

State Permit No. LTS 5004-90-12
DEN Number: 359141-05
Effective Date: July 13, 2012
Amended Date: October 16, 2012
Amended Date: March 14, 2013
Amended Date: October 8, 2015
Amended Date: October 20, 2015
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6. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the state resulting from operation under this permit. Such steps shall include, but not be limited to, accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or reasonable mitigation of such impacts.

7. Bypassing

Any bypass of treatment facilities (including pretreatment, storage, distribution and land application facilities) necessary to maintain compliance with the terms and conditions of this permit is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no alternatives;
- c. The Department is orally notified within 24 hours after such bypass; and, a written submission regarding the bypass is submitted within five days of the permittee's becoming aware of the bypass. Where the need for a bypass is known (or should have been known) in advance, this notification shall be submitted to the Department for approval at least ten days prior or as soon as possible before the date of bypass; and
- d. The bypass is allowed under conditions determined by the Department to be necessary to minimize adverse effects as provided under 7 Del. C., Chapter 60, §6011.

8. Initiation of Facility Operations Notification

If this permit involves the construction of new facilities or modifications to existing facilities, the permittee shall notify the Department at least fifteen days prior to the intent to initiate operations. Permittee must schedule to have Ground Water Discharge Section staff present at the initiation of operations to perform a start up inspection. If the results of the inspection are satisfactory, written authorization will be issued for continued operation. In the event the inspection results are not satisfactory, a letter of deficiency will be issued detailing remedial action necessary. After remedial action has been completed, the permittee must schedule the Ground Water Discharges Section to perform another start up inspection. The permittee must obtain written authorization from the Ground Water Discharges Section prior to commencing operations.

9. Removed Substances

Solids, sludges, filter backwash or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a manner such as to prevent any pollutant from entering the surface water or ground water and to comply with applicable federal or state laws and regulations.

10. Power Failures

An alternative power source, which is sufficient to operate the wastewater treatment and disposal facilities, shall be available. If such alternative power source is not available, the permittee shall halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater facilities.

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B. RESPONSIBILITIES

1. Reapplication for a Permit

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 discharging by the expiration date. In the event that a timely and complete application has been submitted as determined by the Department, 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 until a decision is made on the new application.

2. Submission of As-Built Plans

Within 90 days following the completion of construction of new facilities or modifications to existing facilities, the permittee shall submit to the Department a set of as-built plans of the facility bearing the seal and signature of a Professional Engineer registered in the State of Delaware. As-built drawings shall incorporate the new contours, treatment system, and spray irrigation system, along with the elevations of monitoring wells at the top of the casing and at the ground surface, and local topography tied to a common bench mark. The location and screen depth must also be provided for the monitoring wells.

3. Right of Entry

The permittee shall allow, at reasonable times, the Secretary of the Department of Natural Resources and Environmental Control, or his authorized representatives, upon the presentation of credentials and such other documents as may be required by law:

- a. To enter upon the permittee's premises where the spray irrigation facility is located or where any records are required to be kept under the terms and conditions of this permit;
- b. To have access to and copy any records required to be kept under the terms and conditions of this permit;
- c. To inspect any facility, equipment, monitoring method, monitoring equipment, practice or operation permitted or required under this permit; and
- d. To sample or monitor for the purpose of assuring permit compliance with any condition of this permit, the regulations or 7 Del C., Chapter 60.

4. Transfer of Ownership and Control

No person shall transfer a permit from one location to another, or from one piece of equipment to another. No person shall transfer a permit from one person to another unless 30 days written notice is given to the Department, indicating the transfer is agreeable to both persons, and approval of such transfer is obtained in writing from the Department, and any conditions of the transfer approved by the Department are complied with by the transferor and the transferee.

The notice to the Department shall contain a written agreement between the transferor and the transferee, indicating the specific date of proposed transfer of permit coverage and acknowledging responsibilities of current and new permittees for compliance with and liability for the terms and conditions of this permit. The notice shall be signed by both the transferor and the transferee.

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5. Availability of Reports

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Natural Resources and Environmental Control. Monitoring data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in 7 Del. C., §6013.

6. Permit Modification, Revocation and Termination

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

- a. Violation of any terms of conditions of this permit, the regulations, 7 Del. C., Chapter 60 or failure to pay applicable Department fees;
- b. Obtaining this permit by misrepresentation or failure to fully disclose all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- d. If the Department finds that the health, safety or welfare of the public 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.

