



STATE OF DELAWARE
**DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL**

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SECRETARY

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Secretary's Order No.: 2021-W-0003

**RE: On-Site Wastewater Treatment and Disposal System ("OWTDS") Construction
Permit Application and OWTDS Operations Modification and Renewal
Permit Application for Mountaire Farms of Delaware, Inc.'s Poultry
Processing Complex located in Millsboro, Delaware**

Date of Issuance: January 11, 2021

Effective Date: January 11, 2021

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC"), pursuant to 7 *Del.C.* §§6003, 6004, 6006, Delaware's *Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems* (7 DE Admin. Code 7101), and all other relevant statutory authority, the Department of Natural Resources and Environmental Control ("Department" or "DNREC") issues this Order, approving the On-Site Wastewater Treatment and Disposal System ("OWTDS") Construction Permit Application and the OWTDS Operations Modification and Renewal Permit Application of Mountaire Farms of Delaware, Inc. ("Mountaire" or "Applicant") for the Mountaire Poultry Processing Complex in Millsboro, Delaware. Mountaire has applied for a State of Delaware OWTDS Construction Permit for significant upgrades of the existing wastewater treatment system to provide enhanced wastewater effluent treatment capabilities. The Applicant has also requested to modify and renew their existing State of Delaware OWTDS Operations Permit, which authorizes their wastewater treatment system to receive and treat poultry processing wastewater, stormwater, and sanitary waste ("Applications").

The Applications submitted by Mountaire are subject to various state and federal regulatory requirements, including, but not limited to, Delaware's *Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems*, as set forth in 7 DE Admin. Code 7101 ("Regulations"), and as provided for under Delaware law in 7 *Del.C.* Chapter 60.

Background, Procedural History and Findings of Fact

As noted above, Mountaire has applied for a State of Delaware OWTDS Construction Permit for significant upgrades to the existing wastewater treatment system at its Poultry Processing Complex in Millsboro, Delaware, to provide enhanced wastewater effluent treatment capabilities. The proposed upgrades will allow the wastewater treatment system to treat wastewater to a total nitrogen concentration of 10 mg/L or less.

The proposed wastewater treatment system upgrade project includes improvements to the activated sludge biological nitrogen removal ("BNR") treatment system components. The project also includes the installation of a new tertiary sand filtration system for final effluent polishing, and a new screw press sludge dewatering system designed to increase waste activated sludge handling capacity. The existing spray storage lagoon will continue to be used for final effluent storage prior to disposal in the existing spray irrigation fields, however, a new spray storage lagoon will also be installed to expand the final effluent storage volume.

In addition to the above construction upgrades, Mountaire has also requested permission from the Department to modify and renew its existing State of Delaware OWTDS Operations Permit, authorizing the Applicant's wastewater treatment system to receive and treat poultry processing wastewater, stormwater, and sanitary waste. After the completion of the above requested construction upgrades, the wastewater treatment system will discharge treated wastewater effluent with a total nitrogen concentration of 10 mg/L or less.

The effluent will be spray irrigated onto approximately 893.63 acres of agricultural fields in Sussex County, Delaware, where further nitrogen reduction will occur via crop uptake. Seven center pivot spray irrigation systems are located north of Route 24, and are designated as WHBJ Systems Nos. 1, 2, 3, 4, 5, 6, and 7. Additionally, six center pivot spray irrigation systems are located south of Route 24, and are designated as Center Block Systems Nos. 3, 3A, 3B, 3C, 3DE, and 3DW.

The above-described Applications submitted to the Department by Mountaire were deemed technically complete by the Department's Division of Water, Groundwater Discharges Section ("GWDS"). Accordingly, the Department published legal notices in both the *Sunday News Journal* and the *Delaware State News* on April 29, 2020, advertising that a virtual public hearing would be held, as referenced above. The Department also posted such information on the State of Delaware Public Meeting Calendar and the DNREC web site. Thereafter, the Department held its public hearing concerning this matter on May 21, 2020.

Department staff, representatives of Mountaire, and approximately thirty members of the public virtually attended the May 21, 2020 public hearing. Due to the high level of public interest in these Applications, and in response to requests made by the public for the Department to extend the public comment period, the hearing record remained open for receipt of written comment through June 22, 2020. Proper notice of the hearing was provided as required by law.

At the request of Hearing Officer Lisa A. Vest, the technical experts in the Department's SWDS prepared its TRM to (1) specifically address the verbal and written concerns raised by the public; and (2) offer conclusions and recommendations with regard to Mountaire's pending Applications for the benefit of the Record generated in this matter. During the GWDS's review of the hearing record, similar comments and questions received from the public were grouped together, to better organize the Department's formal responses to the same.

In order to adequately address concerns raised by the public regarding the pending Applications, the GWDS requested additional information from Mountaire in a letter dated July 28, 2020. That request, along with Mountaire's responses, are all contained within the TRM.

