DNREC Virtual Public Hearing

On the Application for a Spray Irrigation Construction Permit and Modification and Renewal of a Spray Irrigation Operations Permit (Docket #2020-P-W-0014)

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Large On-Site Wastewater Treatment and Disposal System

Public Hearing

May 21, 2020
6:00 PM

On the Application for a Spray Irrigation Construction Permit and Modification and Renewal of a Spray Irrigation Operations Permit

Applicant: Mountaire Farms of Delaware, Inc.
Facility: Mountaire-Millsboro Poultry Processing Complex

Groundwater Discharges Section, Division of Water
Delaware Department of Natural Resources and Environmental Control

Background

- A wastewater treatment system failure occurred at the Mountaire-Millsboro Poultry Processing Complex in 2017

- DNREC required Mountaire to take immediate, short-term, and long-term corrective actions to address violations associated with the system failure

- In response to DNREC enforcement, Mountaire enlisted the services of Reid Engineering Co. Inc. to evaluate the treatment system and design system upgrades

Outcome

- Mountaire Farms of Delaware Inc., has applied for a **Spray Irrigation Construction Permit** to significantly upgrade the existing wastewater treatment system
  - ***The upgrade will enhance the treatment capabilities of the system resulting in a maximum Total Nitrogen effluent concentration of 10 mg/L or less which aligns with State and Federal Drinking Water Standards***

- Mountaire has also requested to modify and renew their **Spray Irrigation Operations Permit** authorizing the operation of the upgraded treatment system upon it's construction

Construction Permit Application

Off-Spec Diversion Proposal

- The existing Anaerobic Lagoon #1 is proposed to be retrofitted to function as stormwater first-flush and off-spec wastewater lagoon
  - The “first-flush” is the initial surface runoff from a precipitation event which usually contains the highest levels of pollutants
  - This “first-flush” stormwater will be captured and stored in this lagoon for eventual treatment
  - Off-Spec wastewater can be diverted to this lagoon for temporary storage and re-treatment
  - The lagoon will be aerated

Construction Permit Application

Addressing Operations during Prolonged Periods of Saturated or Frozen Soil Conditions

- The new effluent storage lagoon will increase the facility's treated wastewater storage capacity allowing spray irrigation to cease during periods when conditions are unfavorable for discharge

- Any excess accumulated treated wastewater stored can be irrigated in accordance with the alternative operations plans provided in the Application Nitrogen Balances found in Appendix 3, Attachment I, K or L

Construction Permit Application

Additional Emergency Contingency Planning

- Supplemental Nitrogen Balance spreadsheets were provided in the application demonstrating the ability of the spray irrigation system to adjust operations as necessary to deal with irregular conditions such as crop related issues, off-spec effluent, and temporary flow variations while protecting groundwater quality

Construction Permit Application Revision

- In an attempt to address citizen concerns in connection with the anaerobic lagoons, Mountaire submitted a request to revise their wastewater treatment system upgrade proposal
  - Under the requested revision, the anaerobic lagoons would be replaced with **flow equalization tanks**
- On April 24, 2020, Mountaire submitted a revised Final Design Summary Report providing the calculations and details of the flow equalization tanks along with a revised process flow diagram
  - DNREC has determined that the revised Engineering Design Summary Report provides sufficient details for construction permit issuance
- The submittal also provided an index of Drawings that would need revision to update grading, pipe runs, electrical and some mechanical details for the enhanced upgrade
  - The revised drawings will be submitted under the permits compliance schedule and posted on DNREC's website

Draft Construction Permit

Schedule of Compliance: Construction

- The draft permit requires Mountaire to
  - provide revised drawings incorporating the Flow Equalization Tanks within **180 days** of permit issuance
  - prioritize and complete the construction of all components necessary to produce effluent with a Total Nitrogen concentration of 10 mg/L or less within a **two year period**
  - complete the construction of the remaining upgrades (i.e. equalization tanks, synthetically lined storage lagoon, the solids handling equipment, etc.) within a **three year period**

Draft Construction Permit

- The permit requires all major system upgrade components to be placed into operation as soon as constructed

- Therefore, the draft permit includes provisions to allow for each component to be brought online after completion of the following requirements:

  - Inspection and testing of all mechanical system components

  - Submission of a Design Engineer Inspection Report

  - Submission of a Contractor's Certificate of Completion

Draft Construction Permit

Schedule of Compliance: Monitoring

- Within 180 days of permit issuance, Mountaire shall submit an **influent sampling port** location proposal to DNREC for review and approval
  - The sampling port shall be positioned to ensure that a representative sample of the influent waste stream is obtained
  - The sampling port shall be installed within two years of the effective date of the permit and shall be the influent monitoring point of compliance at that point forward

Draft Construction Permit

Schedule of Compliance: Monitoring

- Within 180 days of permit issuance, Mountaire shall submit an **effluent sampling port** location proposal to DNREC for review and approval
  - The sampling port shall be positioned to ensure that a representative sample of the treated wastewater is obtained prior to the storage lagoons
  - The sampling port shall be installed within two years of the effective date of the permit and shall be the effluent monitoring point of compliance (in part) at that point forward

Draft Construction Permit

Schedule of Compliance: Monitoring

- Within **30 days** following the effective date of the permit, Mountaire shall submit a **written work plan** proposing an appropriately configured **network of shallow observation wells** for the purpose of better defining shallow groundwater flow in the upper portion of the unconfined aquifer in the area just upgradient of residents along Jersey Road (i.e., the area of spray pivot WHBJ2)
- The work plan shall include, at a minimum, the following information
  - A map showing the proposed location of observation wells
  - Proposed screen intervals: the observation wells are required to be constructed with relatively short screen intervals designed to adequately measure fluctuating water table elevations

Draft Construction Permit

Schedule of Compliance: Monitoring

- Within **30 days** following the effective date of the permit, Mountaire shall submit a **written work plan** for **two nested monitoring systems**:
  - one system in the northern spray field area north of Rt. 24, aka, the WHBJ spray area; and
  - one system in the southern spray area south of Rt. 24 in the Center Block System spray area
- The nested systems shall be constructed at or very close to the center of a large spray irrigation field and shall consist of a **lysimeter**, a **shallow monitoring well** that is constructed to sample the top of the water-table over a very discrete screen interval, and a **deeper monitoring well** with a well screened from 15 to 35 feet below the ground surface.

Draft Construction Permit

Schedule of Compliance: Monitoring

- All observation wells and nested monitoring system locations shall be approved by DNREC prior to installation
- All observation wells and nested monitoring systems shall be **installed within 60 days of work plan approval**
- All wells shall be installed by a licensed well driller in accordance with a DNREC issued well construction permit
- All facility wells (old and new) shall be surveyed by a Delaware-licensed Professional Land Surveyor
- Within **60 days** of completion of the above installation requirements, a **comprehensive report** detailing all monitoring well and lysimeter installations, including results of the comprehensive survey, initial depth to water measurements, and groundwater analytical results shall be submitted to DNREC

Draft Operations Permit

- The wastewater treatment facility is designed to receive and treat poultry processing wastewater, stormwater, and sanitary wastewater
- Treated wastewater is discharged via spray irrigation

North Spray Fields		South Spray Fields	
Field Wetted	**Wetted Area (acres)**	**Field Wetted**	**Wetted Area (acres)**
WHBJ - 1	54.29	Center Block 3	40.84
WHBJ - 2	65.33	Center Block 3A	28.97
WHBJ - 3	78	Center Block 3B	64.24
WHBJ - 4	76.84	Center Block 3C	64.72
WHBJ - 5	64.42	Center Block 3D East	41.56
WHBJ - 6	72.91	Center Block 3D West	41.97
WHBJ - 7	199.54		

Draft Operations Permit

Influent Requirements

The monthly average **influent** to the wastewater treatment facility shall not exceed 2.6 million gallons per day (MGD) in any calendar month

2.6 MGD Monthly Average = Total Monthly Volume divided by the number of days in the month

In addition, the permit requires the relocation of several production wells to spray fields with elevated groundwater Nitrate-Nitrogen concentrations to allow the pumping (for process water) and treatment of groundwater upon the operation of the upgraded treatment system

Draft Operations Permit

Effluent Limitations

Total Nitrogen Concentration

Within 2 years and 4 months of the effective date of this Permit, treated wastewater (effluent) discharged from the wastewater treatment system shall not exceed the following maximum limitation

