



APPLICATION FOR A PERMIT TO UTILIZE  
WASTEWATER SLUDGE IN DELAWARE AGU 1901-K-03

**PRELIMINARY INFORMATION**

1. Name of facility: Kent County Regional Resource Recovery Facility

Mailing Address: 139 Milford Neck Rd.  
Milford, DE 19963

Location (street address, if different from mailing address):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Name of operator: Mr. Colby Harrington

Mailing Address: 555 Bay Road  
Dover, DE 19901

Telephone Number: (302)744-2430

1. Does this facility have a currently effective NPDES permit?  
  X   Yes        No

2. Is this facility required to have, or is it requesting, permit(s) from other agencies under other programs (e.g. RCRA, UST, CERCLA, etc.)?  
  X   Yes        No

If the answers to the above questions are **both** no, complete Part 1 only. If the answer to **any** of the above questions is yes, complete Part 2 rather than Part 1.

Send the completed application information to:

State of Delaware  
Division of Water Resources  
Department of Natural Resources and Environmental Control  
Surface Water Discharges Section  
89 Kings Highway, P.O. Box 1401  
Dover, Delaware 19901

**PART 1: LIMITED BACKGROUND INFORMATION**

Applicants that answered no to all questions in the Preliminary Information section (Part 1) complete Part 1 only. Applicants that answered yes to any of the questions to the Preliminary Information section complete Part 2.

1. Does this operator own the facility for which the information is submitted?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

2. Indicate type of facility:  
\_\_\_\_\_ Federally owned treatment works  
\_\_\_\_\_ Privately owned treatment works  
\_\_\_\_\_ Publicly owned treatment works (POTW)  
\_\_\_\_\_ Other \_\_\_\_\_

3. **Description of Sewage Sludge Use or Disposal Practices.** Provide the following information on the quantity (total dry metric tons per year) of sewage sludge handled at the applicants facility:

Amount of sewage sludge:

\_\_\_\_\_ generated at the facility:  
\_\_\_\_\_ received from off-site:  
\_\_\_\_\_ land applied on-site:  
\_\_\_\_\_ sent off-site for land application:  
\_\_\_\_\_ sent off-site for further treatment or distribution  
\_\_\_\_\_ for ultimate land application:  
\_\_\_\_\_ disposed of in a surface disposal unit on-site:  
\_\_\_\_\_ sent off-site for surface disposal:  
\_\_\_\_\_ used or disposed of by a method not described above,  
including sewage sludge sent to a municipal solid  
waste landfill unit (explain below):  
\_\_\_\_\_

4. **Sludge Quality Data.** Attach any data available on the quality of the sewage sludge, including but not limited to pollutant concentrations and the level of pathogen reduction attained. The applicant may use the tables in Section A of Part 2 to provide any or all of this information.

5. **Certification.** Sign the certification statement below.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with the system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person/s who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Officer: \_\_\_\_\_  
Official Title of Officer: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Signature of Officer: \_\_\_\_\_  
Date Signed: \_\_\_\_\_

**PART 2: PERMIT APPLICATION INFORMATION**

Applicants that answered yes to any of the questions in the Preliminary Information section complete Part 2.

**SLUDGE USE AND DISPOSAL INFORMATION**

**SECTION A. GENERAL INFORMATION**

A.1. Applicants NPDES Permit Number DE 0020338

A.2. Does this operator own the facility for which the application information is submitted?  
 Yes  No

A.3. Indicate type of facility:

- Federally owned treatment works
- Privately owned treatment works
- Publicly owned treatment works (POTW)

If a POTW, provide the following:

Total population served: 184,149

Design influent flow (MGD): 20 MGD

Other \_\_\_\_\_

A.4. Does this applicant perform any collection, treatment, storage, application to land, or disposal of sewage on Indian Lands?  
 Yes  No

A.5. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the following three items of information. Include the area one mile beyond all property boundaries of the applicants facility (submit as many maps as necessary to show the entire area).

