wastes, and Title 40 Code of Federal Regulations, Part 503, Standards for the Use or Disposal of Sewage Sludge.

B. SITE LOCATION:

1. James Wells Farm Site Description:

Tax parcel number: 230-14.00-192.00

Approximately 85 acres of a 222-acre parcel of land located on the southern portion of the James Wells Farm. The James Wells Farm is Located on the south side of Slaughter Neck Road (County Road 215), approximately 6 miles southeast of Milford, Delaware.

C. REGULATORY AND SUPPORTING DOCUMENTS:

The land treatment operations shall be conducted in accordance with the following documents:

1. The Department of Natural Resources and Environmental Control's Guidance and Regulations Governing the Land Treatment of Wastes, Part III, (B); (October 1999 Revision);

2. Title 40 of the Code of Federal Regulations Part 503, Standards for The Use and Disposal of Sewage Sludge, Final rule date February 19, 1993;

3. Title 3, Chapter 22, The Department of Agricultural Nutrient Management Law;

4. Authorization letters dated, March 11, 1991 and June 8, 1995, from the Sussex County Planning and Zoning Commission approving the agricultural utilization of sludge at the site;

5. The permit application dated November 21, 2024;

6. The new Project Development Report prepared by Sussex County, dated March 31, 2025, for the James Wells Farm. Previous versions include: July 12, 1989, the revision dated January 15, 1991 to include an additional 25 acres of land, the revision dated September 1, 1995 to include an additional 10 acres of land, and the revision dated April 2015. The March 31, 2025 Project Development Report includes the current Plans and Specifications and the Plans of Operation and Management of the site;

7. The April 3, 2025 letter notifying DNREC that the City or Rehoboth does not intend on renewing AGU Permit Number 2003-S-03 and does not object to the permit being transferred from the City of Rehoboth to Sussex County Council;

8. The Sussex County request dated April 3, 2025 requesting the transfer the James Wells Farm from the City or Rehoboth to Sussex County;

9. The August 12, 2025 Lease Agreement Between Sussex County Council and Wells Farms, Inc.' and,

10. Non-Hazardous Liquid Waste Transporter Permit Number DE OH-298.

D. SLUDGE APPLICATION LIMITATIONS

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to land apply stabilized sludge at agronomic rates to 85 acres of the James Wells Farm as identified in Part I of this permit.

2. The timing of sludge application to the site, as well as the quantity and quality of sludge to be land applied shall be specified in an annual Nutrient Management Plan (NMP).

3. Sludge shall be applied at a rate to meet, but not exceed, the Plant Available Nitrogen (PAN) requirement for the crop(s) grown. All nutrient application rates shall be determined by a Delaware Certified Nutrient Consultant. Estimated crop nutrient uptake requirements shall be based on University of Delaware Cooperative Extension Service crop fertility recommendations and based upon realistic crop yields. The Department may approve alternate fertility recommendations should University of Delaware Cooperative Extension Service crop fertility recommendations not be available for the planned crop rotation. PAN calculations shall also include any residual mineralized nitrogen from previous sludge application. The cropping plan and the nutrient requirement for the crop(s) shall be submitted to the Department for review and approval, prior to the commencement of sludge application activities.

4. Supplemental additions of fertilizers (i.e., commercial fertilizer, manure, Class A biosolids, etc.) shall be limited to amounts necessary to meet crop needs using the written recommendations of a Delaware Certified Nutrient Consultant for the specified crop and anticipated yield.

5. Records of crop yield must be kept for each application area on the site.

6. When any of the limits specified above have been achieved, no additional sludge may be applied to a field.

7. Fields with “high” phosphorus soil levels as defined by Title 3, Chapter 22 of the Delaware Code (the Nutrient Management Law) and the Delaware Nutrient Management Commission shall be in compliance with a current Nutrient Management Plan and phosphorus management requirements in the Nutrient Management Law. Utilization of the phosphorous site index (PSI) and phosphorus management strategies, as recommended by the University of Delaware Cooperative Extension, may also be utilized to comply with the Nutrient Management Law.

