



**AUTHORIZATION TO CONSTRUCT  
UNDER THE LAWS OF THE  
STATE OF DELAWARE**

**PERMITTEE:** Artesian Wastewater Management, Inc. (AWMI)  
664 Churchmans Road  
Newark, DE 19702

**FACILITY:** Sussex Regional Recharge Facility (SRRF)

**DISCHARGE(S):** Spray Irrigation

1. Pursuant to the provisions of 7 *Del. C.* § 6003, **Artesian Wastewater Management, Inc.** is herein authorized to construct Phase 3 of the large on-site wastewater treatment and disposal system project at the **SRRF**.

**SRRF Construction Site:** The Phase 3 treatment plant components are to be constructed on Sussex County Tax Map/Parcel Number: 2-35 6.00 28.09 along Route 30 approximately 4,000-ft north of the intersection of Route 16 and Route 30.

2. The Delaware Department of Natural Resources and Environmental Control's (the Department's or DNREC's) purpose in issuing this Permit, and in imposing the requirements and conditions specified herein, is for the protection of public health and the environment as required by 7 *Del. Admin. C.* §7101 *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* (the Regulations). The construction requirements and other permit terms and conditions are set forth herein.

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John J. Rebar, Jr.  
Environmental Program Manager II  
Division of Water – CGSS  
(302) 739-9946

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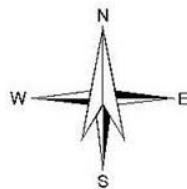
Dated Signed