Total Nitrogen: 10 mg/L

Draft Operations Permit

Effluent Limitations

The average weekly quantity of effluent discharged to any portion of the spray irrigation field shall not exceed the following **hydraulic loading limitation** measured as inch per acre averaged over a 7-day rolling period

North Spray Fields		South Spray Fields	
Field Wetted	**Hydraulic Loading Limit (inches/week)**	**Field Wetted**	**Hydraulic Loading Limit (inches/week)**
WHBJ - 1	1.5	Center Block 3	2.3
WHBJ - 2	2.5	Center Block 3A	2.5
WHBJ - 3	1.5	Center Block 3B	2.5
WHBJ - 4	2.5	Center Block 3C	2.2
WHBJ - 5	1.5	Center Block 3D East	2.5
WHBJ - 6	2.5	Center Block 3D West	2.5
WHBJ - 7	2.5		

Earth Data Inc. Report dated December 16, 2019

Draft Operations Permit

Effluent Limitations

The quantity of effluent discharged to any portion of the spray irrigation field shall not exceed 0.25 inch/acre/hour

The wastewater treatment facility has been designed for limited public access

Parameter	Daily Permissible Average Concentration
BOD_5	50.0 mg/L
Fecal Coliform	200 colonies/100 mL
Total Suspended Solids	50 mg/L

Draft Operations Permit

Influent Monitoring Requirements

Parameter	Unit of Measurement	Monitoring Frequency	Sample Type
Flow	Gallons/Day	Continuous	Recorded
BOD5	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	Monthly	Grab

Draft Operations Permit

Effluent Monitoring Requirements

Parameter	Unit Measurement	Monitoring Frequency	Sample Type	Parameter	Unit Measurement	Monitoring Frequency	Sample Type
Ammonia Nitrogen	mg/L	Monthly	Composite	Organic Nitrogen	mg/L	Monthly	Calculation
BOD_5	mg/L	Twice per month[2]	Composite	pH	S.U.	Daily	Grab
Cadmium	mg/L	Annually	Composite	Potassium	mg/L	Quarterly	Composite
Calcium	mg/L	Annually	Composite	Sodium Adsorption Ratio	N/A	Quarterly	Calculation
Chloride	mg/L	Quarterly	Composite	Sodium	mg/L	Quarterly	Composite
Copper	mg/L	Annually	Composite	Total Dissolved Solids	mg/L	Quarterly	Grab
Effluent Flow	Gal/day	Continuous	Recorded	Total Nitrogen[1]	mg/L	Twice per month[2]	Composite
Fecal Coliform	Col/100 ml	Twice per month[2]	Grab	Total Nitrogen Loading	lbs/acre	Monthly	Calculation
Lead	mg/L	Annually	Composite	Total Phosphorus	mg/L	Monthly	Composite
Magnesium	mg/L	Annually	Composite	Total Phosphorus Loading	lbs/acre	Monthly	Calculation
Nickel	mg/L	Annually	Composite	Total Residual Chlorine	mg/L	Daily	Grab
Nitrate + Nitrite Nitrogen	mg/L	Monthly	Composite	Total Suspended Solids	mg/L	Twice per month[2]	Composite
Oil and Grease	mg/L	Monthly	Grab	Zinc	mg/L	Annually	Composite

[1] Until the construction upgrades are complete in accordance with Part I.C.2 of the State Permit DEN Number 359191-05, the Permittee shall continue the current enhanced monitoring frequency as required by the Department.

[2] Samples shall be taken 14 days apart.

Draft Operations Permit

Spray Irrigation Monitoring Requirements

Parameter	Unit Measurement	Monitoring Frequency	Sample Type
Total Effluent Flow to all Fields/Zones/Pivots combined	Gallons	Monthly	Data
Max Daily Effluent Flow to all Fields/Zones/Pivots combined	Gallons	Monthly	Data
Average Daily Effluent to all Fields/Zones/Pivots combined	MGD or gpd	Monthly	Calculation (Total Monthly Effluent Flow / Number of Days in Month)
Total Effluent Flow to each Fields/Zones/Pivots	Gallons	Monthly	Data
Number of Days Sprayed During the Month to each Fields/Zones/Pivots	Days	Monthly	Data
Nitrogen Loading Rate to each Fields/Zones/Pivots	lbs/acre per Field/Zone/Pivot	Monthly	Calculation
Cumulative Annual Nitrogen Loading Rate to each Fields/Zones/Pivots	lbs/acre per Field/Zone/Pivot	Monthly	Calculation
Phosphorus Loading Rate to each Fields/Zones/Pivots	lbs/acre per Field/Zone/Pivot	Monthly	Calculation
Cumulative Annual Phosphorus Loading Rate to each Fields/Zones/Pivots	lbs/acre per Field/Zone/Pivot	Monthly	Calculation