8. For any portions of the sludge application area where the depth to seasonal high-water table is less than 20 inches but greater than 12 inches, application is limited to May, June July or August. Sludge shall only be

applied when the actual water table depth is at least 20 inches below the maximum depth of tillage as defined in Part I, K. 4 and pursuant to Part III, (B), Subsection 138.6 of the Guidance and Regulations Governing the Land Treatment of Wastes.

9. The depth of groundwater in monitoring wells 3, 4, 5, 6, 7 and 8 must be measured and the results recorded, before land application begins each calendar year and at least monthly during land application activities. Additionally, during land application activities, the frequency of water-level monitoring must increase to weekly in any monitoring well containing a depth to water reading that is within 3 feet of the depth of tillage. Should water-level readings indicate that areas of the sludge field have or likely have a water table that is within 20 inches of the depth of tillage, sludge application in these areas must cease immediately and be discontinued until the limiting situation has passed. Monthly water-level monitoring can resume during application activities once the DTW readings drop to at least 3 feet from the depth of tillage.

10. A daily operating record must be maintained and records kept for a minimum of 5 years in accordance with Part II, A.1 of this permit.

11. Each active application area must be flagged prior to use or alternatively permeant field markers may be utilized. Application must be uniform over the application area and made at a rate that does not contribute to runoff from the area.

12. All land treatment activity shall conform to the conditions of this permit and the Guidance and Regulations Governing the Land Treatment of Wastes, Part III, (B), Land Treatment of Sludges and Sludge Products.

13. Effort must be made to significantly reduce odors and vector attraction, if present, either by the addition of lime to the sludge prior to application or by the addition of lime after application. The Department may require additional odor control and/or vector control measures to be taken for sludge application if deemed necessary.

14. Only sludge which has been treated by a minimum of a Process to Significantly Reduce Pathogens (PSRP) requirements, as defined in Part III, (B), Section 133 of the Guidance and Regulations Governing the Land Treatment of Wastes, Land Treatment of Sludges and Sludge Products shall be applied to the land treatment site.

15. A sufficient amount of lime to adjust the soil pH to a value of 6.2 or above shall be applied to the site prior to sludge application.

16. Sludge may not be applied from December 7 through February 15. Sludge may not be applied when the ground is saturated or covered with snow or

during periods of rain or runoff. Periods of rain shall be defined as more than 0.1 inches of rain in an hour. A rain gauge must be mounted and maintained on-site at any farm receiving application during any period of rainfall. Sludge may not be applied onto frozen ground without written Department approval.

17. Fields that receive land application of sludge must have appropriate vegetation established and harvested during the growing season(s) to receive nutrient uptake credits. Fields shall be planted with appropriate vegetation or a cover crop within one (1) month of completing sludge application, unless prohibited by weather conditions in which case vegetation must be established as soon as practicable. When sludge is land applied late in a calendar year on a field, effort shall be made to plan the end date of application so that temperatures allow for a cover crop to be planted and established.

18. All surface applied sludge shall have a solids content of 15% of more solids. Sludge shall be uniformly land applied by means of a mechanical spreader. The permittee shall ensure that the sludge is incorporated into the soil within 6 hours of application to the soil surface.

19. Animals shall not be allowed to graze on land application fields for at least thirty (30) days subsequent to application of sludge.

20. Feed and fiber crops removed from the sludge land application site shall not be harvested until at least thirty (30) days after the application of sludge.

21. Food crops with harvestable parts above the surface of the land may not be harvested from the sludge application area for at least 24 months after the application of sludge.

22. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge.

23. Public access to the PSRP sludge application area must be controlled for at least thirty (30) days after sludge application, unless sludge has been treated by an approved process to further reduce pathogens (PFRP).

24. Sludge and/or waste shall not be stockpiled for longer than seven days. Stockpiling shall be limited to impervious surfaces unless inadequate storage is the result of an unforeseen and unpreventable circumstance.

25. At minimum, a 50-foot vegetative buffer between the farm road and the application field must be established on the south end of each application field. The buffer shall be established prior to the commencement of application activities.

26. At minimum, buffer zones established pursuant to Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes shall

be maintained at all times during sludge application. During the "Pre Start Up" inspection as required in Part III, 6., of this permit, the Department may require increased buffer zones as allowed in Section 138.2.2 of Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes. The Department may require additional best management practices after evaluating adjacent land use, type of sludge, sludge application method, sludge application rate, sludge quality and level of treatment, land slopes, vegetative cover used the nature of surrounding bodies of water and any other factors.

27. No sludge shall be land applied if sample analysis yields pollutant concentrations in excess of the following values:

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 18 mg/kg	Nickel 420 mg/kg
Selenium 36 mg/kg	Zinc 2800 mg/kg	PCB 5 mg/kg	- - -

E. GROUNDWATER LIMITATIONS

Application of sludge to the designated fields shall not cause groundwater to be in violation of applicable Federal or State drinking water standards on an average annual basis. If down-gradient water supply wells (public or private) are impacted above applicable Federal or State drinking water standards from the land application of sludge, the permittee shall be required to provide a free Department approved alternative potable water supply to the affected parties.

F. MONITORING REQUIREMENTS

During the period beginning on the effective date and lasting through the expiration date the permittee is authorized to apply sludge at agronomic rates to the land treatment fields identified in Part I of this permit. Such applications shall be monitored by the permittee as specified below during any year that sludge is land applied under this permit.

1. STABILIZED SLUDGE

Parameter	Unit Measurement	Minimum Frequency	Sample Type
Moisture Content	Percent	Semi-Annually	Composite
Total Nitrogen as N (Moist & Dried)	Percent	Semi-Annually	Composite
Organic Nitrogen as N (Moist & Dried)	Percent	Semi-Annually	Composite
Ammonium and Nitrate Nitrogen as N (Moist & Dried)	Percent	Semi-Annually	Composite
pH	S.U.	Semi-Annually	Composite
Volatile Solids	Percent	Semi-Annually	Composite
Phosphorus as P (dry weight basis)	Percent	Semi-Annually	Composite
Potassium (dry weight basis)	Percent	Semi-Annually	Composite
Arsenic (dry weight basis)	mg/kg	Semi-Annually	Composite
Cadmium (dry weight basis)	mg/kg	Semi-Annually	Composite
Chromium (dry weight basis)	mg/kg	Semi-Annually	Composite
Copper (dry weight basis)	mg/kg	Semi-Annually	Composite
Lead (dry weight basis)	mg/kg	Semi-Annually	Composite
Mercury (dry weight basis)	mg/kg	Semi-Annually	Composite
Molybdenum (dry weight basis)	mg/kg	Semi-Annually	Composite
Nickel (dry weight basis)	mg/kg	Semi-Annually	Composite
Selenium (dry weight basis)	mg/kg	Semi-Annually	Composite
Zinc (dry weight basis)	mg/kg	Semi-Annually	Composite
Calcium (dry weight basis)	mg/kg	Annually	Composite
Magnesium (dry weight basis)	mg/kg	Annually	Composite
PCB's (dry weight basis)	mg/kg	Annually	Composite
Sodium (dry weight basis)	mg/kg	Annually	Composite
PFAS (dry weight basis)	ug/kg	Quarterly^	Composite
Priority Pollutant Scan	----------	Every 3 Years	Composite

* For sludge lagoons, the minimum frequency of sampling shall be determined by a Department approved sampling plan. Testing of the digested sludge is only required if sludge will be land applied during a calendar year.
^ See Part I. G for additional information.

Sludge samples shall be collected at the following location: off the discharge side of the belt filter press. All sludge samples shall be collected and analyzed in accordance with Section 153 of the Department's Guidance and Regulations Governing the Land Treatment of Wastes.

See Part I, J.1. for reporting requirements. After notice and opportunity for a hearing, the Department may modify the list of parameters required to be monitored and/or the frequency of monitoring.