## SITE MAP



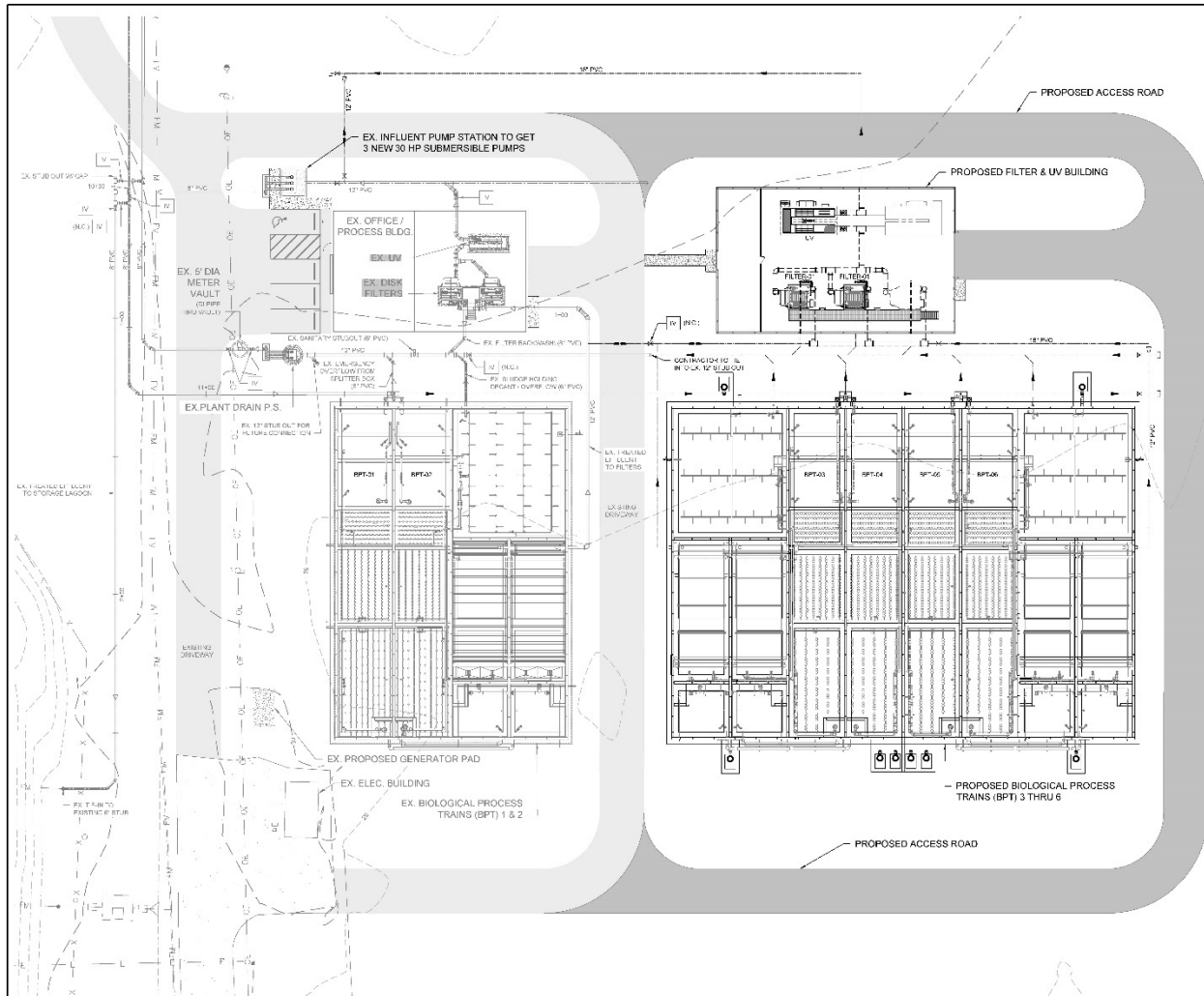
### Legend

- Groundwater Monitoring Wells
- Lysimeters
- Piezometers
- Surface Water Monitoring
- Irrigation Pivots at SRRF



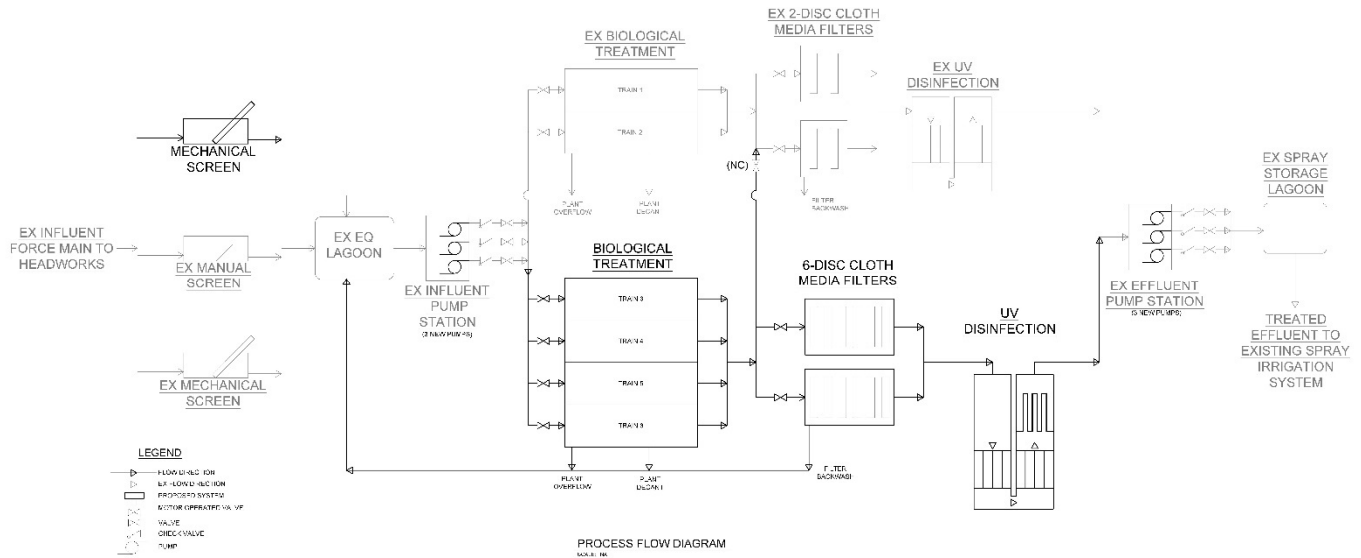
0 500 1,000 2,000 3,000 4,000 Feet

C-1.03 pdf p7 of May 2025 Construction Drawing Set prepared by KCI



## PROCESS FLOW DIAGRAM

G-0.04 pdf p4 of May 2025 Construction Drawing Set prepared by KCI



## PART I

### A. GENERAL DESCRIPTION

The Sussex Regional Recharge Facility (SRRF) will serve as a regional facility meeting existing and future wastewater needs within Artesian's wastewater service territories in Sussex County, Delaware.

The SRRF project is to be constructed on Sussex County Tax Map/Parcel Number: 2-35 6.00 28.09; located on a 75 acre site south of Reynolds Pond Road, east of Route 30, north of Ingram Branch and Route 16, and west of Cedar Creek Road, Sussex County, Delaware.

The SRRF project will be built in multiple phases.

Phase 1 was permitted for Construction under DEN 359288-01. Phase 1 of the project was to construct a storage lagoon and disposal spray fields (D, E, F, and G), and to accept treated wastewater from Allen Harim Foods, LLC (Allen Harim). The design average daily flow was 1.5 million gallons per day (MGD) with a peak daily flow of 2.0 MGD. The customers for Phase 1 consisted of a single food processing source, Allen Harim. Only Fields F and G were constructed and placed in operation.

Phase 2 was permitted for Construction under State of Delaware Permit 359288-03. Phase 2 of the project was to construct an onsite wastewater treatment system designed to treat 625,000 gallons per day (GPD) of wastewater received from Artesian's wastewater service territories in Sussex County. The Phase 2 treatment system was to be constructed on the 75 acre SRRF site where the existing storage lagoon is located. The project scope includes construction of a 3.0 million gallon (MG) combined equalization and off-spec water diversion lagoon, a headworks system consisting of screen and grit removal equipment, an influent lift station, a Hybrid Bardenpho treatment process system, two cloth media filters, an UV disinfection system, and an effluent lift station to pump treated wastewater to the 90 MG treated effluent storage lagoon. The treated wastewater from the SRRF treatment plant will be mixed in the lagoon with the treated effluent from Allen Harim and discharged via spray irrigation to Fields F and G for final disposal.

This Permit authorizes Phase 3. Phase 3 of the project is to construct an expansion of the existing treatment facility with similar unit processes to reach a total treatment capacity of 1.875 MGD. Phase 3 does not include any changes to the disposal capacity. The new treatment systems will include:

- a) New mechanical influent screen
- b) (4) additional hybrid Bardenpho treatment trains with integral clarifiers and aerated sludge holding
- c) New influent pumps (installed in existing wet well)
- d) New cloth media filtration system

- e) New UV system
- f) New Effluent pumps (installed in existing wet well)
- g) Complete buildout of spray system infrastructure on Fields D and E

The treated wastewater (effluent) is discharged via spray irrigation on privately owned agricultural land, under a lease held in perpetuity by Artesian.

## B. DOCUMENTATION

Construction shall be in accordance with the following documents and as required by this Permit.

1. The State of Delaware *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* (the Regulations).
2. Application submittal:
  - a. May 16, 2025
    - 1) KCI Technologies, Inc. letter providing Applications.
    - 2) Application Form for a Construction Permit.
    - 3) 'Design Engineer Report - Sussex Regional Recharge Facility (SRRF) - Phase 3' prepared by KCI Technologies, Inc. for Artesian Wastewater Management, Inc.
    - 4) Construction Drawing Set prepared by KCI.
  - b. June 6, 2025 Artesian Letter requesting a modification to the renewal of Operations Permit to incorporate the Phase 3 treatment expansion; and, providing a schedule for bringing fields D and E online.

## C. FACILITY SPECIFIC CONDITIONS

1. In accordance with Secretary's Order No. 2012-W-0052 Issued and Effective March 12, 2013, the Permittee shall:
  - a. Design the treatment plant to look like an agricultural building and have landscaping to screen it from view from its neighbors.
  - b. Ensure that the storage ponds shall not become a breeding ground for mosquitos.
  - c. Maintain all required buffers for the spray fields as set by both the Department and Sussex County.
    - i. Maintain a 100-foot buffer from the wetted field area to the north-west corner of the Sylvan Acres Development.

2. The permittee shall comply with all applicable Sussex county ordinances and conditional use requirements placed on this facility.
3. The Department reserves the right to increase required separation/buffer and/or isolation distances at any time for reasons including the following:
  - a. objection by an adjacent property owner due to aerosol migration onto their property;
  - b. change in ownership of adjacent property; or
  - c. change in land use of adjacent property.
4. The Phase 3 treatment system shall be constructed to operate in accordance with the following design criteria (Table 1-3) as provided in the May 2025 Phase 3 DER, and the Regulations.

