filtration, cartridge filters, chlorine dioxide, membranes, ozone, or UV, as described in §§141.716 through 141.720.

(c) Failure by a system in any month to achieve treatment credit by meeting criteria in §§141.716 through 141.720 for microbial toolbox options that is at least equal to the level of treatment required in paragraph (a) of this section is a violation of the treatment technique requirement.

(d) If the State determines during a sanitary survey or an equivalent source water assessment that after a system completed the monitoring conducted under §141.701(a) or §141.701(b), significant changes occurred in the system’s watershed that could lead to increased contamination of the source water by Cryptosporidium, the system must take actions specified by the State to address the contamination. These actions may include additional source water monitoring and/or implementing microbial toolbox options listed in §141.715.

§ 141.712 Unfiltered system Cryptosporidium treatment requirements.

(a) Determination of mean Cryptosporidium level. (1) Following completion of the initial source water monitoring required under §141.701(a), unfiltered systems must calculate the arithmetic mean of all Cryptosporidium sample concentrations reported under §141.701(a). Systems must report this value to the State for approval no later than 6 months after the month the system is required to complete initial source water monitoring based on the schedule in §141.701(c).

(2) Following completion of the second round of source water monitoring required under §141.701(b), unfiltered systems must calculate the arithmetic mean of all Cryptosporidium sample concentrations reported under §141.701(b). Systems must report this value to the State for approval no later than 6 months after the month the system is required to complete the second round of source water monitoring based on the schedule in §141.701(c).

(3) If the monthly Cryptosporidium sampling frequency varies, systems must first calculate a monthly average for each month of monitoring. Systems must then use these monthly average concentrations, rather than individual sample concentrations, in the calculation of the mean Cryptosporidium level in paragraphs (a)(1) or (2) of this section.

(4) The report to the State of the mean Cryptosporidium levels calculated under paragraphs (a)(1) and (2) of this section must include a summary of the source water monitoring data used for the calculation.

(5) Failure to comply with the conditions of paragraph (a) of this section is a violation of the treatment technique requirement.

(b) Cryptosporidium inactivation requirements. Unfiltered systems must provide the level of inactivation for Cryptosporidium specified in this paragraph, based on their mean Cryptosporidium levels as determined under paragraph (a) of this section and according to the schedule in §141.713.

(1) Unfiltered systems with a mean Cryptosporidium level of 0.01 oocysts/L or less must provide at least 2-log Cryptosporidium inactivation.

(2) Unfiltered systems with a mean Cryptosporidium level of greater than 0.01 oocysts/L must provide at least 3-log Cryptosporidium inactivation.

(c) Inactivation treatment technology requirements. Unfiltered systems must use chlorine dioxide, ozone, or UV as described in §141.720 to meet the Cryptosporidium inactivation requirements of this section.

(1) Systems that use chlorine dioxide or ozone and fail to achieve the Cryptosporidium inactivation required in paragraph (b) of this section on more than one day in the calendar month are in violation of the treatment technique requirement.

(2) Systems that use UV light and fail to achieve the Cryptosporidium inactivation required in paragraph (b) of this section by meeting the criteria in §141.720(d)(3)(i) are in violation of the treatment technique requirement.

(d) Use of two disinfectants. Unfiltered systems must meet the combined Cryptosporidium inactivation requirements of this section and Giardia lamblia and virus inactivation requirements of §141.72(a) using a minimum of two disinfectants, and each of two disinfectants must separately achieve the
§ 141.713 Schedule for compliance with Cryptosporidium treatment requirements.

(a) Following initial bin classification under §141.710(c), filtered systems must provide the level of treatment for Cryptosporidium required under §141.711 according to the schedule in paragraph (c) of this section.

(b) Following initial determination of the mean Cryptosporidium level under §141.712(a)(1), unfiltered systems must provide the level of treatment for Cryptosporidium required under §141.712 according to the schedule in paragraph (c) of this section.

(c) Cryptosporidium treatment compliance dates.

CRYPTOSPORIDIUM TREATMENT COMPLIANCE DATES TABLE

<table>
<thead>
<tr>
<th>Systems that serve . . .</th>
<th>Must comply with Cryptosporidium treatment requirements no later than . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) At least 100,000 people . . .</td>
<td>(i) April 1, 2012.</td>
</tr>
<tr>
<td>(2) From 50,000 to 99,999 people.</td>
<td>(i) October 1, 2012.</td>
</tr>
<tr>
<td>(3) From 10,000 to 49,999 people.</td>
<td>(i) October 1, 2013.</td>
</tr>
<tr>
<td>(4) Fewer than 10,000 people.</td>
<td>(i) October 1, 2014.</td>
</tr>
</tbody>
</table>

* States may allow up to an additional two years for complying with the treatment requirement for systems making capital improvements.

(d) If the bin classification for a filtered system changes following the second round of source water monitoring, as determined under §141.710(d), the system must provide the level of treatment for Cryptosporidium required under §141.711 on a schedule the State approves.

(e) If the mean Cryptosporidium level for an unfiltered system changes following the second round of monitoring, as determined under §141.712(a)(2), and if the system must provide a different level of Cryptosporidium treatment under §141.712 due to this change, the system must meet this treatment requirement on a schedule the State approves.

§ 141.714 Requirements for uncovered finished water storage facilities.

(a) Systems using uncovered finished water storage facilities must comply with the conditions of paragraph (c) of this section.

(b) Systems must notify the State of the use of each uncovered finished water storage facility no later than April 1, 2008.

(c) Systems must meet the conditions of paragraph (c)(1) or (2) of this section for each uncovered finished water storage facility or be in compliance with a State-approved schedule to meet these conditions no later than April 1, 2009.

(1) Systems must cover any uncovered finished water storage facility.

(2) Systems must treat the discharge from the uncovered finished water storage facility to the distribution system to achieve inactivation and/or removal of at least 4-log virus, 3-log Giardia lamblia, and 2-log Cryptosporidium using a protocol approved by the State.

(d) Failure to comply with the requirements of this section is a violation of the treatment technique requirement.

REQUIREMENTS FOR MICROBIAL TOOLBOX COMPONENTS

§ 141.715 Microbial toolbox options for meeting Cryptosporidium treatment requirements.

(a)(1) Systems receive the treatment credits listed in the table in paragraph (b) of this section by meeting the conditions for microbial toolbox options described in §§141.716 through 141.720. Systems apply these treatment credits to meet the treatment requirements in §141.711 or §141.712, as applicable.

(b) Unfiltered systems are eligible for treatment credits for the microbial toolbox options described in §141.720 only.

(b) The following table summarizes options in the microbial toolbox: