

SURFACE WATER TREATMENT RULE

RULE: 15A NCAC 18C Sections .2001 through .2007

(Note: 40 CFR 141.70 through 141.76 and Subparts P and T were incorporated into NC's Regulations by reference. NC also clarified several definitions regarding these rules in our regulations and added a few extra requirements in Section .2002 regarding disinfection.)

APPLIES TO: Surface Water Systems and Ground Water Systems under the Influence of Surface Water (GWUDI Systems)

SAMPLING REQUIREMENTS: [Sections .2004, .2005 and 2006]

- **Sampling Location:** at each treatment plant (entry point), distribution system and at filters.
- **Number of Samples Required and Sampling Frequency:**
 - **Entry Point Samples-** The entry point disinfectant residual must be monitored continuously and the lowest value recorded each day. Systems serving less than 3,300 persons may take grab samples in lieu of continuous monitoring. Number of samples taken each day is based on population served.
 - **Distribution Samples -** The disinfectant residual in the distribution shall be analyzed for the water samples taken for bacteriological analysis. The number of samples required for each month is the same as number of samples for bacteriological analysis.
 - **Combined Filter Effluent (CFE) -** Turbidity shall be measured after filtration every four hours (or more frequent) during the time water is served to the public. For systems serving 500 or less, the sampling frequency may be reduced to once per day.
 - **Individual Filters -** Turbidity must be monitored continuously after filtration. The results recorded every 15 minutes.
- **Any Additional/Special Sampling Requirements:**

The contact time (CT) ratio for each entry point must be calculated for each day.

INCOMING REPORT/PLAN SUBMITTALS FROM SYSTEMS TO THE STATE:

- **Analytical Results for All Compliance Samples** MUST be submitted to the State by NC certified laboratories in required format. (15 NCAC 18C Section .1525; [40 CFR 141.31])
- **Sample Siting/Location Plans:** N/A
- **Waiver Applications:** N/A
- **Monthly Operating Reports:** [Sections .2005 and .2006] - Water systems are required to submit monthly Operating Reports (MORs) including all the information as specified under the Reporting and Recordkeeping requirements in Sections .2006 and .2007. The MORs include detailed information on the plant operations, as well as, all of the required data indicated above such as the turbidity results for CFE, the entry point and distribution disinfectant residual, and CT ratio. The systems are also required to report in their MORs that the turbidity monitoring for each individual filter was done.
- **Quarterly Status Reports and Corrective Action Plan Following Treatment Technique Violations**
- **Other Misc. Submittals if triggered by conditions of the rule:**
 - If the turbidity measurements for an individual filter exceed the trigger levels, the system is required to include additional reporting requirement in their MOR and may need to perform a filter self assessment or a comprehensive performance evaluation for the filter depending on the trigger level. The detailed information on each triggered condition is available under the Reporting and Recordkeeping requirements in Sections .2006 and .2007.
 - If there is a waterborne disease outbreak potential, or if the entry point residual falls below 0.2 mg/L, the system is required to report to the State as soon as possible as specified in Section .2006 [40 CFR 141.75](b)(3)].

- If at any time the CFE turbidity exceeds 1 NTU, the system must inform the State as soon as possible as specified in Section .2007 [40 CFR 141.175 (c) (1)].
- Water systems must submit data to the State for the disinfection profiling exemption approval. Systems that are required to perform profile must retain the data acceptable to the State for review as part of sanitary surveys conducted by the State. In addition, the systems must consult with the State if they decide to make a significant change to their disinfection practice. The data specified in Section .2007 [40 CFR 141.172](c)(4)) must be submitted as part of the consultation process.

OUTGOING ENFORCEMENT/REPORTS/APPROVALS FROM STATE TO SYSTEMS:

- **Violation Letters:** Includes monitoring/reporting violations, violations, treatment technique violations, and failure to perform required follow-up actions, etc.
- **Administrative Orders**
- **Administrative Penalties**
- **Exceedance Letters:** N/A
- **Approvals:** Approval for disinfection profile exemption.

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