7. State Laws

This permit shall not 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 of 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. If any provision of this permit, or the application of any provision of this permit, to any circumstances is held invalid; the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

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PART III

A. GENERAL CONDITIONS

1. The spray irrigation fields shall be managed to assure at a minimum that:
 - a. Spray irrigation of wastewater shall not occur on barren fields.
 - b. The spray fields shall be maintained in such a manner as to prevent wastewater pooling and/or discharge of wastewater to any surface waters. Should pooled areas become evident, no spraying shall be conducted in those areas until saturated conditions no longer exist.
 - c. No aerosols or nuisance odors shall extend beyond the boundary of the spray irrigation site when treated wastewater is being applied. If odors are produced that are considered to be a public nuisance, the permittee shall take the necessary steps to eliminate such odors. All action taken shall be reported to the Department in accordance with Part II.A.3 of this permit.
 - d. Erosion controls are employed to prevent wastewater runoff from the spray irrigation fields. The permittee must notify the Department immediately if any wastewater runoff occurs.
 - e. The spray irrigation field's crops must be maintained in optimal condition, including any necessary weed management, reseeding, or other vegetative management.
 - f. Effective vegetative management shall be provided such that crops harvested on the spray irrigation sites are removed from the sites.
 - g. The wastewater must be applied in a manner such that the application is even and uniform over the irrigation area.
2. Spray irrigation is prohibited when saturated or frozen soil conditions exist.
3. The ground water mound created by the added infiltration shall at no time reach within two feet of the ground surface in any section of the spray irrigation fields. Should the ground water mound exceed this limit, the permittee shall cease all irrigation of wastewater to the affected fields until the ground water mound recedes to acceptable levels.
4. All construction activities shall be in agreement with the plans and specifications submitted under this project and approved by the Ground Water Discharges Section; and other applicable local utility construction specifications and standards. Connections or additions to the spray irrigation system other than those indicated on the approved plans are prohibited without prior approval from the Ground Water Discharges Section.
5. Roof downspouts, foundation drains, area drains, storm sewers, combined sewers or appurtenances thereto or any sewer or device carrying storm water shall not be connected to the spray irrigation system.
6. The permittee shall take appropriate measures to protect the spray irrigation system from damage due to sub-freezing conditions. Any leaks associated with such conditions shall be reported to the Department and repaired immediately.

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7. Signs must be posted along the perimeter of, and at all entry points to, areas utilizing treated wastewater for irrigation to discourage public contact with the effluent. The signs must indicate that the water being irrigated is treated wastewater. The signs must be legible.
8. Potable ground or surface water may be used for distribution system testing and irrigation to establish vegetation when sufficient treated effluent is not available.
9. In the event that the permittee installs new monitoring wells or replaces any existing monitoring wells, the permittee shall submit to the Ground Water Discharges Section new elevation details relative to the common benchmark previously established. Additionally, the permittee shall conduct a ground water quality sampling program prior to initiation of spray irrigation activities on the area incorporating the well. The sampling program shall be sufficient to establish a representative ground water quality at each well prior to initiation of the spray irrigation activities on the area incorporating the well. A minimum of three (3) samples shall be collected at least one month apart and analyzed. A Summary report which includes all analyses shall be submitted to the Ground Water Discharges Section prior to initiation of spray irrigation activities. Analyses shall include the following:

Ammonia Nitrogen		Nitrate + Nitrite Nitrogen	Temperature
Arsenic	Fecal Coliform		Total Dissolved Solids
Cadmium	Hardness	Organic Nitrogen	Total Nitrogen
Chloride	Iron	pH	
Chromium	Lead	Selenium	Total Phosphate as P
Copper	Manganese	Sodium	Total Phosphorus
Depth to water to 0.01ft from a surveyed point on TOC	Mercury	Specific Conductance	Total Suspended Solids
Dissolved Oxygen	Nickel	Sulfate	Zinc

10. The permittee must calibrate all flow meters in accordance with the Manufacturer's recommendations. Calibration shall include, but not be limited to influent, effluent, continuous online turbidity and chlorine residual monitors. The calibration documentation must be submitted with the Annual Report in accordance with Part I.I.2.b.vi.
11. The permittee shall operate and maintain the land treatment system in accordance with the approved Operation and Maintenance Plan.
12. Written permission must be obtained from the Ground Water Discharges Section prior to utilizing the freeboard in any lagoon.
13. This permit does not relieve the permittee of complying with any other applicable Federal, State or local regulations.
14. In the event that the Guidance and Regulations Governing the Land Treatment of Wastes or applicable federal regulations are revised, this permit may be opened and modified accordingly after notice and opportunity for a public hearing.

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15. This permit supersedes all previous spray irrigation permits issued to the permittee.

B. FACILITY SPECIFIC CONDITIONS

1. A classification was performed on the permitted facility in accordance with Regulations Licensing Operators of Wastewater Facilities. The wastewater treatment system is designated as a Class IV Facility. The facility must be under the direction of a Class IV Licensed Operator in Direct Responsible Charge for the facility who is available at all times. A licensed operator, operating under the direction of the licensed operator in Direct Responsible Charge for the facility, must be available when the spray irrigation system is in operation.
2. Within 90 days of the issuance date of this Amended Permit, Permittee must address the “Requirements” in the February 6, 2013 DNREC Hydrogeological Review.
3. Within 90 days of the issuance date of this Amended Permit, Permittee must address the “Requirements Prior to Issuance of an Operation Permit” iterated in the February 24, 2013 email to Heather Sheridan, Sussex County.