- a. Location of sewage sludge management facilities (including on-site disposal sites).
- b. Location of all water bodies.
- c. Location of wells used for drinking water listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

A.6. Other Requirements

- a. List all Federal, State, and local permits or construction approvals received or applied for that are not described above that regulate sewage sludge management practices used by this applicant.

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- b. Submit, with this application information, any other information that the permitting authority requests to assess sewage sludge use and disposal practices or identify appropriate requirements.

A.7. Provide the information on sewage sludge generated or material derived from sewage sludge at the applicant's facility.

**SECTION B. SEWAGE SLUDGE GENERATION OR PREPARATION**

Complete Section B if the applicant generates sewage sludge or derives material from sewage sludge.

**B.1. Sewage Sludge Use and Disposal**

a. Total dry metric tons per year generated 10,000 – 12,000

b. Total dry metric tons per year received from off site 0

If sewage sludge is received from off-site, list the owner and NPDES permit number (if applicable) of the off-site facility. Also list the quantity (total dry metric tons per year) of sewage sludge received from each

source (attach additional pages if necessary).

Owner: \_\_\_\_\_  
NPDES Permit Number: \_\_\_\_\_  
Quantity: \_\_\_\_\_

**B.2. Off-Site Treatment or Distribution.** To be completed if the applicant sends sewage sludge to another facility for treatment or distribution prior to application to the land.

a. Total dry metric tons per year sent to receiving facility by the applicant NA

b. Name and address of facility to which sewage sludge is sent

Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_

c. Which class of pathogen reduction (if any) is met by the sewage sludge before it leaves the applicant's facility? \_\_\_\_\_

Describe the process(es) (if any) used to meet this class of pathogen reduction. \_\_\_\_\_  
\_\_\_\_\_

d. Which of the following vector attraction reduction requirements (if any) is met by the sewage sludge before it leaves the applicants facility?

- Minimum 38 percent reduction in volatile solids
- Anaerobic process, with bench-scale demonstration
- Aerobic process, with bench-scale demonstration
- Specific oxygen uptake rate (SOUR) for aerobically digested sludge
- Aerobic processes plus raised temperature
- Raise pH to 12 and retain at 11.5
- 75 percent solids with no unstabilized solids
- 90 percent solids with unstabilized solids
- Other, explain. \_\_\_\_\_

Describe the process(es) used to meet this vector attraction reduction requirement. \_\_\_\_\_  
\_\_\_\_\_

e. Check all activities performed by the receiving facility on the applicants sewage sludge.

- Dewatering
- Composting
- Stabilization
- Pathogen reduction
- Vector attraction reduction
- Blending with sewage sludge from other treatment works
- Addition of bulking materials (wood chips, sawdust, manure)
- Placement in bag or other container
- Sale or give-away to public
- Other

Describe the activities identified above. Attach a copy of all labels or notices that accompany the product.

\_\_\_\_\_  
\_\_\_\_\_

**B.3.** To be completed if the applicant processes or packages sewage sludge for sale or give-away in a bag or other container for application to land (as explained in the instructions)

a. Provide the total dry metric tons per year processed or packaged for sale or give-away in a bag or other container for application to land. 10,000 – 12,000

b. Indicate which class of pathogen reduction is met by the sewage sludge processed or packaged for sale or give away in a bag or other container for application to land. Class A

Describe the process(es) used to meet this class of pathogen reduction: Thermal treatment and lime stabilization

Are all processes used to meet this class of pathogen reduction provided by the applicant?

Yes  No

If no, explain. \_\_\_\_\_

c. Which of the following vector attraction reduction requirements is met by the sewage sludge processed or packaged for sale or give away in a bag or other container for application to land?