NOTE: A list of the 126 priority pollutants can be found in 40 CFR, Part 423, Appendix A, 1987.

2. SLUDGE STABILIZATION PROCESS MONITORING

Parameter	Unit Measurement	Frequency	Sample Type	Concentration Limit
Fecal Coliform	MPN/gram or CFUs/gram (dry wt.)	Twice per year	7 Grabs	< 2,000,000 Geometric Mean

No sludge shall be land applied prior to the permittee demonstrating PSRP stabilization requirements have been achieved. Other alternative methods for achieving vector attraction reduction, found in Subsection 133 of Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes, may be employed with prior Departmental approval. See Part I, J. for reporting requirements.

3. VECTOR ATTRACTION REDUCTION

Vector attraction reduction must be achieved by incorporation into the soil, as required in Part III, (B), Subsection 135 of the Guidance and Regulations Governing the Land Treatment of Wastes. Other alternative methods for achieving vector attraction reduction, found in Subsection 135 of Part III, (B), of the Guidance and Regulations Governing the Land Treatment of Wastes, may be employed with prior Departmental approval. See Part I, J for reporting requirements.

4. SOIL MONITORING

Parameter	Unit of Measurement	Minimum Frequency	Sample Type
pH	S.U.	Annually*	Composite
Total Phosphorus as P (dry soil basis)	mg/kg	Annually*	Composite
Potassium (dry soil basis)	mg/kg	Annually*	Composite
% Organic Matter	percent	Annually*	Composite
Arsenic (dry soil basis)	mg/kg	Every 5 Years*	Composite
Cadmium (dry soil basis)	mg/kg	Every 5 Years*	Composite
Copper (dry soil basis)	mg/kg	Every 5 Years*	Composite
Chromium (dry soil basis)	mg/kg	Every 5 Years*	Composite
Lead (dry soil basis)	mg/kg	Every 5 Years*	Composite
Mercury (dry soil basis)	mg/kg	Every 5 Years*	Composite
Molybdenum (dry soil basis)	mg/kg	Every 5 Years*	Composite
Nickel (dry soil basis)	mg/kg	Every 5 Years*	Composite
Selenium (dry soil basis)	mg/kg	Every 5 Years*	Composite
Zinc (dry soil basis)	mg/kg	Every 5 Years*	Composite
Sodium (dry weight basis)	mg/kg	Annually*	Composite
PFAS	ng/kg	Every 5 Years*^	Composite

NOTE: Composite soil samples representing each soil series identified within each sludge application area shall be collected. Soil chemistry testing shall be in accordance with the Methods of Soil Analysis published by the American Society of Agronomy. See Part I, J.1 for reporting requirements.

* Parameters not required to be sampled if digested sludge is not applied during the “minimum frequency” periods.

^ At minimum, one soil sample shall be collected for every 10 acres. See Part 1.G for additional information.

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

5. PLANT TISSUE AND GRAIN ANALYSIS

None required at this time

6. GROUNDWATER MONITORING

Parameter	Unit Measurement	Minimum Frequency	Sample Type
Depth to Water	hundredths of a foot	Monthly	In-Situ
Dissolved Oxygen	mg/L	Quarterly	Field Test
pH	S.U.	Quarterly	Field Test
Specific Conductivity	UMHOS/CM	Quarterly	Field Test
Temperature	°C	Quarterly	Field Test
Ammonium as N	mg/L	Quarterly	Grab
Nitrate Nitrogen as N	mg/L	Quarterly	Grab
Total Nitrogen as N	mg/L	Quarterly	Grab
Total Phosphorus	mg/L	Quarterly	Grab
Total Dissolved Solids	mg/L	Quarterly	Grab
Chloride	mg/L	Quarterly	Grab
Sodium	mg/L	Quarterly	Grab
PFAS	ng/L	Every Six Months^	Grab

^ See Part I. G for additional information

a. Groundwater samples shall be collected and analyzed individually from all monitoring wells. All groundwater samples shall be taken in compliance with the monitoring requirements specified above and in accordance with procedures approved by the Department. A request to suspend groundwater monitoring may be made when sludge has not been applied for three or more consecutive years.

b. Groundwater monitoring results for each monitoring well shall be reported using the State of Delaware Well Identification Tag Number that is required on all wells in accordance with the Delaware Regulations Governing the Construction and Use of Wells, Section 10, A.

