

Spray Irrigation Operations Permit

Issued by: Groundwater Discharges Section
Division of Water
Department of Natural Resources
and Environmental Control
89 Kings Highway
Dover, Delaware 19901
302-739-9948

DEN Number: 359000-05
Effective Date: November 1, 2019
Amended Date: November 14, 2019
Amended Date: November 4, 2020
Amended Date: October 28, 2021
Expiration Date: October 31, 2024



AUTHORIZATION TO OPERATE AND DISCHARGE UNDER THE LAWS OF THE STATE OF DELAWARE

Permittee: **Hometown Angola Beach, LLC**
Angola Beach & Estates
22971 Suburban Blvd
Lewes, DE 19958

Facility: **Angola Beach & Estates Wastewater Treatment Facility**
Angola Beach & Estates
23063 Suburban Blvd
Lewes, DE 19958

Service Area: The Angola Beach and Angola Estates developments

Discharge: Spray irrigation of treated domestic wastewater onto a 14.17-acre spray field located on Suburban Drive adjacent to the office and clubhouse in the Angola Estates development, Sussex County, Delaware

1. Pursuant to the provisions of 7 Del. C. §6003, the Permittee is herein authorized to operate the above referenced facility and to discharge via spray irrigation.
2. The effluent limitations, monitoring requirements and other permit conditions are set forth herein.

John J. Rebar Jr.
Environmental Program Manager I
Groundwater Discharges Section
Division of Water
Delaware Department of Natural Resources
and Environmental Control

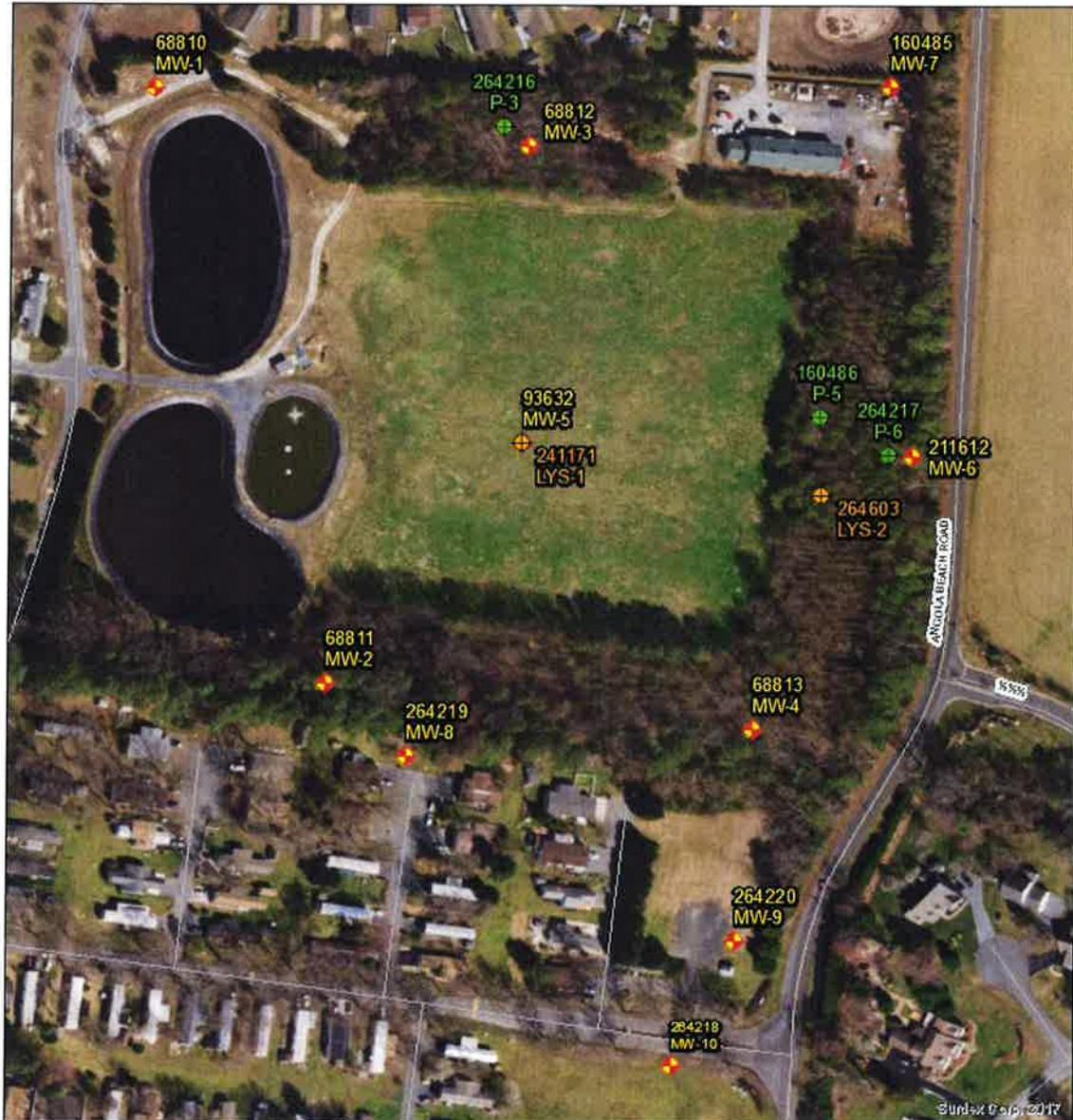
Date Signed

LOCATION MAP



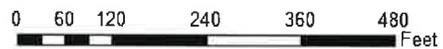
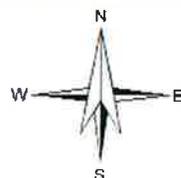
SITE MAP

