**Section 611.1004 Source Water Monitoring Requirements: Analytical Methods**

a) Cryptosporidium. A supplier must analyze for Cryptosporidium using USEPA 1623 (05), USEPA 1623.1 (12), or USEPA 1622 (05), each incorporated by reference in Section 611.102, or alternative methods approved by the Agency under Section 611.480.

1) The supplier must analyze at least a 10 ℓ sample or a packed pellet volume of at least 2 mℓ as generated by the methods listed in subsection (a). A supplier unable to process a 10 ℓ sample must analyze as much sample volume as can be filtered by two filters approved by USEPA for the methods listed in subsection (a), up to a packed pellet volume of at least 2 mℓ.

2) Matrix Spike (MS) Samples

A) MS samples, as required by the methods in subsection (a), must be spiked and filtered by a laboratory approved for Cryptosporidium analysis under Section 611.1005.

B) If the volume of the MS sample is greater than 10 ℓ, the supplier may filter all but 10 ℓ of the MS sample in the field, and ship the filtered sample and the remaining 10 ℓ of source water to the laboratory. In this case, the laboratory must spike the remaining 10 ℓ of water and filter it through the filter used to collect the balance of the sample in the field.

3) Flow cytometer-counted spiking suspensions must be used for MS samples and ongoing precision and recovery samples.

b) E. coli. A supplier must use methods for enumeration of E. coli in source water approved in 40 CFR 136.3(a), incorporated by reference in Section 611.102, or alternative methods approved by the Agency under Section 611.480.

1) The time from sample collection to initiation of analysis may not exceed 30 hours, unless the supplier meets the condition of subsection (b)(2).

2) The Agency may, by a SEP, approve on a case-by-case basis the holding of an E. coli sample for up to 48 hours between sample collection and initiation of analysis if it determines that analyzing an E. coli sample within 30 hours is not feasible. E. coli samples held between 30 to 48 hours must be analyzed by the Colilert® Test reagent version of SM 9223 B listed in 40 CFR 136.3(a), incorporated by reference in Section 611.102.

3) A supplier must maintain the temperature of its samples between 0 ºC and 10 ºC during storage and transit to the laboratory.

4) The supplier may use the membrane filtration, two-step procedure described in SM 9222 D (97) (20th ed. only) and SM 9222 G (97) (20th ed. only), incorporated by reference in Section 611.102.

c) Turbidity. A supplier must use methods for turbidity measurement approved in Section 611.531(a).

BOARD NOTE: Derived from 40 CFR 141.704 and appendix A to subpart C of 40 CFR 141. The Board has not separately listed the following approved alternative methods from Standard Methods Online that are the same version as a method that appears in a printed edition of Standard Methods. Use of the Standard Methods Online copy is acceptable.

Standard Methods Online, Methods 9222 D-97 and 9222 G-97 appear in the 20th and 21st editions as Methods 9222 D and 9222 G, but USEPA approved the method in the 20th edition only. In this Section, these appear as SM 9222 D (97) and SM 9222 G (97).

(Source: Amended at 44 Ill. Reg. 6996, effective April 17, 2020)