- Minimum 38 percent reduction in volatile solids
- Anaerobic process, with bench-scale demonstration
- Aerobic process, with bench-scale demonstration
- Specific oxygen uptake rate (SOUR) for aerobically digested sludge
- Aerobic processes plus raised temperature
- Raise pH to 12 and retain at 11.5
- 75 percent solids with no unstabilized solids
- 90 percent solids with unstabilized solids
- Other, explain. \_\_\_\_\_

Describe the process(es) used to meet this vector attraction reduction requirement. Lime addition following dewatering

Are all processes used for vector attraction reduction provided by the applicant?

Yes  No

If no, explain. \_\_\_\_\_

d. Briefly describe any blending or manufacturing processes employed prior to sale or give away in a bag or other container. \_\_\_\_\_

e. Attach a copy of all labels or notices that accompany the product being sold or given away.

**B.4.** To be completed if sewage sludge from this facility is applied to land.

a. Provide the total dry metric tons per year from this facility applied to each land application site

<u>Amount</u>	<u>Land Application Site</u>
<u>TBD</u>	<u>Kent County KSF1, KSF4, KSF5, and West Farms, (Multi-Farm)</u>
<u>TBD</u>	<u>Kent County Vineyard Farm</u>

b. Have all land application sites been identified at the time of permit application?

Yes  No

If no, submit a copy of the land application plan with this application information. Complete Section C only for land application sites identified at the time of permit application.

**B.5.** To be completed if sewage sludge from this facility is disposed of in a surface disposal site.

a. Total dry metric tons per year from the applicants facility disposed of in surface disposal site \_\_\_\_\_

b. Name and location of surface disposal site

Name \_\_\_\_\_

Location \_\_\_\_\_

c. If the surface disposal site is owned or operated by the applicant, go to B.6, and also complete Section D. If not, answer B.5.d through B.5.f.

d. Provide the name and address of the site owner/operator.

Name \_\_\_\_\_

Address \_\_\_\_\_

e. Which class of pathogen reduction is met for the sewage sludge disposed of in this surface disposal site?

\_\_\_\_\_

Describe the process(es) used to meet this class of pathogen reduction. \_\_\_\_\_

\_\_\_\_\_

Are all processes used to meet this class of pathogen reduction provided by the applicant?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, explain. \_\_\_\_\_

f. Which of the following vector attraction reduction requirements is met for the sewage sludge disposed of in this surface disposal site?

\_\_\_\_\_ Minimum 38 percent reduction in volatile solids

\_\_\_\_\_ Anaerobic process, with further bench-scale demonstration

\_\_\_\_\_ Aerobic process, with further bench-scale demonstration

\_\_\_\_\_ Specific oxygen uptake rate (SOUR) for aerobically digested sludge

\_\_\_\_\_ Aerobic processes plus raised temperature

\_\_\_\_\_ Raise pH to 12 and retain at 11.5

\_\_\_\_\_ 75 percent solids with no unstabilized solids

\_\_\_\_\_ 90 percent solids with unstabilized solids

\_\_\_\_\_ Injection below land surface

\_\_\_\_\_ Incorporation into soil within 6 hours

\_\_\_\_\_ Covering active sewage sludge unit daily

\_\_\_\_\_ Other, explain. \_\_\_\_\_

Describe the process(es) used to meet this vector attraction requirement. \_\_\_\_\_

\_\_\_\_\_

Are all processes used for vector attraction reduction provided by the applicant?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, explain. \_\_\_\_\_

### SECTION C. LAND APPLICATION

Applicants whose sewage sludge is applied to land, and applicants that apply sewage sludge to land complete Section C.

**C.1. Amount of Sewage Sludge Applied to Land Application Site.** Provide the total dry metric tons per hectare per year applied to this site. 9.93

#### C.2. Site Information.

a. Provide the name (if any) and street address of this land application site.

Name Kent County (SEE PDR)  
Address \_\_\_\_\_  
\_\_\_\_\_

b. Provide the size of the land application site in hectares. \_\_\_\_\_

c. Federal, State, and local permit number(s) applicable to this land application site (attach additional pages if necessary).