C. SLUDGE HANDLING REQUIREMENTS

1. The permittee shall comply with all existing Federal and State laws and regulations that apply to its sludge use or disposal practice(s) including, but not limited to, Federal Regulations 40 CFR Part 258, Section 28 *Liquids Restrictions*; 40 CFR Part 503 *Standards for the Use and Disposal of Sludge*, February, 1993; and the Department's Guidance and Regulations Governing the Land Treatment of Wastes, including Part III.B, The Regulations Governing the Use and Disposal of Wastewater Sludge, October, 1999. If the Department determines that additional requirements or permit conditions are needed to ensure compliance with the referenced regulations, or if the Federal Government promulgates new regulations under Section 405(d) of the Act governing, (a) the treatment or disposal of sewage sludge, (b) sewage sludge management practices, or (c) concentrations of pollutants in sewage sludge, this permit may be reopened, and after notice and opportunity for public hearing, modified accordingly during its term. In the event that the Guidance and Regulations Governing the Land Treatment of Wastes or applicable federal regulations are revised, this permit may be opened and modified accordingly after notice and opportunity for a public hearing.
2. Prior to any planned change in the permittee's sludge use, treatment or disposal practice(s), the permittee shall notify the Department's Groundwater Discharges Section in accordance with the requirements of Part II.A.5 of this permit. A change in the permittee's sludge use, treatment or disposal practice(s) shall be considered cause for Permit Number AGU-1504-S-03 to be modified, or revoked and reissued.
3. An inventory of nutrient loading and residual nitrogen from the land application of sewage sludge performed in compliance with State Permit Number's AGU-1504-S-03 shall be included in the nutrient inventory for specific crop needs in addition to the nutrient loadings added by spray irrigation. At no time shall the TOTAL NUTRIENT LOADING exceed agronomic uptake rates for a particular crop.
4. The permittee shall maintain monthly sludge inventory data. This data shall include at a minimum (a) quantity of sludge generated, (b) quantity of sludge stored on site, and (c) quantity of sludge transported off site. Transportation records shall include the date, quantity, carrier used, and the final destination for each shipment. The inventory data shall be maintained at the facility and be made available to the Department in accordance with Part I.I.5 of this permit.

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5. The Permittee shall provide a summary of all sources of sludge/biosolids, regardless of origin, to all fields permitted for spray irrigation with the Annual Report required in accordance with Part I.I.2.b of this Permit. The summary should at a minimum include the following:
 - a. For the reporting year:
 - i. All Nitrogen and Phosphorus sludge/biosolids sources.
 - ii. The amount of Nitrogen and Phosphorus (lbs/acre) applied to each permitted spray irrigation field. A site map depicting sludge application locations.
 - b. Proposed for the coming year:
 - i. The projected Nitrogen and Phosphorus sludge/biosolids sources.
 - ii. The projected amount of Nitrogen and Phosphorus (lbs/acre) to be applied to each permitted spray irrigation field.
 - iii. A site map depicting the proposed sludge application locations.

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PART IV

A. AMENDMENTS TO STATE PERMIT LTS 5004-90-12 ISSUED JULY 13, 2012

1. Amended October 16, 2012

Part I.G.2 Page 9 Deleted monitoring requirement for Enterococcus

Part III.A.9 Page 22 Deleted monitoring requirement for Enterococcus

2. Amended March 14, 2013

Page 1 amended location information

Part I.A additional documentation added Numbers 16-19

Part I.B updated system's design disposal capacity to 2.65 MGD; disposal acreage to 432.5 acres

Part I.D.1 updated system's design disposal capacity to 2.65 MGD

Part I.D.2 included additional spray fields and discharge rate limits

Part I.G.3.b added ground water level measurement requirements

Part I.G.3.c relocated requirements from Part I.G.6

Part I.G.4 added lysimeter monitoring requirement for East Hettie Lingo Field

Part III.A.9 modified monitoring requirements

Part III.B.2 added requirement for Permittee to address the "Requirements" in the February 6, 2013 DNREC Hydrogeological Review

Part III.B.3 added requirement for Permittee to address the "Requirements Prior to Issuance of an Operation Permit" iterated in the February 24, 2013 email to Heather Sheridan, Sussex County.

3. Amended October 8, 2015

Part I.D.4 amended the minimum rest period from 24 to 3 hours between applications on each spray field.

Part I.G.3.c added specific wells affiliated with the meeting the 2 feet DTW requirement for each field.

4. Amended October 20, 2015

Part I.G.3.c corrected/switched OW 27 (242932) and OW 28 (242933)

5. Amended October 4, 2016

Page 3 and 4 updated Site Map

Page 6 inserted process flow diagram for sludge dewatering

Part I.A additional documentation added Numbers 20-23

Part I.B added biosolids dewatering info

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Part I.G.3 added list of monitoring and observation wells and relocated and added verbiage for clarity, deleted listing of fields in verbiage

Part I.G. added list of Lysimeters for clarity, deleted listing of fields in verbiage

Part I.I.2 updated DNREC address

Part I.I.2.b added requirement for the annual report to include a summary of all sources of sludge/biosolids, regardless of origin, to all fields permitted for spray irrigation

Part III.B.1 Adjusted facility classification to a IV

Part III.C added Sludge Handling Requirements