

From: [McGill, Richard](#)
To: [Brown, Don](#)
Cc: [Leoni, Carlie M.](#)
Subject: FW: 35 IAC 611 (R21-10)
Date: Wednesday, September 13, 2023 12:55:24 PM
Attachments: [image001.png](#)
[Responses to JCAR Changes of 7-31-23.pdf](#)
[35-611RG-P r01 \(47-28\).pdf](#)

Good afternoon, Mr. Clerk:

Please docket this email exchange with JCAR staff (including both attachments) as a public comment in R21-10 & R22-2 (consolidated).

Thank you.

Richard R. McGill, Jr.
Senior Attorney for Research & Writing
Illinois Pollution Control Board
60 E. Van Buren St., Suite 630
Chicago, Illinois 60605
richard.mcgill@illinois.gov (312) 814-6983



From: McGill, Richard
Sent: Wednesday, September 13, 2023 12:51 PM
To: 'Eastvold, Jonathan C.' <JonathanE@ilga.gov>
Subject: RE: 35 IAC 611 (R21-10)

Good afternoon, Jonathan:

Attached are the Board staff responses to your suggested changes and questions, along with the corresponding line-numbered JCAR r01 document.

Thank you.

Best regards,

Richard

Richard R. McGill, Jr.
Senior Attorney for Research & Writing
Illinois Pollution Control Board
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From: Eastvold, Jonathan C. <JonathanE@ilga.gov>
Sent: Monday, July 31, 2023 9:38 AM
To: McGill, Richard <Richard.McGill@illinois.gov>
Subject: [External] RE: 35 IAC 611 (R21-10)

The working document is in Word, so it looks like some of the comment bubbles will be cut off.

Here's the list in usual format:

1. In line 441, change "21-9" to "21-10".
2. In line 453, strike "USC" and add "U.S.C.".
3. In line 489, change the semicolons to commas.
4. In line 516, strike "USC" and add "U.S.C.".
5. In line 574, strike "USC" and add "U.S.C.".
6. In line 677, strike "ℓ" and add "ℒ".
7. In line 827, strike "ℓ" and add "ℒ" twice.
8. In line 866, strike "ℓ" and add "ℒ".
9. In line 923, strike "ℓ" and add "ℒ".
10. In line 1038, strike "ℓ" and add "ℒ".
11. In line 1040, change "ℓ" to "ℒ".
12. In line 1209, strike "ℓ" and add "ℒ".
13. In line 1215, strike "USC" and add "U.S.C.".
14. In line 1264, strike "USC" and add "U.S.C.".
15. In line 1326, strike "USC" and add "U.S.C.".
16. In lines 1376 and 1377, change the semicolons to commas.
17. In line 1387, strike "ℓ" and add "ℒ".

18. In line 1408, strike "ℓ" and add "L".
19. In line 1414, strike "ℓ" and add "L".
20. In line 1424, strike "USC" and add "U.S.C.".
21. In line 1504, strike "USC" and add "U.S.C.".
22. In line 1536, strike the URL and add "<https://www.astm.org/products-services/standards-and-publications.html>".

In line 2102, the URL goes to the main HSDL page, not a specific document.

23. In line 2139, strike "on-line" and add "online".

In line 2140, I can't find the download at that location.

24. In lines 2345-2348, strike "from International Atomic Energy Agency (IAEA), Vienna International Centre, PO Box 100, 1400 Vienna, Austria, ((+43-1) 2600-0; www.iaea.org/Public/048/37048205.pdf) or".
25. In line 2349, strike "MC100-44, PO Box 117, Oak Ridge, TN 37831-0117" and add "100 ORAU Way, Oak Ridge, TN 37830". After "3146" add "; <https://www.ornl.gov/health-physics-museum/files/library/nbs/nbs-69.pdf>".

In line 2380, the link to oico.com forwards to <https://www.ysi.com/oi-analytical>.

In line 2460, the link to <https://awwa.org/store> goes to <https://engage.awwa.org/PersonifyEbusiness/>.

Lines 3815-3817: This information probably needs to be updated.

Line 4817: The link to ntrl.ntis.gov forwards to <https://ntrl.ntis.gov/NTRL/>.

26. In line 4872, strike the URL and add "https://www.nemi.gov/methods/method_summary/8907/".
27. In lines 4914-4915, 4932-4933, and 4968-4969, delete the space in the URL.
28. In line 5441, strike "USC" and add "U.S.C.".
29. In line 5515, strike "USC" and add "U.S.C.".
30. In lines 5551 and 5554, strike "USC" and add "U.S.C.".
31. In line 5584, strike "USC" and add "U.S.C.".
32. In line 5612, strike "USC" and add "U.S.C.".

33. In line 5665, strike "ℓ" and add "L".
34. In line 5701, change "like" to "such as".
35. In line 5710, change "having" to "that".
36. In line 5733, delete the comma.
37. In line 5734, change ", actively cooling" to "that actively cools".
38. In lines 5739-5740, change ", including" to "include".
39. In line 5757, after "as" add "defined in".
40. In line 5758, delete "defines".
41. In line 5764, change "meeting" to ", that meets".
42. In line 5770, change "having" to "has".
43. In line 5785, change the semicolon to a comma.
44. In line 5800, after "as" add "defined in".
45. In line 5801, delete "defines".
46. In line 5809, after the closing quotation mark add "or 'PWS'". Change "as" to "defined in". Delete "defines".
47. In line 5827, after the closing quotation mark add a comma. After "Section" add a comma.
48. In lines 5827-5828, delete "an article meeting two conditions".
49. In lines 5830 and 5832, change "if" to ", for".
50. In line 5854, delete "the manufacturer applies" and after "coating" add "is applied".
51. In lines 5862-5863, delete ", etc.".
52. In line 5880, after "pipe" change the comma to "or any".
53. In lines 5880-5881, delete ", solder, or flux". [Not in corresponding federal wording]
54. In line 5894, change "USC" to "U.S.C.".
55. In line 5918, change ", like" to "such as".
56. In line 5920, change "anyone" to "that someone".
57. In line 5933, delete "for" twice. Change "(these" to ", These".