Angola Beach & Estates Wastewater Treatment Facility



Legend

-  Monitoring Wells
-  Piezometers
-  Lysimeters

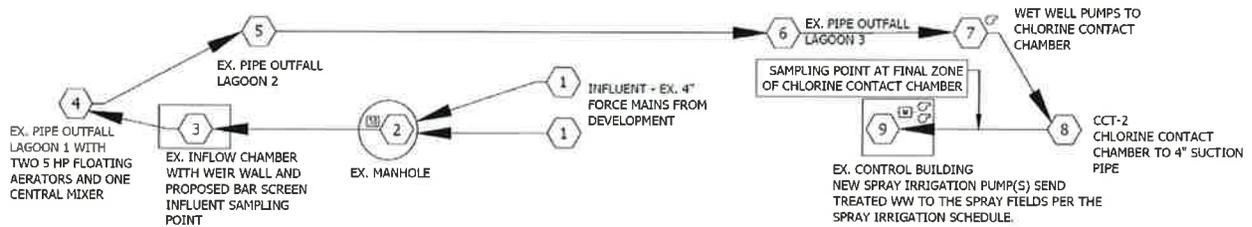


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PROCESS FLOW DIAGRAM

PROCESSING SEQUENCE

1. RAW DOMESTIC WASTEWATER (WW) ENTERS THE MANHOLE DIRECTLY FROM 2 INFLUENT FORCE MAINS FROM THE COLLECTION SYSTEM'S TWO PUMP STATIONS.
2. WW FLOWS THROUGH A 6-INCH FLOW METER THAT LOCALLY RECORDS FLOW RATE THEN DISCHARGES INTO
3. THE INFLOW CHAMBER WITH A PROPOSED BAR SCREEN AND WEIR WALL.
4. WW FLOWS BY GRAVITY THROUGH THE AERATION LAGOON 1, IS AERATED BY (2) 5-HP AERATORS AND (1) 5-HP MIXER AND OUTFALLS VIA GRAVITY TO LAGOON 2.
5. LAGOON 2 PERFORMS AS A POLISHING/STORAGE LAGOON. A SONIC TRANSDUCER ASSIST WITH POTENTIAL ALGAE. FLOWS ABOVE THE 2.5 FOOT WATER SURFACE LEVEL OUTLET VIA PIPE OVERFLOW TO LAGOON 3.
6. LAGOON 3 PERFORMS AS A POLISHING/STORAGE LAGOON. A SONIC TRANSDUCER ASSIST WITH POTENTIAL ALGAE. FLOWS ABOVE THE 2.5 FOOT WATER SURFACE LEVEL OUTLET VIA PIPE OVERFLOW TO THE SEDIMENT TANK AND WET WELL.
7. THE WET WELL PUMPS THE EFFLUENT TO THE CHLORINE CONTACT CHAMBER (CCT-2).
8. THE CHLORINE CONTACT CHAMBER MIXES THE EFFLUENT WITH CHLORINE ALLOWING FOR THE PERMIT CHLORINE RESIDUAL TO BE MET. DISCHARGE IS VIA A 4" PVC PUMP TO THE IRRIGATION PUMPS.
9. SPRAY IRRIGATION PUMPS SEND TREATED WW TO THE SPRAY FIELDS PER THE SPRAY IRRIGATION SCHEDULE.



PART I

A. GENERAL DESCRIPTION OF OPERATION/DISCHARGES

The Hometown America, Angola Beach and Estates Wastewater Treatment and Disposal Facility treats domestic wastewater collected from the community. The treatment facility consists of influent community pump stations with grinder pumps, one 0.88 million gallon aerated lagoon with comminution, two storage/polishing lagoons with a combined volume of 6.64 million gallons (excluding freeboard); one sediment tank and wet well/lift station; one chlorine contact tank; and two 190 GPM irrigation pumps. The chlorinated effluent is to be spray irrigated on 14.17 acres utilizing 82 sprinkler heads, consisting of 11 zones planted in reed canary grass with forested perimeters and spray areas (Zones 1-5: Grasses; Zones 6-11 Woods). The system is designed for the connection of 700 units at approximately 91,000 GPD treatment (inflow); an annual average of 111,160 GDP disposal, and with a peak disposal flow during the peak application months of 137,429 GPD.

This permit authorizes a total of 625 units to be connected and authorizes a daily average influent flow no greater than 81,250 gpd (calculated as Total Monthly Volume divided by number of days in month). Permittee may apply for additional flows after the demonstration of system functionality and compliance as outlined in Part I.I.1 of this permit.

B. DOCUMENTATION

The wastewater treatment facility and disposal system shall be operated in accordance with (but not limited to) the following documents:

1. The State of Delaware, Department of Natural Resources and Environmental Control's Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems (Regulations).
2. April 2018 *Wastewater Treatment and Disposal Facility Design Engineer's Report for Angola Beach and Estates*, Design Plans titled *Wastewater Facility Expansion – Construction Plan*, and *Vegetative Management Plan* prepared by Mill Brook Engineering, LLC with addendum provided in a letter dated May 3, 2018.
3. April 2019 Operation and Maintenance Plan with revision to the Nitrogen Balances provided in a July 16, 2019 email.

C. INFLUENT LIMITATIONS

1. The average daily quantity of influent to the wastewater treatment facility shall not exceed 81,250 gallons per day calculated as Total Monthly Volume divided by number of days in month.

Only domestic wastewater from no more than 625 housing units from the Angola Beach and the Angola Estates developments shall be received by the wastewater treatment facility. The connection of additional units or waste streams is prohibited without prior permit amendment by the Groundwater Discharges Section.

Permitted Treatment Capacity: 81,250 gpd Daily Average [calculated as Total Monthly Volume divided by number of days in month]

2. Industrial and commercial discharges may not be connected to the facility without prior written approval from the Groundwater Discharges Section.

D. SPRAYED EFFLUENT LIMITATIONS

During the period beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to discharge to the spray irrigation field(s) identified on page 1, in Part I.A, and depicted on page 3 of this permit the quantity and quality of effluent specified below and in accordance with the design documents listed in Part I.B of this permit:

1. The facility shall be operated in accordance with the design Nitrogen Balance provided in the April 2018 *Wastewater Treatment and Disposal Facility Design Engineer's Report for Angola Beach and Estates*. The design Nitrogen Balance may also be found in the July 16, 2017 electronic revision to the *Operation and Maintenance Plan* dated April 2019.

The annual quantity of effluent discharged from the wastewater treatment facility to the spray fields shall not exceed 40,573,793 gallons annually.

Design Disposal Capacity: 111,160 Annual Average [calculated as Total Annual Volume divided by 365 days]

Zones 1-5: Grasses Zones 6-11: Woods

	Jan	Feb	Mar	Apr	May	Jun
Grass (in/wk)	0.75	1.11	1.71	2.50	2.50	2.50
Grass (gal/mo)	775,655	1,039,044	1,765,878	2,502,234	2,585,642	2,502,234
Woods (in/wk)	0.95	1.42	2.10	2.50	2.50	2.50
Woods (gal/mo)	635,639	862,108	1,406,851	1,620,633	1,674,654	1,620,633
Total (gal)	1,411,295	1,901,151	3,172,729	4,122,867	4,260,296	4,122,867

	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Grass (in/wk)	2.50	2.50	2.50	2.02	1.75	1.21	
Grass (gal/mo)	2,585,642	2,585,642	2,502,234	2,085,853	1,749,990	1,246,699	23,926,748
Woods (in/wk)	2.50	2.50	2.50	2.20	2.09	1.53	
Woods (gal/mo)	1,674,654	1,674,654	1,620,633	1,474,169	1,357,052	1,025,365	16,647,046
Total (gal)	4,260,296	4,260,296	4,122,867	3,560,021	3,107,042	2,272,065	40,573,793

- The average weekly quantity of effluent discharged to any portion of the spray irrigation field shall not exceed 2.5 inch per acre averaged over a 7-day rolling period.

If operations of the facility encounter emergency or extenuating circumstances that would require the weekly quantity of effluent discharged to exceed 2.5 inches per acre per 7-day period, and the system would be able to assimilate the additional Nitrogen Loading without exceeding the limitations set forth in Part I.D.9 below, please contact the Groundwater Discharges Section for written authorization in accordance with Section 6.3.2.3.13.8.1 of the Regulations.

- The quantity of effluent discharged to any portion of the spray irrigation field shall not exceed 0.25 inch/acre/hour.
- There shall be a sufficient rest period between applications to prevent field saturation and runoff from occurring in any part of the field.
- The pH of the effluent shall not be less than 5.5 standard units nor greater than 9.0 standard units at any time.
- The total residual chlorine concentration shall not be less than 1.0 mg/L nor more than 4.0 mg/L at any time.
- The Chloride concentration of the effluent shall not exceed 250 mg/L on an average annual basis.
- The Sodium concentration of the effluent shall not exceed 210 mg/L on an average annual basis.
- Design Effluent Nitrogen Concentration:

The facility has been designed to not exceed the following monthly effluent Total Nitrogen concentrations.

Total nitrogen in spray effluent (mg/L)											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
25.75	23.30	22.96	22.89	25.06	24.90	26.87	28.34	27.72	26.68	22.99	23.19

If the effluent Total Nitrogen concentration exceeds any of the above listed concentrations by 25% (Design Value + 25%) for any corresponding calendar month, the permittee shall resample the wastewater and submit the additional analyses to the Groundwater Discharges Section. If the effluent Total Nitrogen concentration exceeds any of the above listed concentrations by 25% for over a three-month period, the permittee shall have the system evaluated to determine the cause and submit a revised Design Engineer Report to the Groundwater Discharges Section. If the effluent exceeds any of the above listed concentrations by 50% (Design Value +50%), the Department may invoke the provisions of Part V.A.1 of this permit. Also reference Part II.B.1.

The total amount of nitrogen that may be applied to each spray field acre shall not exceed the following. This amount includes supplemental fertilizers, the nitrogen supplied from the effluent, and any other source.

Nitrogen Loading Limit (lbs/acre)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Ag	19.37	23.48	39.32	55.56	62.83	60.43	67.38	71.06	67.26	53.96	39.01	28.03	587.7
Woods	24.51	30.08	48.36	55.56	62.83	60.43	67.38	71.06	67.26	58.88	46.71	35.6	628.7

Adjustments and reductions for denitrification, ammonia volatilization, evapotranspiration and plant uptake are **not** to be factored into the annual reporting of Total Nitrogen Loading for demonstration of compliance with this limit.

If any crops are not removed from the spray irrigation fields, then the total nitrogen application rate for the field shall be reduced by the amount of nitrogen that would be removed by harvesting the crop as detailed in the facility's Design Engineer Report and/or Design Nitrogen Balance.

10. The discharge to the spray irrigation fields shall be free from material such as floating solids, sludge deposits, debris, scum, oil and grease.
11. The facility has been designed for Limited Public Access.

The treated wastewater utilized for limited public access sites shall meet the following daily permissible average concentrations. The daily average concentration shall be determined by the summation of all the measured daily concentrations obtained from composite samples during each calendar month divided by the number of days during the calendar month when the measurements were made.

- a. The 5-day Biochemical Oxygen Demand (BOD₅) of the treated wastewater shall not exceed 50 mg/L.
- b. Disinfection of wastewaters containing domestic waste is required to yield a discharge not to exceed 200 col/100 mL Fecal Coliform.
- c. The treated wastewater shall not contain more than 50 mg/L of Total Suspended Solids for mechanical systems and 90 mg/L of Total Suspended Solids for ponds.

Parameter	Daily Permissible Average Concentration
BOD ₅	50.0 mg/L
Fecal Coliform	200 colonies/100 mL
Total Suspended Solids	90.0 mg/L for ponds

E. FACILITY CLASSIFICATION

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 II Facility. The facility shall be under the direction of a Class II 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, shall be available when the spray irrigation system is in operation.

F. SCHEDULE OF COMPLIANCE

1. The Permittee shall submit the information necessary and/or complete the following requirements for proper compliant operation of the spray irrigation system:

N/A

2. The Permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance by specified date. In the event of noncompliance, the notice shall include the cause of noncompliance, any remedial action taken, and the probability of meeting the next scheduled requirement.

G. BUFFER REQUIREMENTS

Buffer zones shall be maintained in accordance with Section 6.3.2.3.10 of the Regulations unless otherwise specified below.

In accordance with Section 6.3.2.3.10.2 of the Regulations, the following reduction is permitted if the design and operations demonstrate that aerosols will be contained within the site and/or no threat to public health or the environment exists:

A 50-foot buffer must be maintained between the edge of the wetted field area and all dwellings, property boundaries, lot lines, and roadways.

In the event aerosols are not contained within the site and/or a threat to public health or the environment exists, a 150-foot buffer shall be reinstated in accordance with Section 6.3.2.3.10.1.1 and 6.3.2.3.10.1.2 of the Regulations.

H. SLUDGE HANDLING REQUIREMENTS

N/A

I. FACILITY SPECIFIC CONDITIONS

- I. In the event the permittee wishes to connect or allow occupancy in additional units above the permitted 625 units, up to 700 units, a compliance report shall be submitted with an application to amend the operations permit for the additional units. The compliance report shall be prepared by a Delaware licensed Professional Engineer who also holds a Class C License in the State of Delaware. The report shall contain, at a minimum, the following items as applicable:
 - a. Flow Analysis: Demonstrate the current average daily quantity of influent to the wastewater treatment facility has not exceeded:
 - i. The design flow value of 130 gpd/edu [calculated as Total Monthly Flow divided by the number of days in the month divided by the number of units connected for the month]. Tabulate for each month: flows, number of units occupied, and gallons per day per unit.
 - ii. The currently permitted 81,250 gallons per day [calculated as Total Monthly Volume divided by number of days in month].
 - b. Effluent Quality Analysis:
 - i. Graph and assess effluent data for any upward trends.
 - ii. Total Nitrogen Analysis: Demonstrate the system has consistently treated effluent to not exceed each month's design effluent Total Nitrogen concentrations by more than 25% [Reference Section 6.5.3.2.1.1 of the Regulations].
 - c. Groundwater Quality Analysis: Evaluate groundwater Nitrate concentration data with respect to drinking water standards established by the U.S. EPA.
 - d. Mounding Assessment: Graph and assess Depth to Water data to determine if groundwater reached within 2 ft of the ground surface.
 - e. Summary and Assessment of Operation & Maintenance Concerns.
 - f. Summary and Assessment of all compliance items relative to the permit (e.g., enforcement actions, Notice of Violations, warning letters, self-reported permit violations and effluent limitation exceedances).
 - g. Overall Conclusions of Compliance of facility and Engineering Opinion relative to the system's ability to assimilate additional flows and the connection of additional units/occupancy.