Parameter	Design Value	Units
BOD <sub>5</sub>	10	mg/L
TSS	10	mg/L
Total Nitrogen	10	mg/L
Phosphorus	8	mg/L
pH	6.0 - 9.0	S.U.
Fecal Coliform	20	col/100
Turbidity	5	NTU



## PART II

### A. CONSTRUCTION REQUIREMENTS

1. The permittee shall notify the Department's Commercial and Government Services Section in writing of the intent to initiate construction activities at least fifteen days prior to the commencement of construction. The written notification shall include a proposed construction schedule.

The permittee shall provide updated construction schedules if the schedule changes as construction progresses.

2. Prior to initiating construction of a large on-site wastewater treatment and disposal system, the Department may require a pre-construction meeting be held on-site and attended by the following individuals: DNREC Soil Scientist, DNREC Environmental Engineer, DNREC Hydrologist, Class D.3 Soil Scientist, Professional Geologist, Project Design Engineer, General Site Contractor, Class E.4 System Contractor and other necessary parties.
3. The permittee shall notify the Department's Commercial and Government Services Section of scheduled construction progress report meetings. The Department's Commercial and Government Services Section staff may attend these meetings.
4. All systems shall be constructed/installed by a DNREC licensed Class E.4 system contractor. Proper construction/installation of the components of the treatment and disposal system shall be certified in writing by the design engineer and the manufacturer's representative prior to startup of the wastewater treatment and disposal system.
5. The Class E.4 system contractor shall have a copy of all valid, required and approved permits on site during construction.
6. The design engineer or designee shall periodically review the construction of the disposal system to ensure compliance with design specifications.
7. All system components shall be surveyed to a common datum point.
8. Soil disturbance to the disposal areas shall be limited to the minimum required for construction. The soils may be rendered unsuitable should unnecessary soil disturbance occur near or within the disposal area. Particular care should be taken when clearing wooded lots so as not to remove the surface soil material (see *Lot Clearing Guidelines*, Attachment 2 of the Regulations).



9. If well pointing is required during construction, the wells shall be installed by a licensed well driller, and a permit to construct such wells shall be obtained from the Department.
10. All construction activities shall be approved by the Department's Commercial and Government Services Section and shall comply with all other applicable local utility construction specifications and standards; and shall be in accordance with the Ten States Standards.
11. Connections and/or additions to the wastewater treatment and disposal system, other than those indicated on the approved plans and specifications, will not be allowed without prior written approval from the Department's Commercial and Government Services Section.
12. 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 Commercial and Government Services Section for approval. A new permit may be required.
13. Facility and Construction Changes  
The permittee shall submit a written report to the Department's Commercial and Government Services Section 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's Commercial and Government Services Section; or
  - b. Thirty days before any anticipated change which would result in noncompliance with any permit condition or the Regulations; or
  - c. Immediately after the permittee becomes aware of relevant facts omitted from, or incorrect information submitted in, a permit application or report to the Department's Commercial and Government Services Section.
14. The permittee shall supply the Department's Commercial and Government Services Section with testing procedures and results conducted on the force main/collection/distribution system (including any lift stations).
15. A construction permit issued by the Department does not relieve the permittee from complying with any local, municipal, county, or state requirement.
16. The Class E.4 system contractor shall contact the design Engineer, licensed operator and the Department's Commercial and Government Services Section to schedule an inspection prior to completion of construction.