Draft Operations Permit

Groundwater Monitoring Requirements

Local ID	DNREC ID	Field	Local ID	DNREC ID	Field
MW-13	243364	WHBJ-5	MW-31	70662	WHBJ-7
MW-14	243361	WHBJ-4	MW-32	70663	WHBJ-7
MW-15	243359	WHBJ-4/5	MW-33	70664	WHBJ-7
MW-16	243358	WHBJ-1	MW-34	70665	WHBJ-3
MW-17	243357	WHBJ-4/7	MW-35	70666	WHBJ-2
MW-18	243356	WHBJ-3	MW-36	70667	CB-3DW
MW-19	243355	WHBJ-2	MW-37	70668	CB-3B/C/D
MW-20	243354	WHBJ-2	MW-38	192056	CB-3DW
MW-21	243353	WHBJ-2	MW-40	70671	WHBJ-1
MW-22	243362	WHBJ-4	MW-41	70672	CB-3/B/C
MW-23	243365	CB-3/B/C	MW-42	70673	CB-3C
MW-25	243351	Next to 15	MW-43	70674	CB-3
MW-26	243363	WHBJ-4	MW-44	70675	CB-3
MW-27	243352	WHBJ-7	MW-45	70676	CB-3/3A
MW-28	70659	WHBJ-6	MW-46	70677	CB-3A
MW-29	70660	WHBJ-6	MW-47	70678	CB-3A
MW-30	70661	WHBJ-6			

Parameter	Unit Measurement	Measurement Frequency	Sample Type
Ammonia as Nitrogen	mg/L	Quarterly	Grab
Arsenic	mg/L	Quarterly	Grab
Chloride	mg/L	Quarterly	Grab
Depth to Water	hundredths of a foot	Quarterly	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

Draft Operations Permit

Lysimeter Monitoring Requirements

Local ID	DNREC ID	Associated Pivot	Notes
LY-1	257012	CB-3	Replaced well 233818 on 02/07/17
LY-2	257636	CB-3C	Replaced well 233819 on 03/29/17
LY-3	257016	CB-3DW	Replaced well 233820 on 02/07/17
LY-4	233821	WHBJ-1	
LY-5	233822	WHBJ-3	
LY-6	233823	WHBJ-7	
LY-7	233824	WHBJ-6	

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

Draft Operations Permit

Soil Monitoring Requirements

Parameter	Unit Measurement	Measurement Frequency	Sample Type
pH	S.U.	Annually	Soil Composite
Organic Matter	%	Annually	Soil Composite
Phosphorus (as P_2O_5)	mg/kg	Annually	Soil Composite
Potassium	mg/kg	Annually	Soil Composite
Sodium Adsorption Ratio	meq/100g	Annually	Soil Composite
Arsenic	mg/kg	Once per 5 years	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

Draft Operations Permit

Vegetation Monitoring Requirements

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

Draft Operations Permit

Surface Water Monitoring Requirements

Local ID	Location Type	Water Body	Northings	Eastings
SW-1	Upstream	Swan Creek	69152.576 213967.754	69152.576 213967.754
SW-2	Upstream	Longwood Creek	68292.426 212425.402	68292.426 212425.402
SW-3	Downstream	Longwood Creek	66926.088 213249.301	66926.088 213249.301
SW-4	Downstream	Waples Pond	67260.127 214183.842	67260.127 214183.842
SW-5	Downstream	Longwood Pond	66776.152 213787.762	66776.152 213787.762

Parameter	Unit Measurement	Measurement Frequency	Sample Type
Ammonia as Nitrogen	mg/L	Quarterly	Grab
BOD_5	mg/L	Quarterly	Grab
Chloride	mg/L	Quarterly	Grab
Dissolved Oxygen	mg/L	Quarterly	Field Test
Enterococcus	Col/100mL	Quarterly	Grab
Fecal Coliform	Col/100 ml	Quarterly	Grab
Nitrate + Nitrite as Nitrogen	mg/L	Quarterly	Grab
Total Nitrogen	mg/L	Quarterly	Grab
Total Phosphorus	mg/L	Quarterly	Grab
Total Suspended Solids	mg/L	Quarterly	Grab

Draft Operations Permit

Sludge Handling Requirements

- All solids generated by the treatment system shall be removed in accordance with accepted process control methods in order to maintain effective treatment operations

- Solids removed from the treatment process shall be contained, transported, and disposed of in accordance with all local, state, and federal regulations

- Records of solids disposal, including the volume of solids removed, and copies of all manifests for the previous calendar year shall be submitted to the Department in the Annual Report

Draft Operations Permit

Total Nitrogen Limitation Contingency Plan

- Upon enacting the maximum Total Nitrogen concentration limitation of 10 mg/L, if analytical results of a treated wastewater sample indicate an exceedance of the Total Nitrogen limitation, **the Permittee shall collect and analyze a second sample within 24 hours of becoming aware of the original exceedance**
- If the **second sample** results indicate that the maximum Total Nitrogen limitation is continuing to be **exceeded**, the following contingency plan shall be enacted

Draft Operations Permit

Total Nitrogen Limitation Contingency Plan

- The Permittee shall **notify** the Groundwater Discharges Section within **24-hours** after becoming aware of the second exceedance and submit a copy of the analytical results indicating the exceedances
- The Permittee shall **increase** the frequency of Total Nitrogen **treated wastewater sampling to once daily** and submit weekly results to the Groundwater Discharge Section
- The Permittee shall examine the operation and maintenance log, required to be maintained by this Permit, for any possible improper operational procedures

Draft Operations Permit

Total Nitrogen Limitation Contingency Plan

- The Permittee shall conduct a physical inspection of the treatment system to detect abnormalities; any abnormalities discovered shall be corrected
- A report detailing the corrections made shall be submitted to DNREC within 30 days of correction
- The Permittee shall follow their emergency contingency plan and **submit monthly TN balances indicating that they can continue spray irrigation at higher concentrations while not exceed 10 mg/L on a monthly basis in the percolate**

Draft Operations Permit

Total Nitrogen Limitation Contingency Plan

- When daily analytical results from three consecutive weeks of wastewater sampling do not exceed the limitation, the Permittee is authorized to return to a bi-weekly monitoring frequency
- Upon completion of the off-spec lagoon as authorized by the Construction Permit, if a Total Nitrogen exceedance is confirmed, **the Permittee shall notify the Department to determine if treated wastewater is required to be diverted**
- If required, the **Permittee shall immediately cease discharging to the spray fields and divert treated wastewater to the off-spec lagoon for temporary storage and additional treatment**

Draft Operations Permit

Fecal Coliform Bacteria Limitation Contingency Plan

- If analytical results of a treated wastewater sample collected at the irrigation pivot indicate an **exceedance of the daily average concentration limitations for fecal coliform bacteria**, the contingency plan below shall be enacted

- Within **24 hours** of becoming aware of a confirmed exceedance, the Permittee **shall enact the following corrective actions**:
  - **notify** the Groundwater Discharges Section that the contingency plan is being enacted;

Draft Operations Permit

Fecal Coliform Bacteria Limitation Contingency Plan

- *Corrective Actions Continued*
  - submit copies of the recent analytical results indicating an exceedance;
  - **begin post-storage lagoon chlorination**;
  - **submit weekly analytical sampling results to DNREC**;
  - examine the operation and maintenance log, required to be maintained by this Permit, for any possible improper operational procedures; and
  - conduct a physical inspection of the treatment system to detect abnormalities. Any abnormalities discovered shall be corrected
  - A report detailing the corrections made shall be submitted to DNREC within 30 days of correction

Draft Operations Permit

Fecal Coliform Bacteria Limitation Contingency Plan

- When analytical results indicate that the daily average concentration limitations for fecal coliform bacteria set by the Permit is no longer being exceeded, the Permittee can cease submitting weekly results
- Upon completion of the off-spec lagoon as authorized by the Construction Permit, **if a fecal coliform bacteria exceedance is identified, the Permittee shall notify the Department to determine if treated wastewater is required to be dive**rted
- If required, **the Permittee shall immediately cease discharging to the spray fields and divert treated wastewater to the off-spec lagoon for temporary storage and additional treatment**