2. Event that three lots on southern perimeter are vacated:

If, and when, the manufactured homes located upon the three (3) lots located closest to the perimeter of the buffer on the southern side of the spray irrigation field (depicted as H-05, H-06, and H-16) are removed from those lots, Hometown America shall not place any further manufactured homes on said lots but shall instead maintain same as vacant lots.
3. Signs: In addition to the requirements of Part III.A.10 of this Permit, on the southern perimeter of the spray irrigation field, three (3) signs shall be placed on the fence and shall include DNREC's Enforcement telephone number. These three (3) signs shall be visible by the residents.
4. Excess Storage Capacity: 9.5 feet (6.52 million gallons) has been established as the average operating maximum volume required to be stored during the year. If operations require storage in excess of 9.5 feet (6.52 million gallons), permittee shall notify the Groundwater Discharges Section in writing. Operations may need to consult alternate design application rates to subsequently alleviate excess storage, as prescribed in the Emergency Contingency Guidelines within the Operations and Maintenance Manual.

PART II

A. MONITORING REQUIREMENTS

During the period beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to discharge to spray irrigation fields identified on page 1, in Part I.A, and depicted on page 3 of this permit. Such discharge shall be monitored by the Permittee as specified herein.

For samples required to be taken ‘monthly’ and/or ‘twice per month’ or ‘biweekly’, the samples for each monitoring location (i.e., effluent, well, lysimeter, etc.) shall be taken a minimum of 14 days apart.

Requests for monitoring modifications shall be submitted to the Department’s Groundwater Discharges Section in writing. Such requests will clearly state the reason for and nature of the proposed modification and, where applicable, must contain supporting scientific information, analysis, and justification. Requests will be addressed by the Department on a case-by-case basis.

Permittee shall initiate periodic reporting required under Part II.B.2 upon initiation of irrigation activities for the following monitoring requirements.

1. INFLUENT MONITORING REQUIREMENTS

Parameter	Unit of Measurement	Monitoring Frequency	Sample Type
Flow - Total Influent Flow for Month to	Gallons	Continuous	Recorded
Flow - Max Daily Influent Flow to Facility	Gallons	Continuous	Recorded
Flow - Average Daily Influent Flow to Facility	Gallons/Day	Continuous	Calculation (Total Influent Flow for Month / Number of Days in Month)
BOD ₅	mg/L	Monthly	Grab
TSS	mg/L	Monthly	Grab
Total Nitrogen	mg/L	Monthly	Grab
Ammonia Nitrogen	mg/L	Monthly	Grab
Nitrate/Nitrite as Nitrogen	mg/L	Monthly	Grab
pH	S.U.	Monthly	Grab
Total Phosphorus	mg/L	Monthly	Grab
Chloride	mg/L	Quarterly	Grab

2. SPRAYED EFFLUENT MONITORING REQUIREMENTS

Samples taken in compliance with the monitoring requirements specified for fecal coliform and residual chlorine shall be taken after the chlorine contact chamber. Samples taken in compliance with all other monitoring requirements specified above shall be taken from the discharge side of the effluent spray pump.

Parameter	Unit Measurement	Monitoring Frequency	Sample Type
Ammonia Nitrogen	mg/L	Monthly	Composite
BOD ₅	mg/L	Twice per month	Composite
Cadmium	mg/L	Annually	Composite
Chloride	mg/L	Quarterly	Composite
Copper	mg/L	Annually	Composite
Effluent Flow	Gal/day per Zone	Continuous	Recorded
Fecal Coliform	Col/100 ml	Twice per month	Grab
Lead	mg/L	Annually	Composite
Nickel	mg/L	Annually	Composite
Nitrate + Nitrite Nitrogen	mg/L	Monthly	Composite
Organic Nitrogen	mg/L	Monthly	Calculation
pH	S.U.	Three times per Week	Grab
Potassium	mg/L	Quarterly	Composite
Sodium	mg/L	Quarterly	Composite
Total Dissolved Solids	mg/L	Quarterly	Grab
Total Nitrogen	mg/L	Twice per Month	Composite
Total Phosphorus	mg/L	Monthly	Composite
Total Residual Chlorine	mg/L	Daily	Grab
Total Suspended Solids	mg/L	Twice per month	Composite
Zinc	mg/L	Annually	Composite

Additionally, Permittee shall provide the following information:

Parameter	Unit Measurement	Monitoring Frequency	Sample Type
Total Effluent Flow to all Zones combined	Gallons	Monthly	Data
Max Daily Effluent Flow to all Zones combined	Gallons	Monthly	Data
Average Daily Effluent to all Zones combined	MGD or gpd	Monthly	Calculation (Total Monthly Effluent Flow / Number of Days in Month)

Total Effluent Flow to each Zone	Gallons	Monthly	Data
Number of Days Sprayed During the Month to each Zone	Days	Monthly	Data
Nitrogen Loading Rate to each Zone	lbs/acre per /Zone	Monthly	Calculation
Phosphorus Loading Rate to each Zone	lbs/acre per Zone	Monthly	Calculation

3. GROUNDWATER MONITORING REQUIREMENTS

Groundwater samples shall be taken from each monitoring well for the facility. Groundwater monitoring well locations are depicted on the Site Map found on Page 3 of this Permit.

Samples taken in compliance with the monitoring requirements specified shall be taken at each monitoring well in accordance with procedures approved by the Department and listed in the State of Delaware, Field Manual for Groundwater Sampling (Custer, 1988).

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 11.1.

All field sampling logs and laboratory results for samples obtained from a well shall be identified by the DNREC ID affixed to the well.

Prior to permit expiration, samples shall be taken for groundwater and analyzed for metals as prescribed below. If a Compliance Monitoring Report (CMR) is required for the facility, testing should be performed approximately one year prior to permit renewal so results may be utilized and analyzed by the Permittee in the CMR. Reference Part IV.A.3 of the Permit and Section 6.5.4 of the Regulations regarding CMR requirements.

Groundwater samples shall be tested from the following wells for the following parameters:

DNREC ID	Local ID
68810	MW - 1
68811	MW - 2**
68812	MW - 3*
68813	MW - 4*
93632	MW - 5
211612	MW - 6
160485	MW - 7
264219	MW - 8
264220	MW - 9
264218	MW - 10

* As of November 4, 2020, the Department approves the Permittee's request to discontinue sampling MW-3 (68812) and MW-4 (68813). These wells should be maintained, however, and not abandoned. The Department reserves the

right to reinstate sampling requirements for MW-3 (68812) and MW-4 (68813) at a frequency to be determined at such time of reinstatement.

** The Department approves the Permittee's request to discontinue sampling MW-2 (68811). The well shall be maintained, however, and not abandoned. The Department reserves the right to reinstate sampling requirements for MW-2 (68811) at a frequency to be determined at such time of reinstatement.

Parameter	Unit Measurement	Measurement Frequency	Sample Type
Ammonia as Nitrogen	mg/L	Quarterly	Grab
Chloride	mg/L	Quarterly	Grab
Depth to Water	hundredths of a foot	Monthly	Field Test
Dissolved Oxygen	mg/L	Quarterly	Field Test
Fecal Coliform	Col/100mL	Quarterly	Grab
Nitrate + Nitrite as Nitrogen	mg/L	Quarterly	Grab
pH	S.U.	Quarterly	Field Test
Sodium	mg/L	Quarterly	Grab
Specific Conductance	µS/cm	Quarterly	Field Test
Temperature	°C	Quarterly	Field Test
Total Dissolved Solids	mg/L	Quarterly	Grab
Total Nitrogen	mg/L	Quarterly	Grab
Total Phosphorus	mg/L	Quarterly	Grab
Arsenic	mg/L	Once per 5 years	Grab
Cadmium	mg/L	Once per 5 years	Grab
Chromium	mg/L	Once per 5 years	Grab
Copper	mg/L	Once per 5 years	Grab
Hardness	mg/L	Once per 5 years	Grab
Iron	mg/L	Once per 5 years	Grab
Lead	mg/L	Once per 5 years	Grab
Manganese	mg/L	Once per 5 years	Grab
Mercury	mg/L	Once per 5 years	Grab
Nickel	mg/L	Once per 5 years	Grab
Selenium	mg/L	Once per 5 years	Grab
Sulfate	mg/L	Once per 5 years	Grab
Zinc	mg/L	Once per 5 years	Grab

4. GROUNDWATER TABLE ELEVATION MONITORING REQUIREMENTS

Monthly water level measurements shall be taken at each piezometer listed below and depicted on page 3.

DNREC ID	Local ID
264216	P-3
160486	P-5
264217	P-6

While performing the monitoring as required by Part II.A.3 and Part II.A.4 of this permit, if the ‘Depth to Water’ in any one of the monitoring wells has reached within 3 feet of the ground surface, the Permittee shall be required to collect additional weekly depth to water measurements from the monitoring wells within 3 feet of the ground surface. The additional monitoring is necessary to ensure that spray irrigation ceases on any areas of the spray fields where the groundwater may reach within 2 feet of the ground surface in accordance with Part III.A.5 of this permit. The Permittee may discontinue the additional weekly sampling for depth to water in a well when the groundwater table elevation readings in the well exceeds a 3 foot separation between groundwater and ground surface. The additional groundwater table elevation measurements shall be recorded in the operator’s log and reported to the Groundwater Discharges Section in accordance with Part II.B.2 of this permit.

5. LYSIMETER MONITORING REQUIREMENTS

Samples shall be taken from each lysimeter for the facility. Lysimeter locations are depicted on the Site Map found on Page 3 of this Permit.

All field sampling logs and laboratory results for samples obtained from a well shall be identified by the DNREC ID affixed to the well.

Samples shall be tested from the following wells for the following parameters. The constituents are listed below in highest priority first. In the event, that sufficient sample volume may not be obtained to test for all parameters listed, the sample shall be tested for as many constituents possible in the following order:

DNREC ID	Local ID
241171	LYS-1
264603	LYS-2

Parameter	Unit Measurement	Measurement Frequency	Sample Type
Total Nitrogen	mg/L	Monthly	Grab
Total Phosphorus	mg/L	Monthly	Grab
Nitrate + Nitrite as Nitrogen	mg/L	Monthly	Grab
Ammonia as Nitrogen	mg/L	Monthly	Grab
Chloride	mg/L	Monthly	Grab
Sodium	mg/L	Monthly	Grab
Total Dissolved Solids	mg/L	Monthly	Grab
pH	S.U.	Monthly	Field Test
Specific Conductance	µS/cm	Monthly	Field Test
Temperature	°C	Monthly	Field Test

6. SOIL MONITORING REQUIREMENTS

Three composite soil samples shall be taken from each mapped soil series within the wetted spray field from both soil depths of 0–12 inches and 12–24 inches resulting in a total of six composite samples per mapped soil series. The composite soil sampling shall represent the average conditions in the sampled body of material. The discrete samples that are to be composited shall be collected from the same soil horizon and depth interval.

Soil sample locations shall be plotted on a scaled drawing and labeled consistent with the sample nomenclature. Each field shall be identified so that sample results may be tracked and properly assessed for field life limiting factors.

Soil chemical testing should be in accordance with Methods of Soil Analysis published by the American Society of Agronomy, Madison, Wisconsin.

Testing for Cadmium, Nickel, Lead, Zinc and Copper should be performed approximately one year prior to permit renewal so results may be utilized by the Permittee in the CMR and/or by Groundwater Discharges Section staff during renewal review. Reference Part IV.A.3 of the Permit and Section 6.5.4 of the Regulations regarding CMR requirements.

Parameter	Unit Measurement	Measurement Frequency	Sample Type
pH	S.U.	Annually	Soil Composite
Organic Matter	%	Annually	Soil Composite
Phosphorus (as P ₂ O ₅)	mg/kg	Annually	Soil Composite
Potassium	mg/kg	Annually	Soil Composite
Sodium Adsorption Ratio	meq/100g	Annually	Soil Composite
Cadmium	mg/kg	Once per 5 years	Soil Composite
Nickel	mg/kg	Once per 5 years	Soil Composite
Lead	mg/kg	Once per 5 years	Soil Composite
Zinc	mg/kg	Once per 5 years	Soil Composite
Copper	mg/kg	Once per 5 years	Soil Composite
Cation Exchange Capacity	meq/100g	*Only if soil pH changes significantly	Soil Composite
Phosphorus Adsorption (Mehlich 3 acceptable)	meq/100g	**Only if soil phosphorus levels become excessive for plant growth	Soil Composite
Percent Base Saturation	%	*Only if soil pH changes significantly	Soil Composite

*A significant change in soil pH is defined as a change of one or more standard units from the original value established in the Design Development Report.