The Department's TRM, dated November 23, 2020, provided a summary of the public comments received by the Department in this matter, and offered responses to those comments specifically associated with the Application pending before the Secretary at this time. It does not, however, address those comments that pertain to matters outside the permitting authority of the SWDS, nor is it responsive to any comments not specifically related to the Application, which was the subject matter of the public hearing held by the Department on June 13, 2019.

Subsequent to the Department's TRM having been received for inclusion into the hearing record, Hearing Officer Vest prepared her Hearing Officer's Report ("Report"), dated December 17, 2020, which expressly incorporated the TRM, with attachments, therein. Ms. Vest's Report set forth the procedural history, summarized and established the record of information ("Record") relied on in the Report, and provided findings of fact, reasons, and conclusions. The Report is incorporated herein by reference. The Report recommends the Department issue both the OWTDS Construction Permit and the OWTDS Operations Modification and Renewal Permit to Mountaire, with the revisions proposed by GWDS, as set forth therein.

Reasons and Conclusions

Currently pending before the Department are the above-described Applications submitted to the Department by Mountaire Farms of Delaware, Inc., for its Poultry Processing Complex in Millsboro, Delaware. I find that the proposed project requires Mountaire to obtain both an OWTDS Construction Permit and an OWTDS Operations Modification and Renewal Permit for its aforementioned Millsboro facility.

I further find that the Applicant's proposed project is subject to various state and federal regulatory requirements, including, but not limited to, Delaware's *Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems*, as set forth in 7 DE Admin. Code 7101, and as provided for under Delaware law in 7 *Del.C.* Ch. 60.

In reviewing the applicable statutes and regulations, as well as weighing public benefits of this project against potential detriments, the Department's experts in the GWDS have concluded that the pending Applications submitted by Mountaire, as described in detail above, are complete, and that the same comply with all applicable federal and state laws and regulations. The permits to be issued by the Department would be reflective of the Applications submitted by Mountaire, and would include water quality limitations, along with operational, monitoring, and reporting requirements for the Applicant, to ensure continued protection of public health and the environment.

In response to the above referenced comments received from the public in this matter, the Department has sought to minimize the impacts to the surrounding communities. To that end, the Department's experts in GWDS have made the following determinations:

1. The OWTDS Construction Permit will authorize significant upgrades to the existing wastewater treatment system, providing enhanced effluent treatment capabilities, ultimately allowing the system to treat wastewater to a total nitrogen concentration of 10 mg/L or less, in-line with Federal Drinking Water Standards.
2. Additional upgrades include the installation of a new tertiary sand filtration system for final effluent polishing, a new screw press sludge dewatering system designed to increase waste activated sludge handling capacity, and a new spray storage lagoon expanding the system's final effluent storage volume.

3. In addition to the construction and/or installation of the aforementioned proposed upgrades and equipment, the OWTDS Construction Permit will also include a schedule of compliance, construction requirements, monitoring equipment installation requirements, and project completion requirements designed to (1) eliminate poorly constructed systems; (2) reduce treatment system malfunctions; (3) ensure the retention of construction documents; and (4) ultimately result in wastewater treatment systems that are protective of water resources and the public's health, safety, and welfare.

4. The OWTDS Operations Modification and Renewal Permit will require the wastewater treatment system to achieve a maximum total nitrogen concentration of 10 mg/L within four (4) months of completing the wastewater treatment system upgrades. This enhanced water quality is in-line with Federal Drinking Water Standards and therefore protective of human health and the environment. Additionally, effluent total nitrogen concentrations will be further reduced by plant uptake during disposal via spray irrigation.

5. The OWTDS Operations Permit will include effluent limitations, as well as operational and reporting requirements designed to protect human health and the environment. Additionally, the permit will govern the volume and manner in which treated wastewater (effluent) may be used for spray irrigation, prohibiting spray during periods of high winds, saturated or frozen soil conditions, or when effluent ponding or runoff is observed.

6. Furthermore, the OWTDS Operations Permit will require extensive water quality monitoring through spray effluent monitoring, the use of lysimeters (in-field), monitoring wells (in-field, up-gradient, and down-gradient), and surface water monitoring, allowing the GWDS to assess what impact the spray irrigation activities are having on the spray fields, groundwater, and surface waters within and adjacent to the spray fields.

7. In the event trends of increasing concentrations and/or impacts are observed, Mountaire will be required to take all necessary actions to eliminate and correct any adverse impact on public health or the environment resulting from permit non-compliance. This includes the addition of nitrogen and fecal coliform contingency plans for poor water quality.

