12VAC5-590-220. Compliance with the Manual of Practice.

A. The design guidelines set forth in Part III Manual of Practice for Waterworks Design (12VAC5-590-640 et seq.) of this chapter (Manual of Practice) specify general criteria for the design and construction of waterworks. The commissioner may impose standards or requirements that are more stringent than those contained in the Manual of Practice when required to meet drinking water quality standards. Any special standards or requirements with a federal mandate shall take precedence over the criteria in the Manual of Practice and will be items that warrant careful consideration at the preliminary engineering conference, referenced in 12VAC5-590-200.

B. Designs submitted for waterworks must demonstrate that the waterworks will adequately safeguard public health. Submissions that are in substantial compliance with the Manual of Practice and any additional requirements of the commissioner, as noted in subsection A of this section, will be approved. Justification for a design may be required for those portions of the submitted design that differ from the criteria set forth in the Manual of Practice and any established by the commissioner. Deviations from mandatory criteria contained in the Manual of Practice shall be identified and justified. For each deviation, the commissioner may issue a design exception or require compliance with the criteria.

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12VAC5-590-290. Issuance of a temporary operation permit.

A. Water treatment methods, processes, and equipment that are not covered by the design criteria of Part III (12VAC5-590-640 et seq.) of this chapter, and that in principle or application are new or nonconventional, are subject to a temporary permit application procedure instead of that set forth in 12VAC5-590-200. A temporary permit may be issued only after detailed evaluation of all engineering data and after a period of extensive monitoring of the water treatment plant performance.

B. The department encourages the development of any new or nonconventional methods, processes, and equipment that by virtue of treatability studies appear to have application for water treatment. However, these new or nonconventional developments shall have been thoroughly tested in a full-scale or representative pilot plant installation before these methods, processes, and equipment are approved and an operation permit issued. The results shall be submitted to the department. The testing required on new or nonconventional developments shall generally follow these guidelines:

1. All procedures used in validating the process shall be conducted under the supervision of (i) a licensed professional engineer experienced in the field of environmental engineering, (ii) the owner's engineering staff, or (iii) a testing firm acceptable to the department;
2. Samples shall be collected and analyzed in a manner that shall demonstrate water treatment plant effectiveness and efficiency under adverse conditions and over extended periods of time in the area of the proposed installation;
3. The data shall be from the continuous operation of a full-scale or pilot plant treating the type of water to be handled;
4. Automatic indicating, recording, and totalizing equipment shall be provided, and the total flow shall be measured and recorded daily;
5. If the source water receives upstream discharges of treated industrial wastes or treated wastewater, then automatic indicating and recording equipment shall be provided for continuously monitoring the pH of the source and finished water in addition to the chlorine residual of the finished water;
6. The minimum sampling and analysis program will be established by the department in accordance with the process under investigation; and
7. All analyses shall utilize methods that are consistent with 12VAC5-590-440.

C. Detailed plans shall be submitted where possible showing how, in case of nonacceptance, the water treatment plant or water treatment methods, processes, and equipment will be converted to, or replaced

with, a proven process. Also, financial resources must be assured to make the conversion (for example, funds placed in escrow or a bond posted.

D. After evaluation of the plans and testing data, the commissioner will issue a construction permit if the performance data verifies that the method, process, or equipment may efficiently produce water in accordance with the design specifications and the operation standards of Part II (12VAC5-590-340 et seq.) of this chapter.

E. Upon completion of construction or modification, a temporary permit for a definite period of time will be issued for the operation of the new or nonconventional methods, processes, and equipment. Not more than one temporary permit will be granted for a similar installation during the evaluation period. The temporary operation permit shall require that:

1. The evaluation period shall be a minimum of 12 months and no longer than 18 months; and
2. The holder of a temporary operation permit shall submit reports on operation during the evaluation period as required by the department. The reports shall be prepared by (i) a licensed professional engineer experienced in the field of environmental engineering, (ii) the owner's operating or engineering staff, or (iii) a testing organization.

F. The commissioner may issue a temporary operation permit if the waterworks is not in compliance with this chapter and public health will not be jeopardized. The temporary permit may be issued for a period of time and subject to conditions as the commissioner may deem appropriate for the owner to achieve compliance with this chapter.

1. The commissioner may require, as a condition to a temporary operation permit, the submission of a waterworks business operation plan by new waterworks and existing waterworks that have demonstrated limited TMF capabilities or significant noncompliance with this chapter.
2. The waterworks business operation plan shall satisfy the requirements of 12VAC5-590-200 A5.