** Excessive levels of soil phosphorus are defined by the Delaware Nutrient Management Commission. Soil phosphorus levels must be tested in accordance with the University of Delaware soil testing methods (Gartley, 2002). If the soil phosphorus levels become excessive, the Permittee must perform a Phosphorus Site Index (PSI) study. The results must be submitted to the Groundwater Discharges Section within 30 days of completion. Based on these, the Groundwater Discharges Section may require the Permittee to submit a plan for detailing steps to reduce the phosphorus loading rates at the site.

7. VEGETATION MONITORING

In the year prior to permit expiration, a minimum of one composite sample for each field is required upon each harvest. If a crop rotation is utilized either in alternate years or in the same year, the aforementioned requirement shall be duplicated for each crop type. If a Compliance Monitoring Report (CMR) is required for the facility, testing should be performed approximately one year prior to permit renewal so results may be utilized by the Permittee in the CMR. Reference Part IV.A.3 of the Permit and Section 6.5.4 of the Regulations regarding CMR requirements.

Parameter	Unit Measurement	Measurement Frequency	Sample Type
Yield	Bushels/acre and lbs/acre	Per harvest	Vegetation Composite
Nitrogen	% and lbs/acre	Per harvest	Vegetation Composite
Phosphorus	% and lbs/acre	Per harvest	Vegetation Composite
% Moisture	%	Per harvest	Vegetation Composite

8. OPERATIONS MONITORING REQUIREMENTS

a. Spray Field Applications

Parameter	Unit Measurement	Monitoring Frequency	Sample Type
Additional Irrigation Water (i.e., potable)	Total Gallons per field/zone/pivot	Monthly	Recorded/Calculated
Additional Irrigation Water (i.e., potable)	Inches/acre per field/zone/pivot	Monthly	Recorded/Calculated
Fertilizer Nitrogen	lbs/acre per field/zone/pivot	Monthly	Reported
Fertilizer Phosphorus	lbs/acre per field/zone/pivot	Monthly	Reported

b. Treatment System

The following information shall be recorded and documented in the facility's operator log in accordance with Part II.B.9 of this permit.

Parameter	Sample Location	Unit Measurement	Monitoring Frequency	Sample Type
Lagoon Levels	Lagoons	Feet	Weekly	Field Test
pH	Various	S.U.	3 times per week	Field Test
DO	Various	mg/L	3 times per week	Field Test
Temperature	Various	°C	3 times per week	Field Test

9. SURFACE WATER MONITORING REQUIREMENTS

N/A

B. MONITORING SPECIFICATIONS AND REPORTING REQUIREMENTS

1. Representative Sampling

Samples and measurements taken as required in the operation permit shall be representative of the volume and nature of the monitored discharge. If there has been significant increase (> 25%) in the characterization of any one parameter of the effluent wastewater as established in the Design Engineer Report, the permittee shall resample the wastewater and submit the additional analyses to the Department. The permittee shall re-characterize the wastewater to determine if a change in treatment is required and/or if the land limiting constituent has changed. If a change in treatment is required and/or if the land limiting constituent has changed, a revised Design Engineer Report shall be submitted to the Department. After a review of these results, the Department may invoke the provisions of Part V.A.1 of this permit.

2. Reporting

Monitoring results obtained during the previous one month/quarter shall be summarized and reported on an approved monitoring report form(s) postmarked no later than the 28th day of the month following the completed reporting period. Laboratory analytical results and sampling logs shall be submitted with the corresponding month's monitoring report. Signed reports/forms, laboratory analytical results, laboratory sampling logs and field data sheets shall be submitted in one complete package to the Department at the following address:

Groundwater Discharges Section
Division of Water
Department of Natural Resources and Environmental Control
89 Kings Hwy
Dover, DE 19901
(302) 739-9948 Office

Monitoring results reported as less than the detectible limit shall be reported with the less than symbol "<" before the detection limit. The full detection limit value shall be utilized in any necessary calculations. The less than symbol shall be carried through the calculation. The resulting value shall include any appropriate less than or greater than symbol resulting from the calculation.

3. Additional Monitoring by Permittee

If the permittee monitors any parameter at the location(s) designated herein more frequently than required, using approved analytical methods, the results shall be reported to the Department on an approved monitoring report form. Such increased frequency shall also be indicated.

4. Annual Report

The Permittee shall submit to the Groundwater Discharges Section an Annual Report summarizing the operations, management, administration and maintenance of the facility for the calendar year. The Annual Report shall be submitted to the Groundwater Discharges Section on or before February 28th of each year. The Annual Report shall include all applicable items found in Section 6.8.2.4.1.3 and Section 6.9 of the Regulations. The Annual Report shall also include the calibration documentation required by Part III.A.14 of this permit.

5. Test Procedures

Test procedures for analysis of pollutants shall conform to the applicable test procedures identified in 40 CFR, Part 136 or the most recently adopted copy of Standard Methods unless otherwise specified in this permit.

6. 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 date(s) the analyses were performed and the time the analyses were begun;
- d. The person(s) who performed the analyses; and
- e. The results of each analysis.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit or the Regulations including all records of performed analyses, calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation shall be retained for five 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.

8. 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.

9. Operator Log

An operator log shall be kept on site at all times. Each spray system section shall be numbered and referred to by number in the operator log. All records and reports shall also be kept in a bound log book on site at all times and shall be made available upon request for review by the Department. This log shall, at a minimum, include the applicable items listed in Section 6.7.3 of the Regulations.

10. Quality Assurance Practices

The Permittee is required to show the validity of all monitoring data by requiring its laboratory to adhere to quality assurance practices in accordance with Section 6.8.2.4 of the Regulations.

PART III

A. OPERATIONAL REQUIREMENTS

1. Groundwater Requirements

Operation of the wastewater treatment facility and spray irrigation system shall not cause the quality of Delaware's groundwater resources to be in violation of applicable Federal or State Drinking Water Standards on an average annual basis.

2. Facilities Operation

The Permittee shall properly maintain and operate all structures, pipelines, systems and equipment for collection, treatment control and monitoring which are used by the permittee to achieve compliance with the terms and conditions of the permit. Proper operation and maintenance includes, but is not limited to, effective performance based on designed facility removals, adequate funding, effective management, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures.