7. OTHER MONITORING AS REQUIRED BY THE DEPARTMENT

a. The Permittee shall perform additional monitoring of effluent, groundwater, soils, crops, and/or surface water upon Department notification. Monitoring requirements may include increased sampling frequency, sampling for additional parameters, and/or additional monitoring locations to assure the protection of human health and/or the environment. Analytical results from additional monitoring shall be submitted in monthly reports as required in Part I. J. of this permit.

b. The Permittee shall provide the Department access to land permitted in this permit to perform sampling of groundwater, soils, crops, and/or nearby surface water upon request by the Department.

G. SCHEDULE OF COMPLIANCE

1. Beginning no later than ninety (90) days after the issuance date of this permit, biosolids, soil, and groundwater shall be analyzed for PFAS as required in Part I. F.1, F4, and F6 of this permit. The permittee shall have the samples analyzed by EPA Method 1633, 1633A, or another laboratory method approved by the Department in writing. The frequency of sampling for the effective period of this permit shall be as follows:

    a. Biosolids: One composite sample shall be collected quarterly. The permittee may request to reduce the sampling frequency after one year.

    b. Soil: One composite sample shall be collected every 5 years. At least one sample shall be collected from every 10 acres of permitted land. Each sample shall be a composite sample of soils collected at a depth of approximately 1 foot below the soil surface. Prior to sampling, a sampling plan shall be submitted to the Department for review and approval.

    c. Groundwater: One grab sample shall be collected every 6 months. The permittee may request to reduce the sampling frequency after one year.

H. BONDING

Not required pursuant to Part III, (B), Section 126 of the Guidance and Regulations Governing the Land Treatment of Wastes.

I. MONITORING

1. Representative Sampling

    Samples and measurements taken as required herein shall be representative of the volume and nature of the sludge that is to be land applied.

2. 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 and/or measurement;

    b. The person(s) who performed the sampling and/or measurement;

    c. The dates the analyses were performed and the time the analyses were begun;

d. The person(s) who performed the analyses;

e. The results of each analysis.

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.

J. REPORTING

1. The permittee shall submit, to the Department and landowners, an annual operation report on or before February 1 of each year sludge is land applied. If sludge is not land applied a signed letter, in a format acceptable to the Department, from the permittee shall be submitted in lieu of an annual report. The annual operation report shall be in a format acceptable to the Department and include the following:

a. The daily operational record (as specified in Part II, A.);

b. The weight (wet and dry tons) and volume of sludge utilized at the land application site;

c. The weight of nitrogen, phosphorus and potassium, from sludge, applied to each field. Supplemental fertilizers must be reported separately;

d. Any changes in ownership of the land where the operation is conducted or any change in any lease agreement for the use of such land that may affect or alter the operator's rights upon such land;

e. A chemical analysis of soil from each field for the constituents identified in Part I, F.4. 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 153 of the Department's Guidance and Regulations Governing the Land Treatment of Wastes;

f. Groundwater analysis from monitoring wells for the constituents identified in Part I, F.6.

g. Site maps showing the boundaries within each field where sludge has been applied during the previous year;

h. For each site: the cropping scheme followed during the previous year and anticipated for the coming year; Crop yield data and an explanation of which portions of the plants were harvested; Results of plant tissue and grain analyses, if required; Identification of fields to be used during the coming year; Sludge application rates for the coming year based on nitrogen mineralization calculations from previous sludge application practices;

i. Sludge application rate adjustments, if necessary (See Part I, A.1); and

j. Additional information as required by the Department.

2. Monitor well data and sludge analytical and stabilization process monitoring data obtained during the previous period shall be summarized for each period and submitted 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 electronically submitted to the Department to biosolids_de@delaware.gov.