Draft Operations Permit

Fecal Coliform Bacteria Limitation Contingency Plan

- If Mountaire is required to enact the plan **more than three times in a 12-month period**, they shall have the system evaluated to determine the cause of the elevated fecal coliform bacteria concentrations
- **Submit to DNREC a revised Design Engineer Report with proposed corrective actions** to achieve a maximum fecal coliform bacteria concentration of 200 col/100 mL that bears the seal and signature of a Class C licensed Delaware Professional Engineer
- **The report shall be submitted within one year of the third notification of the contingency plan being enacted**
- **Mountaire shall initiate implementation of the plan within 90 days following approval by DNREC**

In Conclusion

- Upgrades to the treatment system will result in an effluent Total Nitrogen concentration of 10 mg/L or less which aligns with State & Federal Drinking Water Standards
- The facility's permitted capacity remains the same but, the current use of wet weather fields spray is discontinued
- Anaerobic lagoons will be replaced by flow equalization tanks which will help address odor and mosquito concerns
- Production wells will be relocated to spray fields with elevated Nitrate-Nitrogen concentrations in groundwater resulting in the treatment groundwater upon operation of the upgraded treatment system

In Conclusion

- Extensive monitoring is required including influent and effluent monitoring, groundwater monitoring, surface water monitoring, soils, and vegetative monitoring
- Upgrades include additional treated effluent storage and the ability to divert off-spec wastewater (if issues occur)
- The permit includes enhanced contingency plans for elevated Total Nitrogen and Fecal Coliform Bacteria concentrations (if issues occur)
- The Construction and Operations Permits and their requirements and conditions are protective of public health and the environment as required by the Regulations

Public Hearing Exhibits

1. **Application for Spray Irrigation Construction Permit**
   a. 2019 preliminary soils work
   b. February 2020 Application Submittal
      1)Application submittal cover letter dated February 7, 2020
      2)DNREC Application Form dated February 5, 2020
      3)Final Design Summary Report dated February 5, 2020
      4)Drawings dated revised February 5, 2020
      5)Technical Specification dated February 5, 2020
   c. April 2020 Application Submittal for revision
      1)Letter providing revised submittal dated April 24, 2020
      2)Final Design Summary Report dated April 24, 2020
      3)Process Flow Diagram dated April 24, 2020
      4)Index of Drawings annotating drawings requiring additional revisions provided April 24, 2020
   d. Email from Reid Engineering dated April 27, 2020 indicating which upgrades are needed to meet an effluent Total Nitrogen of 10 mg/L

Public Hearing Exhibits

2. **DNREC Enforcement documents relative to the proposed applications**
   a. Notice of Violation issued to Mountaire dated November 2, 2017
   b. Agreement and Proposed Consent Decree dated December 13, 2019
3. **Modification and Renewal of the Spray Irrigation Operations Permit**
   a. Letter requesting the modification of the existing Spray Irrigation Operations Permit (DEN Number 359191-04) to incorporate the proposed facility upgrades
4. **Previously permitted design documents that the permittee will continue to operate in accordance with until the construction of the proposed upgrades have been completed**
   a. Design Development Report (DDR) titled 2011 and dated December 7, 2010
   b. Drawings dated November 15, 2011
   c. 2012 Operation and Maintenance Manual

Public Hearing Exhibits

5. Draft Construction Permit

6. Draft Operations Permit – Modification/Renewal

7. Legal Notice of Public Hearing – advertised April 29, 2020

8. Notice of Virtual Hearing Posted on the State of Delaware Public Meeting Calendar – advertised April 29, 2020

9. Public Hearing Web Page providing Webex meeting information and exhibits – advertised April 29, 2020

10. DNREC's Public Hearing Presentation – dated May 21, 2020

DNREC Virtual Public Hearing

On the Application for a Spray Irrigation Construction Permit and Modification and Renewal of a Spray Irrigation Operations Permit (Docket #2020-P-W-0014)

Thank you for joining us. We will accept comments on this matter through June 22, 2020.

You can submit your comments using the DNREC comment form, via email, or by USPS mail, as noted on the hearing event page.

A copy of the Court Reporter's full, verbatim transcript will be posted on this hearing's web page as soon as it becomes available.

For more information, find the event page for this hearing on the DNREC Public Hearings page (de.gov/dnrechearings).