58. In line 5935, change "gasses" to "gases". Delete the closing parenthesis.
59. In lines 5943-5944, change "steam capable" to "steam-capable".
60. In line 5954, change "using" to "it is illegal to use".
61. In line 5955, delete "is illegal".
62. In line 5966, change "introducing" to "the introduction of".
63. In line 5967, change "documents" to "documentation".
64. Change line 5971 to "The".
65. In line 5972, after "fixtures" add "do not need to be certified".
66. Change line 5975 to "Direct".
67. In line 5977, after "products" add "do not need to be certified".
68. Change line 5981 to "Dishwashers do not need to be certified.".
69. In line 5984, change "third party" to "third-party". After "as" add "provided in".
70. In line 5985, delete "provides otherwise".
71. In line 5989, after "as" add "required by".
72. In line 5990, delete "requires".
73. In lines 5992-5993, delete "may be self-certified by manufacturers or importers".
74. In line 6003, delete "manufacturer must calculate its".
75. In line 6004, after "employees" add "must be calculated". Change "it" to "the manufacturer".
76. In line 6005, change "fulltime" to "full-time".
77. In line 6012, change "of" to "after".
78. In line 6021, after "that" add "its".
79. In line 6023, change "fulfill certain conditions" to "be".
80. In line 6025, change "A" to "Signed by a".
81. In line 6027, delete "must sign the certificate".
82. In line 6029, change "The manufacturer or importer must post the certificate" to "Posted".

83. In line 6031, delete "distributing". After "certificate" add "is being distributed".
 84. In lines 6035-6036, delete "specific information".
 85. In lines 6048-6049, delete "the certificate must also include".
 86. In line 6051, change "any applicable" to ", when applicable,".
 87. In lines 6056 and 6062, change "USC" to "U.S.C.".
 88. In lines 6071 and 6072, change "documents" to "documentation".
 89. In line 6075, change "documents giving" to "documentation of".
 90. In line 6076, change "documents" to "documentation".
 91. In line 6078, change "these documents" to "documentation".
 92. In line 6080, delete "provides". Change "documents" to "documentation".
 93. In line 6090, after "with the" add "federal Safe Drinking Water".
- Line 6091: An enforcement action by whom? State and/or federal?
94. In line 6096, change "like" to "such as".
 95. In line 6098, change "USC" to "U.S.C.".
 96. In line 6446, strike "USC" and add "U.S.C.".
 97. In line 6479, strike "USC" and add "U.S.C.".
 98. In line 6488, after "nepis.epa.gov" add a semicolon.
 99. In line 6527, strike "USC" and add "U.S.C.".
 100. In line 6608, change "USC" to "U.S.C.".
 101. In line 6630, change "other" to "alternative".
 102. In line 6691, strike "USC" and add "U.S.C.".
 103. In lines 6736 and 6740, strike "followup" and add "follow-up".
 104. In line 7382, strike "ℓ" and add "ℒ".
 105. In lines 7565, 7569, and 7572, strike "ℓ" and add "ℒ".
 106. In lines 7667 and 7672, strike "ℓ" and add "ℒ".

107. In lines 7705 and 7709, strike "ℓ" and add "ℒ".
108. In lines 7762 and 7767, strike "ℓ" and add "ℒ".
109. In the table after line 7967 and in line 7978, strike "ℓ" and add "ℒ".
110. In lines 7985 and 7990, strike "ℓ" and add "ℒ".
111. Throughout the table after line 8025, strike "ℓ" and add "ℒ".
112. In the table after line 8038, in the entries for mercury, , strike "ℓ" and add "ℒ" three times.
113. In the table after line 8045, change "to" to "through" 10 times.
114. In line 8047, strike "USC" and add "U.S.C.".
115. In the table after line 8079, strike "ℓ" and add "ℒ".
116. In the table after line 8100, strike "ℓ" and add "ℒ".
117. In the table after line 8110, strike "ℓ" and add "ℒ".
118. In the table after line 8116, strike "ℓ" and add "ℒ".
119. In line 8139, strike "USC" and add "U.S.C.".
120. In the table after line 8150, strike "ℓ" and add "ℒ".
121. In the table after line 8170, strike "ℓ" and add "ℒ".
122. In the table after line 8194, strike "ℓ" and add "ℒ".
123. In lines 8304 and 8311, strike "ℓ" and add "ℒ".
124. In line 8338, strike "ℓ" and add "ℒ".
125. In line 8429, change "Complying" to "Compliance".
126. In line 8432, restore "community water".
127. In lines 8433-8434, restore the stricken text.
128. In lines 8436-8437, change "beginning no later than" to "by".
129. In lines 8440 and 8441, delete the comma.
130. In line 8454, change "needs no longer" to "no longer needs to".
131. In lines 8463-8464, change the semicolons to commas.

132. In line 8491, strike "ℓ" and add "L" twice.
133. In line 8510, after the second "school" add "classified by". Delete "classifies".
134. In line 8511, change "to" to "through".
135. In line 8525, change "ℓ" to "L".
136. In line 8542, change "out-of-service" to "out of service".
137. Change line 8564 to "A lead service line may be owned by the water system, the property owner, or both. A".
138. In line 8565, after "if" add "it was".
139. In line 8567, change "that" to ", and it".
140. In line 8568, after "that is" add "considered".
141. In line 8570, after "not" add "considered".
142. In line 8572, change "not" to "has not been".
143. In line 8574, after "composition" add "of a service line (e.g., copper or plastic)".
144. In lines 8574-8575, delete "(for example, copper or plastic) of a service line".
145. In line 8575, change "records demonstrating" to "if records demonstrate that".
146. In line 8576, change "Federal" to lower case.
147. In line 8582, change "ℓ" to "L".
148. In line 8639, change "requiring replacement service line" to "service line requiring replacement". After "leaving" add "in service".
149. In line 8640, delete "requiring replacement".
150. In line 8647, change "gravity fed" to "gravity-fed".
151. In line 8648, after "or" add "an".
152. In line 8649, after "with" add "the version of". Delete "as".
153. In line 8673, change "primarily educating" to "that primarily provides teaching and learning for".
154. In line 8721, change "term when" to "period of time during which".
155. In line 8723, change "determines" to "determine".

156. In line 8769, after "concentration" add "determined in". Delete "determines". Change "ℓ" to "L".

Line 8772: Why not give this value in µg/L too for consistency's sake?

157. In lines 8772 and 8775, strike "ℓ" and add "L".

158. In line 9012, strike the period.

159. In line 9023, change "limit" to "level". Change "ℓ" to "L".

160. In line 9030, change "limit" to "level".

161. In line 9034, delete the period.

162. In line 9057, delete the comma.

163. In line 9097, change "Not exceeding" to "A small or mid-sized supplier not applying corrosion control treatment is deemed to have OCCT if it does not exceed".

164. In line 9098, change "remaining" to "remains".

165. In lines 9100-9101, delete "deems a small or mid-sized supplier not applying corrosion control treatment to have OCCT".

166. In line 9109, change "Not exceeding" to "A small or mid-sized supplier applying corrosion control treatment is deemed to have OCCT if it does not exceed".