   If more than one sample is analyzed during any month, a table showing the range of constituent concentration values shall be prepared and included with the submittal. Monthly reports may be submitted electronically or in any format specified by the Department.

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

3. The permittee shall submit copies of all monitoring results to the landowner of each site in accordance with Part I, J.2 above.

4. The permittee shall maintain monthly sludge inventory data. This data shall include at a minimum (a) the quantity of sludge generated, (b) quantity of sludge stored on site, and (c) quantity or sludge transported off-site. Transportation records shall include the date, quantity, carrier used, and the final destination of each shipment. The inventory data shall be maintained at the facility and be made available to the Department in accordance with Part I, I.3 of this permit.

5. Test Procedures

   Test procedures for laboratory analyses shall conform to the applicable

test procedures identified in Section 153 of the Department's Guidance and Regulations Governing the Land Treatment of Wastes, Part III, (B), Land Treatment of Sludges and Sludge Products, unless otherwise specified in this permit.

K. DEFINITIONS

1. "Agricultural Utilization" means the application rate of wastes or sludge or sludge products which shall not exceed the nutrient needs of the crop grown on the particular soil plus the other assimilative pathways in soils (e.g. immobilization with organic material, volatilization, and leachate in compliance with drinking water standards). This term may be used interchangeably with “agronomic rate”.

2. "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 material to be analyzed.

3. “The Department” means the Delaware Department of Natural Resources and Environmental Control.

4. "Depth of Tillage" means the maximum depth at which sludge can be found after injection or incorporation into the soil.

5. "Feed crops" are crops produced primarily for consumption by animals.

6. "Fiber crops" are crops such as flax, cotton, and hemp.

7. "Food crops" are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

8. "Land application" means the placement of sludge, treated sludge, or any other product containing these materials within 2 feet below the surface of land used to support vegetative growth.

9. “Phosphorus Site Index or PSI” means the assessment tool approved as a State Technical Standard designed to evaluate the site characteristics and management factors in determining Phosphorus loss to the environment.

10. “PFRP” means Process to Further Reduce Pathogens.

11. "PSRP" means Process to Significantly Reduce Pathogens.

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 water treated in a water treatment plant, whether or not these solids have undergone treatment.

15. “Solid Sludge” means sludge containing 15 percent or more solids.

16. "Treatment" means a process which alters modifies or changes the biological, physical, or chemical characteristics of sludge or liquid waste.

17. “Vector Attraction” is the characteristic of sewage sludge that attracts rodent, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Part II

A. MANAGEMENT REQUIREMENTS

1. Land Application of Sludge

The permittee shall prepare and maintain an operational record for each day that sludge is applied and/or when any other management activities are conducted at the land application sites. The daily operational record shall include the following:

a. The date, type, and wet and dry weights of the sludge applied;

b. The facility from which the sludge originated;

c. A record of any major deviations from the operating plan;

d. General daily weather conditions;

e. The application rate for sludge;

f. A map for each site showing the fields of daily activity;

g. A record of all actions taken to correct violations of the Regulations;

h. Management undertaken, such as planting and harvesting of crops, fertilizers and chemicals added, frequency of irrigation, techniques used, etc.

2. Change in Operation

The application of sludge to the land treatment sites authorized herein shall be in compliance with the terms and conditions of this permit. The application of sludge at levels in excess of the amount necessary to provide plant available nitrogen for the crop being grown, in accordance with the limits identified in Part I, D.1, D. 2, and D. 3 of this permit, shall constitute a violation of the permit. Any anticipated facility expansion, production increase, or change in site conditions which would affect the land limiting constituent, create a new land limiting constituent, or adversely affect site conditions must be reported in writing to the Department. Upon review of this information, the Department may revoke or modify this permit in accordance with the provisions of Part II, B.6 of this permit.