3. The spray irrigation fields shall be managed to assure at a minimum that:

- a. Spray irrigation of wastewater shall only occur on fields being prepared for planting or already planted with a crop and shall not occur on fields with crops not actively growing or on voluntary vegetation.
- 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, spraying on those areas shall be prohibited until saturated conditions no longer exist.
- c. Aerosols or nuisance odors shall not extend beyond the boundary of the spray irrigation site when treated wastewater is being applied. If aerosols are not contained within the site or if odors are produced that are considered to be a public nuisance, within 30 days the Permittee shall submit a corrective action plan to alleviate aerosol migration and odors for Department review and approval. Any non-compliance and all actions taken shall be reported to the Department in accordance with Part IV.A.5 of this permit.
- d. Erosion controls shall be 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 shall be maintained in optimal condition, including any necessary weed management, reseeding, or other vegetative management practices.
- f. Effective vegetative management shall be provided such that crops harvested on the spray irrigation sites are removed from the sites.
- g. Forage crops shall be harvested and removed from the irrigation field(s) at least twice a year. Crops harvested shall be removed from the irrigation site within six (6) months of harvest.
- h. The wastewater shall be applied in a manner such that the application is even and uniform over the irrigation area.

4. Spray irrigation is prohibited when saturated or frozen soil conditions exist.

5. The groundwater 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 groundwater mound exceed this limit, the Permittee shall cease all irrigation of wastewater to the affected fields until the groundwater mound recedes to acceptable levels.
6. Connections or additions to the spray irrigation system other than those indicated on the approved plans are prohibited without prior approval from the Department's Groundwater Discharges Section.
7. 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.
8. The Permittee shall take appropriate measures to protect the spray irrigation system from damage due to sub-freezing conditions.
9. Any leaks shall be reported to the Department and repaired immediately.

10. Signs

Limited Public Access: Signs shall be posted on all limited public access spray fields utilized to irrigate treated wastewater to prohibit public contact. The signs shall indicate that the water being irrigated is treated wastewater. The signs shall be legible. Limited public access sites shall have signs posted on the perimeter every 1,000 feet, at a minimum, and at all entry points. Also reference Part I.1.3 for additional requirements.

11. Potable ground or surface water may be used for distribution system testing and irrigation to establish vegetation when sufficient treated effluent is not available.

12. Phased Systems

- a. Once an operation permit has been issued and the wastewater flow reaches 80% of the permitted treatment capacity for the constructed phase based on a period of seven (7) consecutive days, the Permittee shall submit written notification to the Department. The written notification shall include a work plan for construction of the next permitted phase. The Permittee shall submit a construction permit application, plans and specifications and Design Engineer Report with applicable fees if the next phase has not yet been permitted or if there are changes to the previously permitted design.
- b. Any flow above the permitted flow for a phase shall not be allowed to be discharged to the system until construction is completed on the following phase and an operating permit has been issued or amended by the Department for the next phase.
- c. Required documents for connecting subdivisions may be found in Section 6.5.10.3.1 of the Regulations.

13. In the event, that the permittee installs new monitoring wells or replaces any existing monitoring wells, the Permittee shall submit to the Department's Groundwater Discharges Section new elevation details relative to the common benchmark previously established. Additionally, the permittee shall conduct a groundwater quality sampling program prior to initiation of wastewater disposal activities on the area incorporating the well. The sampling program shall be sufficient to establish representative groundwater quality at each well prior to initiation of the wastewater disposal activities. A minimum of three samples shall be collected at least one month apart and analyzed. A summary report detailing all analyses shall be submitted to the Department's Groundwater Discharges Section prior to initiation of wastewater disposal activities. Analyses shall include the parameters iterated in Section 6.8.1 of the Regulations.
14. The Permittee shall 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 shall be submitted with the Annual Report in accordance with Part II.B.4
15. The Permittee shall operate and maintain the land treatment system in accordance with the approved Operation and Maintenance Plan (O&M). A copy of the O&M shall be on site at all times. The Permittee shall maintain the O&M's accuracy and applicability in accordance with both their Permit and the Regulations. In the event of a discrepancy between the O&M and the Permit or Regulations, the requirements of the Permit and the Regulations would govern.
16. At least three feet of freeboard, measured vertically from the lowest point of the berm, is required for all ponds. The lowest point of the berm shall be determined and marked. Also reference Part I.I.4 for additional requirements.
17. The Permittee shall notify the Department's Groundwater Discharges Section in writing prior to utilizing the freeboard in any lagoon or immediately upon unexpected encroachment into freeboard. In the event of encroachment into freeboard, Permittee shall contact the Groundwater Discharges Section to coordinate relief measures. In the event of an emergency, Permittee may contact the Department at the telephone numbers cited in Part II.B.2 of this permit; however, written notification shall subsequently be provided within 5 days of encroachment. Also reference Part I.I.4 for additional requirements.
18. If the facility does not treat sewage and has a storage tank that requires cleanout, and if the permittee intends to land apply material collected from the cleanout onto the spray irrigation field, the Permittee shall analyze the material for nutrients and any other applicable parameters of concern as determined by the Groundwater Discharges Section Prior to tank cleanout being performed. Permittee shall submit to the Groundwater Discharges Section a report including the results, the frequency and estimated volume of material to be applied, and how and where it will be applied. The report shall include a mathematical analysis determining any nitrogen loading from the tank cleaning combined with nitrogen loading from wastewater application will not exceed the allowable nitrogen load.
19. Fencing is required at treatment facilities, pump stations and storage/treatment ponds. Fencing of spray fields is not required.
20. The collection and channelization of irrigated wastewater for purposes other than retreatment is prohibited.
21. Direct application of treated wastewater to drainage ditches, any water bodies, and wetlands is prohibited.

22. Emergency Repairs

Emergency repairs or the replacement of critical "like kind" components of the wastewater treatment facility necessary for the continued operation of the facility may be performed without first obtaining a construction permit from the Department.

A report shall be submitted to the Department within five (5) days of completion of the emergency repairs. The report shall summarize the nature of the emergency and the repairs performed. All violations shall also be reported in accordance with Section 6.5.9.

23. Adverse Impact

The Permittee shall take all steps to minimize and correct any adverse impact to the 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 mitigation of such impacts.

24. Bypassing

The diversion of flow from any portion of the treatment facility's process flow (including, but not limited to, pretreatment, storage, distribution, and land application) necessary to maintain compliance with the terms and conditions of this permit is prohibited unless:

- a. The bypass is unavoidable to prevent personal injury, loss of life, severe property damage, or materially adversely affect public health and/or the environment; or
- b. There are no alternatives readily available.

The Groundwater Discharges Section shall be orally notified within 24 hours after such bypass; and a written submission regarding the bypass shall be 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 Groundwater Discharges Section for approval at least ten days prior, or as soon as possible, before the date of bypass.