<u>Permit Number</u>	<u>Type of Permit</u>
_____	_____
_____	_____
_____	_____

d. Is this site owned/operated by the applicant?  
 Yes  No

e. What is the concentration of total nitrogen (as N on dry weight basis) in the bulk sewage sludge applied to this land application site? 3.75 Percent

**C.3. Person that Land Applies the Sewage Sludge.** Sewage sludge is applied to the site by:

Facility generating the sewage sludge  
 Site owner/operator  
 Other \_\_\_\_\_

Provide the name and address of the person that applies sewage sludge to this site.

Name Kent County  
Address 555 Bay Road  
Dover, DE 19901

#### C.4. Type of Land Application Site

Agricultural  
 Forest  
 Public contact  
 Reclamation site  
 Lawn or home garden  
 Other \_\_\_\_\_

#### C.5. Vegetation Grown on Site.

a. What type of vegetation is grown on this site? grain corn/soybeans/small grains

b. What is the nitrogen requirement for this vegetation? 0 lb/acre – 165 lb/acre

**C.6. Other facilities.** Is sewage sludge sent to this land application site by any facilities other than the applicant's facility?

Yes  No

If yes, provide the names and addresses of other persons that send sewage sludge to the site.

Name \_\_\_\_\_

Address \_\_\_\_\_

**C.7. Sewage Sludge Applied to Land in a Different State.** Is this land application site located in a State other than the State where the sewage sludge is generated or the material is derived from sewage sludge?

Yes  No

If yes, describe how the applicant plans to notify the permitting authority for the State where the land application site is located. \_\_\_\_\_

**C.8. Land Application Cumulative Pollutant Loading Rates.** Is this sewage sludge applied to land subject to cumulative pollutant loading rates?

Yes  No

If yes, have the cumulative pollutant loading rates of each pollutant applied to land in accordance with been determined?

Yes  No

If yes, provide the allotment remaining for the following pollutants (in kilograms per hectare).

_____ Arsenic	_____ Lead	_____ Nickel
_____ Cadmium	_____ Mercury	_____ Selenium
_____ Chromium	_____ Molybdenum	_____ Zinc
_____ Copper		

**C.9. Pathogen Reduction.**

a. Which class of pathogen reduction is met by the sewage sludge applied to this site? Class B

b. Describe the process(es) used to meet this class of pathogen reduction. Lime stabilization and thermal treatment

c. Are all processes used to meet this class of pathogen reduction provided by the applicant?

Yes  No

If no, explain. \_\_\_\_\_

**C.10. Vector Attraction Reduction.**

a. Which of the following vector attraction reduction requirements is met by the sewage sludge applied to this site?



- Minimum 38 percent reduction in volatile solids
- Anaerobic process, with further bench-scale demonstration
- Aerobic process, with further bench-scale demonstration
- Specific oxygen uptake rate (SOUR) for aerobically digested sludge
- Aerobic processes plus raised temperature
- Raise pH to 12 and retain at 11.5
- 75 percent solids with no unstabilized solids
- 90 percent solids with unstabilized solids
- Injection below land surface
- Incorporation into soil within 6 hours
- Covering active sewage sludge unit daily
- Other, explain. \_\_\_\_\_

b. Describe the process(es) used to meet this vector attraction reduction requirement. \_\_\_\_\_

c. Are all processes used for vector attraction reduction provided by the applicant?  
 Yes  No

If no, explain. \_\_\_\_\_

**SECTION D. SURFACE DISPOSAL**

Complete Section D if applicants own or operate a surface disposal site.

**D.1. Name and Location of Surface Disposal Site.**

Name \_\_\_\_\_  
 Address \_\_\_\_\_

**D.2. Ownership Status.** Is this surface disposal site owned by the applicant?  
 Yes  No

**D.3. Person Who Disposes of Sewage Sludge in the Surface Disposal Site.** Sewage sludge is disposed of in the surface disposal site by (check all that apply)  
 Facility generating the sewage sludge  
 Site owner  
 Other \_\_\_\_\_

Provide name and mailing address of person who disposes of sewage sludge in this surface disposal site.