3. Noncompliance Notification

The permittee shall report to the Department:

a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facilities or activities, if that alteration or addition would result in any significant change in information that was submitted during the permit application process;

b. In writing thirty (30) days before any anticipated change which would result in noncompliance with any permit condition or the Department's Guidance and Regulations Governing the Land Treatment of Wastes;

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 hours, 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; and

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 or the correct information shall be included as a part of this report.

4. 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 by the expiration date. **When submitting a new permit application, updated Project Development Reports (PDRs) for all land treatment sites must be included if the PDR is 10 or more years old.** 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, with written permission from the Department 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 facilities;

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 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 this permit or 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 cause 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 applicable provisions of the Guidance and Regulations Governing the Land Treatment of Wastes, or fails to pay applicable Department fees.

7. Permit Closure Report

a. All land approved for the Agricultural Utilization of sludge is required to have a closure report when the land is no longer being utilized as described in permit application. The report must be submitted to the Department within four (4) months of determination that the field will no longer be utilized for sludge application.

This report shall contain:

1) Letter from permittee stating the application site (including tax parcel number(s)) will no longer receive sludge approved by this

Permit.

2) Copy of the last sludge monitoring results as required in Part I, F.1 and F.2 of this permit.

3) Copy of the last soil monitoring results as required in Part I, F.4 of this permit.

4) Groundwater monitoring, as required in Part I, F.6 of this permit, shall continue for three years after the last application of sludge unless another timeframe is approved by the Department in writing.

8. 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 under 7 Del. C., Chapter 60.

9. 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.

10. 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.

11. 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.

12. Compliance Required

The permittee shall comply with all conditions of the permit.

13. Reopener

In the event that the Part III, B, of the Guidance and Regulations Governing the Land Treatment of Wastes applicable Federal Regulations are revised, this permit may be reopened and modified accordingly after notice and opportunity for a public hearing.

Part III

A. SPECIAL CONDITIONS

The permittee must ensure that the following conditions are met:

1. Sludge shall be transported to the land treatment site in accordance with Delaware Waste Transporters Permit No. WH-298.

2. Pre Start-Up

   a. Prior to the application of sludge, buffer zones and the areas on which sludge is to be applied must be clearly marked with stakes or other suitable markers acceptable to the Department.

   b. Before the permitted may begin to apply sludge to a designated land application site for the first time of a calendar year, the permittee must notify the Department at (302) 739-9946 at least two (2) working days prior to the proposed start application date. The Department may require and conduct a pre start-up inspection to verify that proper buffer zones and that non-application areas are suitably marked. If a pre start-up inspection is required, based on the results of the inspection the Department will either:

      1) Grant approval for sludge application operations to begin or;

      2) Require the permittee to perform additional site preparation (such work must be performed and approved prior to sludge application).

3. Application Measures

   a. If at any time during the sludge application period the depth to groundwater is less than 20 inches below the depth of tillage (see definition in Part I, K.4), all sludge application activities shall immediately cease and the Department shall be notified. Departmental approval shall then be required before sludge application operations can continue.

4. Post Application Measures

   a. The facility shall adhere to the nutrient management plan for the year in which sludge is to be applied to lands specified in this permit. The Department must be notified of any change in the nutrient management plan prior to implementation.

b. The Annual Report shall be submitted to the Department as required in Part I, J.1 of this permit. Should the permittee fail to supply the required documents on or before the deadline specified, the Department may revoke this permit.

5. Regulatory Modification

In the event that the Guidance and Regulations Governing the Land Treatment of Wastes or any applicable federal regulations are revised, this permit may be reopened and modified accordingly after notice and opportunity for a public hearing.

6. The permittee is responsible for compliance with both the Department's Guidance and Regulations Governing the Land Treatment of Wastes and Title 40 of the Code of Federal Regulations, Part 503, Standards for the Use and Disposal of Sludge Compliance with this permit does not constitute compliance with the Federal regulation.

7. Supersedes Previous Permit

This permit supersedes all land application permits previously issued for the James Wells Farm.

8. Sussex County shall only perform land application activities as authorized by this permit if a valid and current lease agreement is in effect between Sussex County Council and the property owner.