The treatment facility shall be repaired and restored to the permitted design operations process flow.

25. Removed Substances

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

26. 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.

PART IV

A. MANAGEMENT REQUIREMENTS AND RESPONSIBILITIES

1. Initiation of Facility Operations Notification

The Permittee shall notify the Groundwater Discharges Section in writing within 24 hours of the initiation of operations of the newly constructed irrigation zones.

2. Additional Information

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

3. Operation Permit Re-Issuance

At least 180 days before the expiration date of this permit, the Permittee shall submit an application for renewal or notify the Department of the intent to cease discharging by the expiration date. The application package for systems with a design flow $\geq 100,000$ gpd, shall include a five (5) year Compliance Monitoring Report (CMR). The CMR shall be in accordance with Section 6.5.4.3 of Regulations. 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.

4. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

Any anticipated facility expansions, production increases, or process modifications that will result in new, different, or increased discharges of pollutants shall be reported in writing to the Department's Groundwater Discharges Section for approval. A new permit may be required.

Any other activity which would constitute cause for modification or revocation and reissuance of this permit as described in Part V.A.1 of this permit shall be reported to the Groundwater Discharges Section. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

5. Non-compliance Notification

The Permittee shall report to the Department's Enforcement Section at (800) 662-8802 and the Groundwater Discharge Section at (302) 739-9948 any unpermitted release or discharge of any contaminant into the air, or a pollutant, including petroleum substances, into surface waters, groundwater, or onto land as soon as the Permittee has knowledge of, or should have had knowledge of, the release or discharge.

The Permittee shall report to the Groundwater Discharges Section orally within 24 hours from the time the Permittee became aware of any noncompliance that may endanger the public health or the environment by contacting the Groundwater Discharges Section at the telephone numbers cited above.

If for any reason the Permittee does not comply with, or will be unable to comply with, any effluent limitations or other conditions specified in this permit, the Permittee shall provide the Department with the following information in writing within five days of becoming aware of any actual or potential non-compliance:

- a. A description and cause of the non-compliance with any limitation or condition;
- b. The period of non-compliance including exact dates and times; or, if not yet corrected, the anticipated time the non-compliance is expected to continue; and
- c. The corrective actions necessary to eliminate and correct any adverse impact on public health or the environment resulting from permit non-compliance.

6. Facility and Construction Changes

The Permittee shall submit a written report to the Department for review and approval, of any changes to the facility or construction of the system within the following time periods:

- a. Thirty days before any planned activity, physical alteration to the permitted facility or addition to the permitted facility if that activity, alteration or addition would result in a change in information that was previously submitted to the Department;
- b. Thirty days before any anticipated change which would result in noncompliance with any permit condition or the regulations; or
- b. Immediately after the Permittee becomes aware of relevant facts omitted from, or incorrect information submitted in, a permit application or report to the Department.

7. Right of Entry

The permittee shall allow the Department entry and access, consistent with 7 Del.C. Ch. 60, to:

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

8. Permit Transferability

Permits may be transferred to a new owner or operator. The permittee shall notify the Department by requesting a change of ownership of the permit before the date of transfer. The transfer shall be consistent with any notarized legal documents and/or CPCN required by the Regulations. The legal documentation shall be provided with the application. The application shall be received 30 days before the transfer.

- a. No person shall transfer a permit from one (1) 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 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.

- b. 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.

9. Wastewater Treatment Facility Closure/Abandonment

In the event, that the wastewater treatment facility (or any component of the wastewater treatment system) is to be abandoned the permittee shall submit a proposed closure and abandonment work plan with procedures on how the facility will be abandoned for review and approval by the Department. The site may require remediation which shall also be addressed in the work plan. Upon review and approval of the work plan and completion of all closure and abandonment actions the permittee shall contact the Department for a final inspection of the facility.

PART V

A. PROVISIONS

1. Permit Revocation

The Department may revoke a permit if, among other things, the permittee violates any permit condition, the regulations, fails to pay applicable Departmental fees, obtains the permit by misrepresentation or fails to fully disclose all relevant facts.

Except in cases of emergency, the Department shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within 20 days of receipt of the notice by the permittee, unless within that time the permittee requests an administrative hearing in writing.

The Department shall notify the permittee in writing of any revocation hearing at least 20 days prior to the date set for such hearing.

If the Department finds 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.

2. Permit Modifications/Amendments

In consultation with the permittee, the Department may modify or amend an existing permit provided that the modifications would not result in an increased impact or risk to the environment or to public health.

3. 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.

4. 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.

5. 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.

6. This permit does not relieve the Permittee of complying with any applicable Federal, State or local regulations.

7. In the event that the Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems or applicable federal regulations are revised, this permit may be opened and modified accordingly after notice and opportunity for a public hearing.

8. This permit supersedes all previous spray irrigation operation permits issued to the Permittee.

Part VI

A. AMENDMENTS TO STATE PERMIT DEN NUMBER 359000-05 ISSUED NOVEMBER 1, 2019

1. Amended November 13, 2019

Page 1-29

- Included Amended Date at top right-hand corner

Part I.B DOCUMENTATION

Omitted irrelevant, historical design documents.

Corrected Addendum dates for remaining items.

Part I.G BUFFER REQUIREMENTS

Amended to reflect reduction to 50-foot buffer between the edge of the wetted field area and all dwellings, property boundaries, lot lines, and roadways

2. Amended November 4, 2020

Page 1-29

- Included Amended Date at top right-hand corner

Part I.B DOCUMENTATION

2. Omitted irrelevant word “dated” misplaced in sentence

Part II.A.3 GROUNDWATER MONITORING REQUIREMENTS

Amended in response to Permittee’s email request for a reduction in monitoring from Michaelena M. Hayes, P.E., Mill Brook Engineering, dated: August 6, 2020 and Department response from Amber Bataille, P.G dated: November 2, 2020 approving: “the request to discontinue sampling MW-3 (68812) and MW-4 (68813) at this time. These wells should be maintained, i.e., not be abandoned, in case they are needed in the future. MW-2 (68811) should still continue to be sampled as the nitrates over the few quarters is trending up.”

3. Amended October 28, 2021

Page 1-29

- Included Amended Date at top right-hand corner

Part II.A.3 GROUNDWATER MONITORING REQUIREMENTS

Amended in response to Permittee’s email request for a reduction in monitoring from Michaelena M. Hayes, P.E., Mill Brook Engineering, dated: June 2, 2021 and Department response from Amber Bataille, P.G dated: October 20, 2021 approving: “the request to discontinue sampling MW-2 (68811) at this time. These wells should be maintained, i.e., not be abandoned, in case they are needed in the future.”