Name \_\_\_\_\_  
 Address \_\_\_\_\_

**D.4. Ground-Water Monitoring.**

a. Is ground-water monitoring conducted at this surface disposal site?  
 Yes  No

If yes, describe. \_\_\_\_\_

b. Has a ground-water monitoring plan been prepared for the surface disposal site?  
 Yes  No

If yes, provide a copy of the ground-water monitoring plan.

- c. Has the applicant obtained a certification from a qualified ground-water scientist that ground-water contamination has not occurred?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, provide a copy of the certification.

Provide the information requested in D.5. - D.12. once for each active sewage sludge unit.

**D.5. Name or Number of Active Sewage Sludge Unit.** \_\_\_\_\_

**D.6. Amount of Sewage Sludge Disposed of in the Unit.** Provide the total dry metric tons per year disposed of in this sewage sludge unit. \_\_\_\_\_

**D.7. Pathogen Reduction.**

- a. Which class of pathogen reduction is met for the sewage sludge disposed of in this sewage sludge unit?

\_\_\_\_\_

- b. Describe the process(es) used to meet this class of pathogen reduction. \_\_\_\_\_

\_\_\_\_\_

- c. Are all processes used to meet this class of pathogen reduction provided by the applicant?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, explain. \_\_\_\_\_

**D.8. Vector Attraction Reduction.**

- a. Which of the following vector attraction reduction requirements is met for the sewage sludge disposed of in this surface disposal site?

- \_\_\_\_\_ Minimum 38 percent reduction in volatile solids  
\_\_\_\_\_ Anaerobic process, with further bench-scale demonstration  
\_\_\_\_\_ Aerobic process, with further bench-scale demonstration  
\_\_\_\_\_ Specific oxygen uptake rate (SOUR) for aerobically digested sludge  
\_\_\_\_\_ Aerobic processes plus raised temperature  
\_\_\_\_\_ Raise pH to 12 and retain at 11.5  
\_\_\_\_\_ 75 percent solids with no unstabilized solids  
\_\_\_\_\_ 90 percent solids with unstabilized solids  
\_\_\_\_\_ Injection below land surface  
\_\_\_\_\_ Incorporation into soil within 6 hours  
\_\_\_\_\_ Covering active sewage sludge unit daily  
\_\_\_\_\_ Other, explain. \_\_\_\_\_

- b. Describe the process(es) used to meet this vector attraction reduction requirement. \_\_\_\_\_

\_\_\_\_\_

- c. Are all processes used for vector attraction reduction provided by the applicant?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, explain. \_\_\_\_\_

**D.9. Distance from Property Boundary.** Is the distance from the boundary of this sewage sludge unit to the property line of the surface disposal site less than 150 meters?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, list the actual distance: \_\_\_\_\_

**D.10. Liners.** Does this sewage sludge unit have a liner?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, describe the liner. \_\_\_\_\_

**D.11. Leachate Collection Systems.** Does this sewage sludge unit have a leachate collection system?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, describe the method used for leachate disposal. \_\_\_\_\_

Also if yes, provide Federal, State, and local permit number(s) for the disposal of leachate.

Permit Number

Type of Permit

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**D.12. Site-Specific Limits.** Are site-specific pollutant limits being sought for the sewage sludge disposed of in this sewage sludge unit?

\_\_\_\_\_ Yes \_\_\_\_\_ No

## SECTION F. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Officer: \_\_\_\_\_

Name of Officer: \_\_\_\_\_

Official Title of Officer: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Date Signed: \_\_\_\_\_

*Diana J. Golt*

*Diana T. Golt*

*Public Works Director*

*302. 744. 2430*

*11.28.23*