§ 141.70 General requirements.

(a) The requirements of this subpart constitute national primary drinking water regulations. These regulations establish criteria under which filtration for public water systems supplied by a surface water source and public water systems supplied by a ground water source under the direct influence of surface water are required. In addition, these requirements establish treatment technique requirements in lieu of maximum contaminant levels for the following contaminants: Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, and turbidity. Each public water system with a surface water source or a ground water source under the direct influence of surface water must provide treatment of that source water that complies with these treatment technique requirements. The treatment technique requirements consist of installing and properly operating water treatment processes which reliably achieve:

(1) At least 99.99 percent (4-log) removal and/or inactivation of Giardia lamblia cysts between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer; and

(2) At least 99.99 percent (4-log) removal and/or inactivation of viruses between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer.

(b) A public water system using a surface water source or a ground water source under the direct influence of surface water is considered to be in compliance with the requirements of paragraph (a) of this section if:

(1) It meets the requirements for avoiding filtration in §141.71 and the disinfection requirements in §141.72(a); or

(2) It meets the filtration requirements in §141.73 and the disinfection requirements in §141.72(b).

(c) Each public water system using a surface water source or a ground water source under the direct influence of surface water must be operated by qualified personnel who meet the requirements specified by the State.

(d) Additional requirements for systems serving at least 10,000 people. In addition to complying with requirements in this subpart, systems serving at least 10,000 people must also comply with the requirements specified by the State.

(e) Additional requirements for systems serving fewer than 10,000 people. In addition to complying with requirements in this subpart, systems serving fewer than 10,000 people must also comply

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TABLE D—COMPLIANCE TECHNOLOGIES BY SYSTEM SIZE CATEGORY FOR RADIONUCLIDE NPDES WTR'S

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Compliance technologies 1 for system size categories (population served)</th>
<th>25–500</th>
<th>501–3,300</th>
<th>3,300–10,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Combined radium-226 and radium-228</td>
<td>1, 2, 3, 4, 5, 6, 7, 8, 9</td>
<td>1, 2, 3, 4, 5, 6, 7, 8, 9</td>
<td>1, 2, 3, 4, 5, 6, 7, 8, 9</td>
<td></td>
</tr>
<tr>
<td>2. Gross alpha particle activity</td>
<td>3, 4</td>
<td>3, 4</td>
<td>3, 4</td>
<td></td>
</tr>
<tr>
<td>3. Beta particle activity and photon activity</td>
<td>1, 2, 3, 4</td>
<td>1, 2, 3, 4</td>
<td>1, 2, 3, 4</td>
<td></td>
</tr>
<tr>
<td>4. Uranium</td>
<td>1, 2, 4, 10, 11</td>
<td>1, 2, 3, 4, 5, 10, 11</td>
<td>1, 2, 3, 4, 5, 10, 11</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: 1 Numbers correspond to those technologies found listed in the table C of 141.66(h).

[65 FR 76748, Dec. 7, 2000]
§ 141.71 Criteria for avoiding filtration.

A public water system that uses a surface water source must meet all of the conditions of paragraphs (a) and (b) of this section, and is subject to paragraph (c) of this section, beginning December 30, 1991, unless the State has determined, in writing pursuant to §1412(b)(7)(C)(iii), that filtration is required. A public water system that uses a ground water source under the direct influence of surface water must meet all of the conditions of paragraphs (a) and (b) of this section and is subject to paragraph (c) of this section, beginning 18 months after the State determines that it is under the direct influence of surface water, or December 30, 1991, whichever is later, unless the State has determined, in writing pursuant to §1412(b)(7)(C)(iii), that filtration is required. If the State determines in writing pursuant to §1412(b)(7)(C)(iii) before December 30, 1991, that filtration is required, the system must have installed filtration and meet the criteria for filtered systems specified in §§141.72(b) and 141.73 by June 29, 1993. Within 18 months of the failure of a system using surface water or a ground water source under the direct influence of surface water to meet any one of the requirements of paragraphs (a) and (b) of this section or after June 29, 1993, whichever is later, the system must have installed filtration and meet the criteria for filtered systems specified in §§141.72(b) and 141.73.

(a) Source water quality conditions. (1) The fecal coliform concentration must be equal to or less than 20/100 ml, or the total coliform concentration must be equal to or less than 100/100 ml (measured as specified in §141.74 (a)(1) and (b)(2)), in representative samples of the source water immediately prior to the first or only point of disinfectant application unless: (i) the State determines that any such event was caused by circumstances that were unusual and unpredictable; and (ii) as a result of any such event, there have not been more than two events in the past 12 months the system served water to the public, or more than five events in the past 120 months the system served water to the public, in which the turbidity level exceeded 5 NTU. An “event” is a series of consecutive days during which at least one turbidity measurement each day exceeds 5 NTU.

(b) Site-specific conditions. (1)(i) The public water system must meet the requirements of §141.72(a)(1) at least 11 of the 12 previous months that the system served water to the public, on an ongoing basis, unless the system fails to meet the requirements during 2 of the 12 previous months that the system served water to the public.

(iii) The public water system must meet the requirements of §141.72(a)(2) at all times the system serves water to the public.

(iv) The public water system must meet the requirements of §141.72(a)(4) on an ongoing basis unless the State determines that failure to meet these requirements was not caused by a deficiency in treatment of the source water.

(2) The public water system must maintain a watershed control program which minimizes the potential for contamination by Giardia lamblia cysts and