167. In line 9111, change "remaining" to "remains".

168. In lines 9112-9114, delete "deems a small or mid-sized supplier applying corrosion control treatment to have OCCT".

169. In line 9114, change "Complying with this Section deems" to "If".

170. In line 9115, change "exceeding" to "exceeds".

171. In line 9116, change "not exceeding" to "does not exceed".

172. In line 9117, change "remaining" to "remains".

173. In line 9119, after "611.356" add ", that supplier is deemed".

174. In line 9163, change "ℓ" to "L".

175. In line 9223, after "applicable" add "option".

176. In line 9296, delete the comma.

177. In line 9309, after "timeframes" add "in".
178. In line 9310, delete "specify".
179. In line 9382, restore "described in".
180. In line 9383, delete "the steps describe".
181. In line 9414, after "Step 2" add a period.
182. In line 9421, after "within the" add "applicable timeframe in". Strike "appropriate of the" and "timeframes".
183. In line 9422, delete "establish".
184. In line 9449, delete "of this section".
185. In line 9552, after "recommend" add "that".
186. In line 9561, change "needs not" to "does not need to".
187. In line 9562, delete the comma.
188. In line 9581, change "ℓ" to "ℒ".
189. In lines 9629 and 9634, change "ℓ" to "ℒ".
190. In lines 9729 and 9735, change "ℓ" to "ℒ".
191. In lines 9884 and 9885, change "ℓ" to "ℒ".
192. In line 11329, strike "ℓ" and add "ℒ".
193. In line 11332, change "ℓ" to "ℒ".
194. In lines 11348 and 11359, change "ℓ" to "ℒ".
195. In line 11449, change "ℓ" to "ℒ".
196. In line 11473, change "ℓ" to "ℒ".
197. In lines 11514 and 11529, change "ℓ" to "ℒ".
198. In lines 12445 and 12447, strike "ℓ" and add "ℒ".
199. In line 12665, strike "USC" and add "U.S.C.".
200. In lines 12690 and 12694, strike "ℓ" and add "ℒ".
201. In line 12764, strike "ℓ" and add "ℒ".

202. In line 12769, strike "ℓ" and add "ℒ".
203. In line 13195, change "ℓ" to "ℒ".
204. In line 13200, strike "ℓ" and add "ℒ".
205. In lines 13297 and 13298, strike "ℓ" and add "ℒ".
206. In lines 13507 (twice), 13511 (twice), and 13514, strike "ℓ" and add "ℒ".
207. In lines 13540 (twice), 13544, 13545, 13546, and 13547, strike "ℓ" and add "ℒ".
208. In line 14367, change "USC" to "U.S.C.".
209. In lines 14807, 14809, 14811, 14813, 14815, 14817, 14819, 14821, 14823, 14825, and 14828, strike "ℓ" and add "ℒ".
210. In line 15010, strike "ℓ" and add "ℒ".
211. In line 15036, strike "ℓ" and add "ℒ".
212. In lines 15506 and 15508, strike "ℓ" and add "ℒ".
213. In lines 15571 and 15574, strike "ℓ" and add "ℒ".
214. In the first row of the table after line 15706, strike "ℓ" and add "ℒ" twice.
215. In the third-to-last and second-to-last rows of the table after line 15706, strike "ℓ" and add "ℒ".
216. In line 15778, strike "ℓ" and add "ℒ".
217. In line 16395, 16397, 16401, 16403, 16405, 16407, 16409, 16411, and 16413, strike "ℓ" and add "ℒ".
218. In lines 16415, 16417, 16419, 16421, and 16423, strike "ℓ" and add "ℒ".
219. In line 17279, strike "ℓ" and add "ℒ" (twice).
220. In the first line of the table after line 17567, strike "ℓ" and add "ℒ".
221. In the first line of the table after line 17570, strike "ℓ" and add "ℒ".
222. In the last four rows of the table after line 17755, strike "ℓ" and add "ℒ".
223. In the 2nd through 7th rows of the table after line 17763, strike "ℓ" and add "ℒ".
224. In lines 17970 and 17973, strike "ℓ" and add "ℒ".

225. In line 18012, strike "ℓ" and add "L".
226. In lines 18063 and 18089, strike "ℓ" and add "L".
227. In line 18094, change "sum" to "add". (?)
228. In line 18333, strike "ℓ" and add "L" (twice).
229. In lines 18702 and 18722, strike "mℓ" and add "mL".
230. In line 18890, change "as" to "when".
231. In line 18892, change "sooner of specified" to "earlier of the" and restore "following". Strike "times" and add "intervals".
232. In lines 18895 and 18898, delete "Within" and restore "The"
233. In line 18911, after "Agency" add "that it is". After "with" add "the".
234. In line 18912, after "notification" add "requirements of".
235. In line 18923, after "practicable" add a comma.
236. In line 19256, delete "clearly" and restore "include a clear". Delete "understandably".
237. In line 19257, delete "explain" and restore "understandable explanation of".
238. In line 19260, delete "Failure in monitoring or" and restore "Monitoring and".
239. In lines 19562 and 19563, strike "ℓ" and add "L".
240. In line 19626, strike "ℓ" and add "L".
241. In line 19688, strike "ℓ" and add "L".
242. In line 19845, strike "ℓ" and add "L" twice.
243. In line 19865, strike "ℓ" and add "L" twice.
244. In line 19900, delete "deciding" and restore "it decides".
245. In lines 19998 and 20001, strike "mℓ" and add "mL".
246. In line 20099, strike "ℓ" and add "L".
247. In line 20188, after the semicolon add "or".
248. In lines 20188-20189, strike "epacdx@csc.com" ("Technical Support" in the subject line); or fax 301-429-3905" and add "helpdesk@epacdx.net".

249. In lines 20263-20264, strike "epacdx@csc.com" ("Technical Support" in the subject line); or fax 301-429-3905" and add "helpdesk@epacdx.net".
250. In line 20287, strike "ℓ" and add "ℒ".
251. In line 20306, strike "ℓ" and add "ℒ" (twice).
252. In line 20332, strike "mℓ" and add "mℒ".
253. In line 20520, strike "mℓ" and add "mℒ".
254. In line 20524, restore "density".
255. In line 20850, change "ℓ" to "ℒ".
256. In lines 20913, 20914, 20936, and 20939, change "ℓ" to "ℒ".
257. In line 21694, change "ℓ" to "ℒ".
258. In lines 22679 and 22681, change "ℓ" to "ℒ".
259. In line 22863, change "USC" to "U.S.C.".
260. In lines 22887 and 22891, change "ℓ" to "ℒ".
261. In lines 22950 and 22955, change "ℓ" to "ℒ".
262. In line 23219, change "ℓ" to "ℒ".
263. In lines 23295 and 23296, change "ℓ" to "ℒ".
264. In line 23392, change "ℓ" to "ℒ" twice.
265. In line 23410, change "ℓ" to "ℒ" twice.
266. In line 23441, change "ℓ" to "ℒ" twice.
267. In line 23445, change "ℓ" to "ℒ" twice.
268. In line 23448, change "ℓ" to "ℒ".
269. In lines 23471, 23475, and 23477, change "ℓ" to "ℒ" twice.
270. In line 23675, change "ℓ" to "ℒ".
271. In line 23779, change "G" to "AG".
272. In line 23801, change "ℓ" to "ℒ" twice.
273. In the first row of the table after line 23934, strike "ℓ" and add "ℒ" (twice).

- 274. In the table after line 23934, in the third column of the rows labeled "77" through "79", , strike "ℓ" and add "L".
- 275. In lines 23999 and 24001, strike "ℓ" and add "L".
- 276. In line 24015, strike "ℓ" and add "L" twice.
- 277. In lines 24091 and 24095, change "ℓ" to "L".
- 278. In lines 24290 and 24291, change "ℓ" to "L".

Thanks for your consideration.

Sincerely,

Jonathan

Jonathan C. Eastvold, Ph.D.
Rules Analyst III

Illinois General Assembly
Joint Committee on Administrative Rules
700 Stratton Building
Springfield IL 62706
217-524-9010

From: McGill, Richard <Richard.McGill@illinois.gov>
Sent: Friday, July 28, 2023 13:14
To: Eastvold, Jonathan C. <JonathanE@ilga.gov>
Subject: RE: 35 IAC 611 (R21-10)

Good afternoon, Jonathan:

I'm not sure whether your working document is Word or PDF, but as I would be having it docketed as a public comment in COOL, it would be a PDF in COOL. Would its comment bubbles still function there? If so, that format is fine with me. Otherwise, I'd need the usual Exhibit K-style list.

I'm happy to give the r01 with comment bubbles a try.

Thanks

Richard R. McGill, Jr.
Senior Attorney for Research & Writing

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Chicago, Illinois 60605
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From: Eastvold, Jonathan C. <JonathanE@ilga.gov>
Sent: Friday, July 28, 2023 11:16 AM
To: McGill, Richard <Richard.McGill@illinois.gov>
Subject: [External] 35 IAC 611 (R21-10)

I went through this rulemaking and noted a number of potential changes. Would it be easier for you if I prepared the usual Exhibit K-style list of requested changes or, given the size, if I just sent you my working document (an r01 version of the rulemaking with my comments in comment bubbles)?

Either will work for me.

Thanks,

Jonathan

Jonathan C. Eastvold, Ph.D.
Rules Analyst III

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To: Jonathan Eastvold (JCAR)
From: Richard McGill (IPCB)
Re: Exempt rulemaking, 35 IAC 611, consolidated R21-10 & R22-2 (IIS)
Date: Sept. 13, 2023

For convenience, your suggested changes and questions of July 31, 2023, are repeated below. Board staff responses appear in **bold, blue font**.

Thank you.

1. In line 441, change "21-9" to "21-10".
Agree. Also change "R22-10" to "R22-2".
2. In line 453, strike "USC" and add "U.S.C.".
Agree.
3. In line 489, change the semicolons to commas.
Agree.
4. In line 516, strike "USC" and add "U.S.C.".
Agree.
5. In line 574, strike "USC" and add "U.S.C.".
Agree.
6. In line 677, strike "ℓ" and add "L".
Agree but subject to the following understanding.

Part 611 uses "ℓ" over 400 times; many of those uses appear in provisions that are not open in this rulemaking. Simply switching some but not all instances of "ℓ" to "L" would introduce an ambiguity into Part 611. Our proposed solution is to change line 923 (the definition of "ℓ") to read: "ℓ" or "L" means "liter". Like changes would be made to line 1038 ("mg/ℓ" or "mg/L" means) and line 1040 ("μg/ℓ" or "μg/L" means). Once the final instances of "ℓ" in Part 611 are proposed to be replaced by "L", the Board would propose amending these definitions to remove "ℓ" or.

7. In line 827, strike "ℓ" and add "L" twice.
Agree, subject to the understanding described in No. 6.
8. In line 866, strike "ℓ" and add "L".
Agree, subject to the understanding described in No. 6.
9. In line 923, strike "ℓ" and add "L".
Disagree. See No. 6. After "ℓ" add or "L". Strike quotation marks around "liter".
10. In line 1038, strike "ℓ" and add "L".

Disagree. See No. 6. After “mg/ℓ” add or “mg/L”.

11. In line 1040, change "ℓ" to "L".

Disagree. See No. 6. After “μg/ℓ” add or “μg/L”.

12. In line 1209, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

13. In line 1215, strike "USC" and add "U.S.C.".

Agree.

14. In line 1264, strike "USC" and add "U.S.C.".

Agree.

15. In line 1326, strike "USC" and add "U.S.C.".

Agree.

16. In lines 1376 and 1377, change the semicolons to commas.

Agree.

17. In line 1387, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

18. In line 1408, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

19. In line 1414, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

20. In line 1424, strike "USC" and add "U.S.C.".

Agree.

21. In line 1504, strike "USC" and add "U.S.C.".

Agree.

22. In line 1536, strike the URL and add "<https://www.astm.org/products-services/standards-and-publications.html>".

Agree.

In line 2102, the URL goes to the main HSDL page, not a specific document.

In lines 2102 and 2103, strike the URL and add “<https://www.hSDL.org/c/view?docid=487142>”.

23. In line 2139, strike "on-line" and add "online".

Agree.

In line 2140, I can't find the download at that location.

In line 2135, after “3600” add “; <https://journals.asm.org/doi/epdf/10.1128/aem.62.10.3881-3884.1996>”.

In line 2139, after “Inc.” strike “(accessible on-line and available by download from www.asm.org, as “Enterolert™ Procedure”)” and add “, [One IDEXX Drive, Westbrook, Maine 04092 \(800-548-6733\); https://www.idexx.com/en/water/water-products-services/enterolert/](https://www.idexx.com/en/water/water-products-services/enterolert/)”.

24. In lines 2345-2348, strike “from International Atomic Energy Agency (IAEA), Vienna International Centre, PO Box 100, 1400 Vienna, Austria, ((+43-1) 2600-0; www.iaea.org/Public/048/37048205.pdf) or”.

Disagree. In line 2345, after “from” strike “International Atomic Energy Agency (IAEA), Vienna International Centre, PO Box 100, 1400 Vienna, Austria, ((+43-1) 2600-0; www.iaea.org/Public/048/37048205.pdf)” and add “[U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738; https://www.nrc.gov/docs/ML2020/ML20206L091.pdf](https://www.nrc.gov/docs/ML2020/ML20206L091.pdf)”.

25. In line 2349, strike “MC100-44, PO Box 117, Oak Ridge, TN 37831-0117” and add “[100 ORAU Way, Oak Ridge, TN 37830](https://www.ornl.gov)”. **Agree.** After “3146” add “; <https://www.ornl.gov/health-physics-museum/files/library/nbs/nbs-69.pdf>”. **Agree to addition but after “3146”.**

In line 2380, the link to oico.com forwards to <https://www.ysi.com/oi-analytical>.

In lines 2378-2380, strike “ALPKEM, Division of OI Analytical, P.O. Box 9010, College Station, TX 77842-9010, telephone: 979-690-1711, Internet: www.oico.com;”.

In line 2457, after “800-” strike “321-0207” and add “[548-6733](tel:548-6733)”.

In line 2460, the link to <https://awwa.org/store> goes to <https://engage.awwa.org/PersonifyEbusiness/>.

In line 2460, after the second quotation mark add a period.

In line 2462, strike “, www.awwa.org/store”.

In line 2464, after “7711” add “, <https://www.awwa.org/Publications/Standard-Methods>”

Lines 3815-3817: This information probably needs to be updated.

In lines 3815-3817, strike “Pathogen Detection Systems, Inc., 382 King Street, Kingston, Ontario, Canada K7K 2Y2 (844-215-7122 or www.tecta-pds.ca)” and add “[IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092 \(800-548-6733\); https://www.idexx.com/en/water/other-products-services/tecta-water-microbiology-system/](https://www.idexx.com/en/water/other-products-services/tecta-water-microbiology-system/)”

Line 4817: The link to ntrl.ntis.gov forwards to <https://ntrl.ntis.gov/NTRL/>.

In line 4817, strike “ntrl.ntis.gov” and add “<https://ntrl.ntis.gov/NTRL/>”.

26. In line 4872, strike the URL and add "https://www.nemi.gov/methods/method_summary/8907/".
Disagree. The current link is good. It goes to “Phosphorus, orthophosphate, colorimetry, phosphomolybdate, automated segment-flow, I-2601-90”, in “Methods for Analysis by the U.S. Geological Survey National Water Quality Laboratory – Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments”, U.S. Geological Survey, Open File Report 93-125 (1993).

In line 4872, after “pubs.usgs.gov/publication/ofr93125” add “[and https://www.nemi.gov/methods/method_summary/8907/](https://www.nemi.gov/methods/method_summary/8907/)”.

27. In lines 4914-4915, 4932-4933, and 4968-4969, delete the space in the URL.
Agree.

28. In line 5441, strike "USC" and add "U.S.C.".
Agree.

29. In line 5515, strike "USC" and add "U.S.C.".
Agree.

30. In lines 5551 and 5554, strike "USC" and add "U.S.C.".
Agree.

31. In line 5584, strike "USC" and add "U.S.C.".
Agree.

32. In line 5612, strike "USC" and add "U.S.C.".
Agree.

33. In line 5665, strike "ℓ" and add "L".
Agree, subject to the understanding described in No. 6.
In line 5679, change “like” to “such as”.

34. In line 5701, change "like" to "such as".
Agree.

35. In line 5710, change "having" to "that".
Agree.
In line 5716, change “like” to “such as”.

36. In line 5733, delete the comma.
Disagree. Change the comma to “that is”.

37. In line 5734, change ", actively cooling" to "that actively cools".
Disagree. Delete the comma and change “cooling” to “cools”.

38. In lines 5739-5740, change ", including" to "include".
Agree.
In lines 5745 and 5751, change "like" to "such as".
In line 5755, delete the third "any".
In line 5756, delete "or any" and after "solder" add a comma.
39. In line 5757, after "as" add "defined in".
Agree. Also, after "611.102", delete the comma.
40. In line 5758, delete "defines".
Agree.
41. In line 5764, change "meeting" to ", that meets".
Disagree. Change "like" to "such as".
In lines 5764-5765, change "meeting certain conditions" to ", that is".
In line 5767, change "The lining is sealed" to "Sealed".
In line 5770, change "The lining is of" to "Of".
42. In line 5770, change "having" to "has".
Agree.
43. In line 5785, change the semicolon to a comma.
Agree.
In lines 5792 and 5797, change "like" to "such as".
44. In line 5800, after "as" add "defined in".
Agree.
45. In line 5801, delete "defines".
Agree.
In line 5804, change "like" to "such as".
46. In line 5809, after the closing quotation mark add "or 'PWS'". **Agree.** Change "as" to "defined in". **Agree. Change "611.102" to "611.101".** Delete "defines". **Agree.**
In line 5811, change "like" to "such as".
47. In line 5827, after the closing quotation mark add a comma. **Agree.** After "Section" add a comma. **Agree.**
48. In lines 5827-5828, delete "an article meeting two conditions".
Agree.
49. In lines 5830 and 5832, change "if" to ", for".
Agree.
50. In line 5854, delete "the manufacturer applies" and after "coating" add "is applied".

Agree.

In line 5858, delete "the manufacturer installs" and after "liner" add "is manufactured".

51. In lines 5862-5863, delete ", etc.".

Agree.

52. In line 5880, after "pipe" change the comma to "or any".

Disagree.

53. In lines 5880-5881, delete ", solder, or flux". [Not in corresponding federal wording]

Disagree. 40 CFR 143.13(a) reads "No person may use any pipe, any pipe or plumbing fitting or fixture, any solder or any flux that is not lead free"

54. In line 5894, change "USC" to "U.S.C.".

Agree.

55. In line 5918, change ", like" to "such as".

Agree.

56. In line 5920, change "anyone" to "that someone".

Agree.

In line 5922, delete "certain items".

57. In line 5933, delete "for" twice. Agree. Change "(these" to ". These". Agree.

58. In line 5935, change "gasses" to "gases". Agree. Delete the closing parenthesis. Agree.

59. In lines 5943-5944, change "steam capable" to "steam-capable".

Agree.

60. In line 5954, change "using" to "it is illegal to use".

Agree.

61. In line 5955, delete "is illegal".

Agree.

In line 5965, change "before the later of" to "by".

In line 5966, after "2023" add a comma. After "or" add "before".

62. In line 5966, change "introducing" to "the introduction of".

Disagree. The gerund is correct and more concise. See No. 61.

63. In line 5967, change "documents" to "documentation".

Agree.

In lines 5967-5968, change "to substantiate" to "substantiating".

64. Change line 5971 to "The".

Disagree. Delete “The manufacturer or importer needs not individually certify product” and add “Product”.

65. In line 5972, after “fixtures” add “do not need to be certified”.

Disagree. After “fixtures” add “do not need to be individually certified”.

66. Change line 5975 to “Direct”.

Disagree. Delete “The manufacturer or importer needs not individually certify direct” and add “Direct”.

67. In line 5977, after “products” add “do not need to be certified”.

Disagree. After “products” add “do not need to be individually certified”.

68. Change line 5981 to “Dishwashers do not need to be certified.”.

Agree.

69. In line 5984, change “third party” to “third-party”. After “as” add “provided in”.

Agree.

70. In line 5985, delete “provides otherwise”.

Agree.

In line 5989, change “to the Agency or USEPA upon request” to “upon request to the Agency or USEPA”.

71. In line 5989, after “as” add “required by”.

Disagree. After “as” add “specified in”.

72. In line 5990, delete “requires”.

Agree.

73. In lines 5992-5993, delete “may be self-certified by manufacturers or importers”.

Agree.

74. In line 6003, delete “manufacturer must calculate its”.

Agree.

75. In line 6004, after “employees” add “must be calculated”. **Agree.** Change “it” to “the manufacturer”. **Agree.**

76. In line 6005, change “fulltime” to “full-time”.

Agree.

77. In line 6012, change “of” to “after”.

Agree.

78. In line 6021, after “that” add “its”.

Agree.

79. In line 6023, change "fulfill certain conditions" to "be".

Agree.

80. In line 6025, change "A" to "Signed by a".

Agree.

81. In line 6027, delete "must sign the certificate".

Agree.

82. In line 6029, change "The manufacturer or importer must post the certificate" to "Posted".

Agree.

83. In line 6031, delete "distributing". **Agree.** After "certificate" add "is being distributed".

Agree.

84. In lines 6035-6036, delete "specific information".

Agree.

85. In lines 6048-6049, delete "the certificate must also include".

Agree.

86. In line 6051, change "any applicable" to ", when applicable,".

Agree.

In line 6052, change "like" to "such as".

87. In lines 6056 and 6062, change "USC" to "U.S.C.".

Agree.

In line 6069, after "maintain" add a comma.

In line 6070, after "States" add a comma.

88. In lines 6071 and 6072, change "documents" to "documentation".

Disagree to change in line 6071. Change "documents sufficient" to "sufficient documentation".

Agree to change in line 6072.

89. In line 6075, change "documents giving" to "documentation of".

Agree.

90. In line 6076, change "documents" to "documentation".

Agree.

91. In line 6078, change "these documents" to "documentation".

Disagree. Change "these documents" to "this documentation".

In line 6079, change "Administrator" to "Agency or USEPA". After "(k)(2)" add a period.

92. In line 6080, delete "provides". Change "documents" to "documentation".
Disagree. Change lines 6080-6081 to "The manufacturer or importer must also maintain this documentation and certificates of conformity for at least five years after it last sold the product".

93. In line 6090, after "with the" add "federal Safe Drinking Water".
Disagree. Here, "the Act" refers to the Illinois Environmental Protection Act, not SDWA.

Line 6091: An enforcement action by whom? State and/or federal?

Under the Act, enforcement actions may brought in a number of ways, including by “[a]ny person” before the Board (415 ILCS 5/31(d)(1)), as well as by the Office of the Illinois Attorney General or the State’s Attorney of the county in which the alleged violation occurred before the Board (415 ILCS 5/31(c)(1)) or in court (415 ILCS 5/42(e), 44(m)).

94. In line 6096, change "like" to "such as".
Agree.

95. In line 6098, change "USC" to "U.S.C.".
Agree.

96. In line 6446, strike "USC" and add "U.S.C.".
Agree.

97. In line 6479, strike "USC" and add "U.S.C.".
Agree.

98. In line 6488, after "nepis.epa.gov" add a semicolon.
Agree.

99. In line 6527, strike "USC" and add "U.S.C.".
Agree.

100. In line 6608, change "USC" to "U.S.C.".
Agree.

101. In line 6630, change "other" to "alternative".
Disagree. It’s an additional method, not an alternative to (g)(1)(A) notice.

102. In line 6691, strike "USC" and add "U.S.C.".
Agree.

103. In lines 6736 and 6740, strike “followup” and add “follow-up”.
Agree.

104. In line 7382, strike “ℓ” and add “L”.

Agree, subject to the understanding described in No. 6.

105. In lines 7565, 7569, and 7572, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

106. In lines 7667 and 7672, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

107. In lines 7705 and 7709, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

108. In lines 7762 and 7767, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.
In line 7853, delete “like the” and restore “such as”.

109. In the table after line 7967 and in line 7978, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

110. In lines 7985 and 7990, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

111. Throughout the table after line 8025, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

112. In the table after line 8038, in the entries for mercury, , strike “ℓ” and add “L” three times.
Agree, subject to the understanding described in No. 6.

113. In the table after line 8045, change “to” to “through” 10 times.
Disagree. No ambiguity here, especially with note 3. A system serves 501 “to” 3,300 persons or 3,301 to 10,000 persons. Also, sounds odd to say a system serves 501 “through” 3,300 persons, for example.

114. In line 8047, strike “USC” and add “U.S.C.”.
Agree.

115. In the table after line 8079, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

116. In the table after line 8100, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

117. In the table after line 8110, strike “ℓ” and add “L”.
Agree, subject to the understanding described in No. 6.

118. In the table after line 8116, strike “ℓ” and add “L”.

Agree, subject to the understanding described in No. 6.

119. In line 8139, strike "USC" and add "U.S.C.".

Agree.

120. In the table after line 8150, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

121. In the table after line 8170, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

122. In the table after line 8194, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

123. In lines 8304 and 8311, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

124. In line 8338, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

125. In line 8429, change "Complying" to "Compliance".

Agree.

126. In line 8432, restore "community water".

Agree.

127. In lines 8433-8434, restore the stricken text.

Agree.

128. In lines 8436-8437, change "beginning no later than" to "by".

Agree.

129. In lines 8440 and 8441, delete the comma.

Disagree. Most authorities, including *The Chicago Manual of Style* and Garner's *The Redbook*, call for a comma after the year in these instances.

130. In line 8454, change "needs no longer" to "no longer needs to".

Agree.

131. In lines 8463-8464, change the semicolons to commas.

Disagree. The semi-colons lend clarity as the list of five items includes an item with commas. In addition, the semi-colons more clearly demarcate the five listed items corresponding to the five rule sections cited.

132. In line 8491, strike "ℓ" and add "L" twice.

Agree, subject to the understanding described in No. 6.

133. In line 8510, after the second "school" add "classified by". **Agree.** Delete "classifies".
Agree.
134. In line 8511, change "to" to "through".
Agree.
135. In line 8525, change "l" to "L".
Agree, subject to the understanding described in No. 6.
In line 8537, change "like" to "such as".
136. In line 8542, change "out-of-service" to "out of service".
Agree.
137. Change line 8564 to "A lead service line may be owned by the water system, the property owner, or both. A".
Agree.
138. In line 8565, after "if" add "it was".
Disagree. Change "ever" to "it was or is".
139. In line 8567, change "that" to ", and it".
Agree.
140. In line 8568, after "that is" add "considered".
Agree.
141. In line 8570, after "not" add "considered".
Agree.
142. In line 8572, change "not" to "has not been".
Agree.
143. In line 8574, after "composition" add "of a service line (e.g., copper or plastic)".
Agree.
144. In lines 8574-8575, delete "(for example, copper or plastic) of a service line".
Agree.
145. In line 8575, change "records demonstrating" to "if records demonstrate that".
Agree.
146. In line 8576, change "Federal" to lower case.
Agree.
147. In line 8582, change "l" to "L".
Agree, subject to the understanding described in No. 6.

148. In line 8639, change "requiring replacement service line" to "service line requiring replacement". After "leaving" add "in service".

Disagree. See 611.350(b)'s defined term "galvanized requiring replacement" and its accompanying Board Note.

149. In line 8640, delete "requiring replacement".

Disagree. See No. 148.

150. In line 8647, change "gravity fed" to "gravity-fed".

Agree.

151. In line 8648, after "or" add "an".

Agree.

152. In line 8649, after "with" add "the version of". **Agree.** Delete "as". **Agree (the second one).**

153. In line 8673, change "primarily educating" to "that primarily provides teaching and learning for".

Agree.

154. In line 8721, change "term when" to "period of time during which".

Agree.

155. In line 8723, change "determines" to "determine".

Agree.

156. In line 8769, after "concentration" add "determined in". **Disagree. After "concentration" add "determined under".** Delete "determines". **Agree.** Change "ℓ" to "L". **Agree, subject to the understanding described in No. 6.**

Line 8772: Why not give this value in µg/L too for consistency's sake?

The definition of "action level" (611.350(b)) states that "[t]he action level for lead is 0.015 mg/ℓ".

157. In lines 8772 and 8775, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

158. In line 9012, strike the period.

Agree.

159. In line 9023, change "limit" to "level". **Disagree. Section 611.350(b) defines "practical quantitation limit".** Change "ℓ" to "L". **Agree, subject to the understanding described in No. 6.**

160. In line 9030, change "limit" to "level".
Disagree. Section 611.350(b) defines "practical quantitation limit".
161. In line 9034, delete the period.
Agree.
162. In line 9057, delete the comma.
Agree.
In line 9058, delete the comma.
163. In line 9097, change "Not exceeding" to "A small or mid-sized supplier not applying corrosion control treatment is deemed to have OCCT if it does not exceed".
Agree.
164. In line 9098, change "remaining" to "remains".
Agree.
165. In lines 9100-9101, delete "deems a small or mid-sized supplier not applying corrosion control treatment to have OCCT".
Agree.
166. In line 9109, change "Not exceeding" to "A small or mid-sized supplier applying corrosion control treatment is deemed to have OCCT if it does not exceed".
Agree.
167. In line 9111, change "remaining" to "remains".
Agree.
168. In lines 9112-9114, delete "deems a small or mid-sized supplier applying corrosion control treatment to have OCCT".
Agree.
169. In line 9114, change "Complying with this Section deems" to "If".
Agree.
170. In line 9115, change "exceeding" to "exceeds".
Agree.
171. In line 9116, change "not exceeding" to "does not exceed".
Agree.
172. In line 9117, change "remaining" to "remains".
Agree.
173. In line 9119, after "611.356" add ", that supplier is deemed".
Agree.

After “OCCT” add “by complying with this Section”. “Complying with this Section” is a condition of being deemed to have re-optimized OCCT. Without it, a supplier would be deemed to have re-optimized OCCT merely by fitting the description of the supplier.

174. In line 9163, change "l" to "L".

Agree, subject to the understanding described in No. 6.

175. In line 9223, after "applicable" add "option".

Disagree. The change would misleadingly suggest that Step 3 or Step 5 is optional. In line 9226, change “611.353” to “611.363”.

176. In line 9296, delete the comma.

Agree.

177. In line 9309, after "timeframes" add "in".

Agree.

178. In line 9310, delete "specify".

Agree.

179. In line 9382, restore "described in".

Agree.

180. In line 9383, delete "the steps describe".

Agree.

181. In line 9414, after "Step 2" add a period.

Agree.

In line 9417, change “a” to “the”.

182. In line 9421, after "within the" add "applicable timeframe in". **Agree.** Strike "appropriate of the" and "timeframes". **Agree**

183. In line 9422, delete "establish".

Agree. Also, strike the colon.

In lines 9424-9425 and 9430-9431, delete “the supplier must complete corrosion control studies”.

184. In line 9449, delete "of this section".

Agree.

185. In line 9552, after "recommend" add "that".

Agree.

186. In line 9561, change "needs not" to "does not need to".

Agree.

187. In line 9562, delete the comma.
Agree.
188. In line 9581, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
189. In lines 9629 and 9634, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
190. In lines 9729 and 9735, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
191. In lines 9884 and 9885, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
In line 10396, change "like" to "such as".
192. In line 11329, strike "ℓ" and add "L".
Agree, subject to the understanding described in No. 6.
193. In line 11332, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
194. In lines 11348 and 11359, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
In line 11422, change "like" to "such as".
195. In line 11449, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
196. In line 11473, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
197. In lines 11514 and 11529, change "ℓ" to "L".
Agree, subject to the understanding described in No. 6.
198. In lines 12445 and 12447, strike "ℓ" and add "L".
Agree, subject to the understanding described in No. 6.
199. In line 12665, strike "USC" and add "U.S.C.".
Agree.
200. In lines 12690 and 12694, strike "ℓ" and add "L".
Agree, subject to the understanding described in No. 6.
201. In line 12764, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

202. In line 12769, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

203. In line 13195, change "ℓ" to "L".

Agree, subject to the understanding described in No. 6.

204. In line 13200, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

205. In lines 13297 and 13298, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

206. In lines 13507 (twice), 13511 (twice), and 13514, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

207. In lines 13540 (twice), 13544, 13545, 13546, and 13547, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

In line 13702, change "like" to "such as".

208. In line 14367, change "USC" to "U.S.C.".

Agree.

In line 14622, delete "that" and restore "caused by". Delete "like" and restore "such as".

In line 14624, delete "caused".

In line 14538, after "manager" add "or, if applicable, both".