17. Upon completion of construction, the permittee shall provide the Department's Commercial and Government Services Section with an approved engineer inspection report(s) demonstrating that the system has been constructed in accordance with the approved Design Engineer Report, Plans and Technical Specifications.
18. The permittee is responsible for supplying the Department's Commercial and Government Services Section with a certificate or letter of completion/approval from the wastewater treatment plant manufacturer upon construction completion of the wastewater treatment plant, if applicable.
19. Construction activities within spray fields shall be minimized. Excessive compaction of surface soils by construction equipment shall be avoided. Re-grading of pipeline trenches shall match original contours. Settlement of trench backfill shall be repaired.
20. In forested systems, it is necessary to only grub the pipe centerline. Excessive clearing and grubbing shall be avoided. Clearing for above-ground piping systems shall involve only vegetation that will interfere with operation of the system.
21. All areas disturbed by construction shall be re-vegetated prior to initiation of irrigation activities.
22. Sloped areas require protection from erosion.
23. Pressure testing of the irrigation force mains and laterals shall be conducted during installation to avoid damage to spray fields from re-excavation and repair. Flushing is necessary to clear distribution system pipes of construction debris which will clog sprinkler nozzles. Care should be exercised to prevent erosion or flooding of the spray fields during pipeline flushing. Every effort should be made to keep trash and debris out of the distribution systems. Sprinklers and drain valves shall be checked for proper operation prior to installation.
24. Wastewater irrigation on bare soil is not allowed beyond what is necessary for germination to establish a vegetative cover. Wastewater application, at the design rate, may begin only after a uniform vegetative cover has been established.
25. Spray fields should be constructed early in the project so a vegetative cover can be re-established on disturbed areas before wastewater irrigation begins.
26. Potable, ground or surface water shall be used for distribution system testing unless authorized in writing by the Department's Commercial and Government Services Section.

27. One growing season may be necessary before new spray fields will accept the design wastewater loading. This start-up period shall be considered in the design and operation of these systems.
28. If testing of the system is required prior to construction completion that will require the operation of the system or the discharge of treated wastewater, the permittee shall request approval in writing from the Department's Commercial and Government Services Section and shall notify the Commercial and Government Services Section of the scheduled testing so that Commercial and Government Services Section staff may be present during the testing of the system. Testing shall not commence until written approval is received by the Commercial and Government Services Section.
29. The permittee shall take all reasonable steps to minimize any adverse impact to waters of the state resulting from construction under this permit. Such steps shall include, but not be limited to, accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or reasonable mitigation of such impacts.
30. The permittee must obtain appropriate state permits for the collection and distribution system if applicable.

#### B. MONITORING REQUIREMENTS

1. Monitoring wells, piezometers and lysimeters are required as previously permitted under the Phase 1 Construction Permit DEN Number: 359288-01.
2. Information for each monitoring well and piezometer shall be reported using the State of Delaware Well Identification Tag Number that is required on all wells in accordance with the State of Delaware's *Regulations Governing the Construction and Use of Wells*, Section 11.
3. Sampling parameters and frequencies are outlined in the Operations Permit DEN Number: 359288-02 and will be superseded by the proposed Amended Operation Permit DEN Number 359288-0\*.

#### C. REQUIREMENTS PRIOR TO PLACING SYSTEM INTO OPERATION

1. The permittee shall notify the Department's Commercial and Government Services Section in writing prior to the completion of construction and request a Construction Completion Inspection to be performed by the Department's Commercial and Government Services Section staff. The Design Engineer, Class E.4 system contractor, licensed operator and the permittee shall be present during the inspection. During the inspection, all mechanical parts are to be tested.

2. A classification shall be performed on the facility in accordance with the State of Delaware's *Regulations Licensing Operators of Wastewater Facilities*. The class of operator required for the facility will be determined by the Board of Certification for Licensed Wastewater Operators in accordance with the *Regulations Licensing Operators of Wastewater Facilities*. All large systems shall be under the direction of a licensed operator. The licensed operator shall be available at all times. The licensed operator shall be on-site at the time the system is put into operation and is to receive all training as necessary to properly operate the system.
3. Upon completion of construction, the permittee shall submit to the Department's Commercial and Government Services Section the following applicable items. The items shall be combined in one package and submitted electronically.
  - a. Design Engineer Inspection Report(s) certifying the facility has been constructed in accordance with approved plans and specifications.
  - b. Copies of any other applicable State/County inspection reports.
  - c. Contractor's Certificate of Completion.
  - d. A certificate or letter of completion/approval from the wastewater treatment plant manufacturer.
  - e. A set of "as-built" drawings of the facility bearing the seal and signature of a licensed Professional Engineer registered in the State of Delaware.

The "as-built" drawings shall include the following information.