Additionally, as a direct result of the comments received by the Department in this matter, the GWDS has made revisions to both the Draft OWTDS Construction Permit and the Draft OWTDS Operations Modification and Renewal Permit for Mountaire's Poultry Processing Complex in Millsboro, Delaware. These revisions are specifically set forth in the Department's TRM, and are noted herein as follows:

Revisions to Draft OWTDS Construction Permit:

1. Mountaire is now required to upgrade the wastewater treatment system to achieve a Total Phosphorous ("TP") effluent concentration of 3.0 mg/L within three (3) years of permit issuance.
2. The Department acknowledges that Mountaire does not intend to construct a future dryer for Class A solids disposal. The Department recommends Mountaire submit a revised Process Flow Diagram with the Drawings required in Part I, C.1 of the Draft OWTDS Construction Permit.
3. On Page 5, Item #2 – DAF Cell 1B – should indicate 2400 gpm, not 1800 gpm. Also, DAF Cell 1B can operate either in parallel or independently. The DAFs will operate 24 hours/day, 6-7 days per week.

4. On Page 7, Item #11 – Any modifications to the number of screw presses to be installed for sludge dewatering, based on size and/or brand chosen, should be included with the Drawings and Technical Specifications required in Part I, C.1 of the Draft OWTDS Construction Permit. Revisions have been made to indicate the minimum number.

In addition to the above revisions, the Department notes that the requirement of two synthetically lined storage lagoons in Part I, C.3 of the Draft OWTDS Construction Permit was drafted in error. The Department provides the following correction regarding the same:

Part I C.3 on Page 9 of the draft construction permit will be revised to reflect the requirement of only one new, synthetically lined storage lagoon. Part I, A on Page 8 of the draft construction permit has also been revised to include the required new, synthetically lined storage lagoon in the list of authorized construction items as Item Number 23.

Revisions to Draft OWTDS Operations Permit:

1. Mountaire is now required to achieve a TP effluent concentration of 3.0 mg/L within three (3) years and four (4) months of permit issuance. As a component of the system upgrade, Mountaire will be allowed to investigate TP effluent concentrations further and submit additional information for the GWDS to evaluate and may request a Permit Modification regarding the TP limit.
2. As noted previously, the Department acknowledges that Mountaire does not intend to construct a future dryer for Class A solids disposal. The Department recommends Mountaire submit a revised Process Flow Diagram with its required Drawings.

3. The Department acknowledges that typical farming practices require soybeans to be harvested only once per year. Thus, revisions have been made to require crops to be harvested as appropriate. The permit will continue to require harvested crops to be removed from the irrigation site within six (6) months of harvest.
4. The intent of the requirements regarding the application of fertilizer iterated in Part I, D.10 of the Draft OWTDS Operations Permit is to limit the application of Nitrogen and Phosphorus. The Department acknowledges that typical farming practices, at times, require the addition of pot ash and lime. Thus, revisions have been made to specify the prohibition of fertilizer containing Nitrogen and Phosphorus.

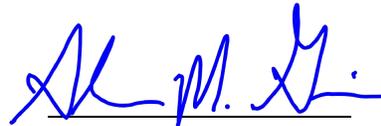
The Record developed in this matter indicates that the Department's GWDS experts have considered all applicable statutes and regulations that govern projects such as the Applicant's above proposed activities and have recommended approval of the aforementioned permits, with GWDS's proposed revisions, necessary for the same.

I find and conclude that the Applicant has adequately demonstrated compliance with all requirements of the statutes and regulations, as noted herein, and that the Record supports approval of the Applications as submitted by Mountaire in this matter. Accordingly, this Order approves the issuance of both the revised OWTDS Construction Permit and revised OWTDS Operations Modification and Renewal Permit for Mountaire's Poultry Processing Complex in Millsboro, Delaware, as set forth in the Applications described above, in the customary form, consistent with the Record developed in this matter and with appropriate conditions.

Further, the Department concludes and specifically directs the following:

1. The Department has jurisdiction under *7 Del. C. §§6003, 6004, 6006(4)*, Delaware's *Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems* (7 DE Admin. Code 7101), and all other relevant statutory authority, to make a final determination on the Applications submitted by Mountaire after holding a public hearing, considering the public comments, and all information contained in the Record generated in this matter;
2. The Department provided proper public notice of the Applications submitted by Mountaire, and of the public hearing held on May 21, 2020, and held said hearing to consider any public comments that may be offered on the Applications, in a manner required by the law and regulations;
3. The Department considered all timely and relevant public comments in the Record, as established in the TRM provided by the Department's GWDS, which has now been expressly incorporated into the Record generated in this matter;
4. The Department has carefully considered the factors required to be weighed in issuing the permits required by the aforementioned Applications, and finds that the Record supports approval of the same;
5. The Department shall issue to Mountaire both the On-Site Wastewater Treatment and Disposal System Construction Permit and the Operations Modification and Renewal Permit for Mountaire's Poultry Processing Complex in Millsboro, Delaware, with the revisions proposed by the Department's GWDS, consistent with the Record developed in this matter. Furthermore, said permits shall include all conditions as set forth in the Department's revised Draft Permits for Mountaire, to ensure that Delaware's environment and public health will be protected from harm;
6. The Department adopts the Report and its attachments as further support for this decision;

7. The Department has an adequate Record for its decision, and no further public hearing is appropriate or necessary; and
8. The Department shall serve and publish its Order on its internet site.



Shawn M. Garvin
Secretary