    - i. Site map showing the location of all structures, piping and appurtenances, disposal areas and buffers.
    - ii. A full equipment list and technical specifications for all equipment used, if different than submitted in the permit application.
    - iii. The new topography elevations of the system.
    - iv. Monitoring/Observation well elevations at the top of the casing (TOC) and at the ground surface, GPS coordinates (State Plane), and local topography tied to a common benchmark.
    - v. The location and screen depth, length of stick up, and well ID's shall be provided for each monitor well.
    - vi. Surface water monitoring points.
  - f. A copy of all Collection System Permit(s).
  - g. Inspection Reports demonstrating collection system has been installed and inspected by Design Engineer.

- h. If the collection system does not require county approval, the permittee must supply the Department's Commercial and Government Services Section with all testing procedures conducted on the collection system, force main(s) and lift station(s).
- i. An amended Operation and Maintenance (O&M) Plan outlined in accordance with Section 6.7 of the Regulations.
- j. Biosolids Management Plan. A copy of a biosolids management contract if a third party will be utilized to manage the biosolids. If the permittee is not contracting out sludge management, the permittee shall obtain any necessary permits for land application of biosolids from the Department and provide a copy to the Commercial and Government Services Section.
- k. Legal documents (see Section 6.4 of the Regulations).
- l. Material Safety Data Sheets for all chemicals to be used by the facility staff/operator.

## PART III

### A. MANAGEMENT REQUIREMENTS AND RESPONSIBILITIES

#### 1. Effluent Limitations on Pollutants Attributable to Industrial Users

The use of the constructed facility is conditioned on meeting all applicable pretreatment standards under 40 CFR, Part 403, or toxic pollutant discharge limitation under Section 307(a) of the Clean Water Act of 1977, PL 95-217.

#### 2. 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 must be kept under the conditions of the permit or Regulations;
- c) inspect any facility, equipment, practice, or operation permitted or required by the permit or Regulations; and
- d) sample or monitor for the purpose of assuring permit compliance of any substance or any analytical or operational parameter at the facility.

#### 3. Permit Transferability

Permits may be transferred to a new owner or operator. The permittee shall notify the Department's Commercial and Government Services Section 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 person to another unless 30 days written notice is given to the Department's Commercial and Government Services Section, indicating the transfer is agreeable to both persons, and approval of such transfer is obtained in writing from the Department's Commercial and Government Services Section, and any conditions of the approval of such transfer is obtained in writing from the Department's Commercial and Government Services Section, and any conditions of the transfer approved by the Department's Commercial and Government Services Section are complied with by the transferor and the transferee.
- b) The notice to the Department's Commercial and Government Services Section 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.

#### 4. 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.

#### 5. Non-compliance Notification

The Permittee shall report to the Department's Enforcement Section at (800) 662-8802 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 also report to the Department's Commercial and Government Services Section orally within 24 hours from the time the Permittee became aware of 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 or any other action or event that may endanger the public health or the environment by contacting the Department at the telephone numbers cited below. Spill reporting shall follow the requirements of 7 Del. C., 6028.

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's Commercial and Government Services Section 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 steps being taken or planned to reduce eliminate and/or prevent recurrence of the non-compliant condition.

The notification shall be submitted to the Department at the following address:

Commercial and Government Services Section  
Division of Water  
Department of Natural Resources and Environmental Control  
89 Kings Hwy  
Dover, DE 19901  
Office Telephone: (302) 739-9948



## 6. Construction Permit Expiration

- a) If construction has not been initiated prior to the expiration of the construction permit, and there are proposed changes to the approved design, the applicant shall submit a new or updated Design Engineer Report and construction plans as outlined in Sections 6.2.3, 6.5.1.4 and 6.5.1.5 for project re-evaluation. This will require public notification.
- b) If construction has been initiated prior to the expiration of the construction permit, and construction has not been completed prior to the expiration of the permit, the permittee may apply for a one year extension of the construction permit.
- c) If construction has not been initiated or construction has not been completed prior to the expiration of the one year extension, provided, the SIR is valid, and there are no changes to the approved design prior to the expiration of the construction permit, the applicant must submit a construction permit application along with applicable fees, and a construction schedule.

## 7. Construction Permit Extension

The application for extension shall include the following:

- a) A Department extension form.
- b) Applicable Departmental fees.
- c) Construction schedule.

## PART IV

### A. PROVISIONS

#### 1. Permit Revocation

The Department may revoke a permit if, among other things, the Permittee violates any permit condition, these 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 other 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.