209. In lines 14807, 14809, 14811, 14813, 14815, 14817, 14819, 14821, 14823, 14825, and 14828, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

210. In line 15010, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

211. In line 15036, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

212. In lines 15506 and 15508, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

213. In lines 15571 and 15574, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

214. In the first row of the table after line 15706, strike "ℓ" and add "L" twice.

Agree, subject to the understanding described in No. 6.

215. In the third-to-last and second-to-last rows of the table after line 15706, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

216. In line 15778, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

217. In line 16395, 16397, 16401, 16403, 16405, 16407, 16409, 16411, and 16413, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

218. In lines 16415, 16417, 16419, 16421, and 16423, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

219. In line 17279, strike "ℓ" and add "L" (twice).

Agree, subject to the understanding described in No. 6.

220. In the first line of the table after line 17567, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

221. In the first line of the table after line 17570, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

222. In the last four rows of the table after line 17755, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

223. In the 2nd through 7th rows of the table after line 17763, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

224. In lines 17970 and 17973, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

225. In line 18012, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

226. In lines 18063 and 18089, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

227. In line 18094, change "sum" to "add". (?)

Disagree. The verb “sum” more closely follows “summed” in 40 CFR 141.26(b)(5). Strike the first “and” and add “, as well as”.

228. In line 18333, strike "ℓ" and add "L" (twice).

Agree, subject to the understanding described in No. 6.

229. In lines 18702 and 18722, strike "mℓ" and add "mL".

Agree, subject to the understanding described in No. 6.

230. In line 18890, change "as" to "when".

Agree.

231. In line 18892, change "sooner of specified" to "earlier of the" and restore "following".

Agree. Strike "times" (**Agree**) and add "intervals" (**Disagree**. Add "timeframes").

232. In lines 18895 and 18898, delete "Within" and restore "The"

Agree.

233. In line 18911, after "Agency" add "that it is". **Disagree.** After "with" add "the".

Disagree.

Strike "The supplier" and delete "must certify to the Agency fully complying with public".

234. In line 18912, after "notification" add "requirements of".

Disagree.

Delete "notification under Subpart V". Strike "within" and add "Within".

In lines 18912-18913, restore "the public notification requirements under Subpart V for".

In line 18914, after "notices" add ", the PWS must certify to the Agency that it has fully complied with the public notification rules".

In line 18917, change "the Agency" to "that the PWS".

In line 18918, strike "or" and add "and". After "served" add "by the PWS".

In line 18919, strike "or" and add "and".

In line 18921, change "supplier" to "PWS".

235. In line 18923, after "practicable" add a comma.

Agree. Change "supplier" to "PWS".

236. In line 19256, delete "clearly" and restore "include a clear". **Agree.** Delete

"understandably". **Agree.**

237. In line 19257, delete "explain" and restore "understandable explanation of".

Agree.

238. In line 19260, delete "Failure in monitoring or" and restore "Monitoring and".

Agree.

In line 19340, delete ", like" and restore "such as".

239. In lines 19562 and 19563, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

240. In line 19626, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

241. In line 19688, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

242. In line 19845, strike "ℓ" and add "L" twice.

Agree, subject to the understanding described in No. 6.

243. In line 19865, strike "ℓ" and add "L" twice.

Agree, subject to the understanding described in No. 6.

244. In line 19900, delete "deciding" and restore "it decides".

Agree.

245. In lines 19998 and 20001, strike "mℓ" and add "mL".

Agree, subject to the understanding described in No. 6.

246. In line 20099, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

247. In line 20188, after the semicolon add "or".

Agree.

248. In lines 20188-20189, strike "epacdx@csc.com ("Technical Support" in the subject line); or fax 301-429-3905" and add "helpdesk@epacdx.net".

Agree.

In line 20263, after the semicolon add "or".

249. In lines 20263-20264, strike "epacdx@csc.com ("Technical Support" in the subject line); or fax 301-429-3905" and add "helpdesk@epacdx.net".

Agree.

250. In line 20287, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

251. In line 20306, strike "ℓ" and add "L" (twice).

Agree, subject to the understanding described in No. 6.

252. In line 20332, strike "mℓ" and add "mL".

Agree, subject to the understanding described in No. 6.

253. In line 20520, strike "mℓ" and add "mL".

Agree, subject to the understanding described in No. 6.

254. In line 20524, restore "density".

Agree.

255. In line 20850, change "ℓ" to "L".

Agree, subject to the understanding described in No. 6.

256. In lines 20913, 20914, 20936, and 20939, change "l" to "L".
Agree, subject to the understanding described in No. 6.

257. In line 21694, change "l" to "L".
Agree, subject to the understanding described in No. 6.

258. In lines 22679 and 22681, change "l" to "L".
Agree, subject to the understanding described in No. 6.
In line 22744, change "like" to "such as".

259. In line 22863, change "USC" to "U.S.C.".
Agree.

260. In lines 22887 and 22891, change "l" to "L".
Agree, subject to the understanding described in No. 6.

261. In lines 22950 and 22955, change "l" to "L".
Agree, subject to the understanding described in No. 6.

262. In line 23219, change "l" to "L".
Agree, subject to the understanding described in No. 6.

263. In lines 23295 and 23296, change "l" to "L".
Agree, subject to the understanding described in No. 6.

264. In line 23392, change "l" to "L" twice.
Agree, subject to the understanding described in No. 6.

265. In line 23410, change "l" to "L" twice.
Agree, subject to the understanding described in No. 6.

266. In line 23441, change "l" to "L" twice.
Agree, subject to the understanding described in No. 6.

267. In line 23445, change "l" to "L" twice.
Agree, subject to the understanding described in No. 6.

268. In line 23448, change "l" to "L".
Agree, subject to the understanding described in No. 6.

269. In lines 23471, 23475, and 23477, change "l" to "L" twice.
Agree, subject to the understanding described in No. 6.

270. In line 23675, change "l" to "L".
Agree, subject to the understanding described in No. 6.

271. In line 23779, change "G" to "AG".

Agree.

272. In line 23801, change "ℓ" to "L" twice.

Agree, subject to the understanding described in No. 6.

273. In the first row of the table after line 23934, strike "ℓ" and add "L" (twice).

Agree, subject to the understanding described in No. 6.

274. In the table after line 23934, in the third column of the rows labeled "77" through "79", , strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

275. In lines 23999 and 24001, strike "ℓ" and add "L".

Agree, subject to the understanding described in No. 6.

276. In line 24015, strike "ℓ" and add "L" twice.

Agree, subject to the understanding described in No. 6.

277. In lines 24091 and 24095, change "ℓ" to "L".

Agree, subject to the understanding described in No. 6.

278. In lines 24290 and 24291, change "ℓ" to "L".

Agree, subject to the understanding described in No. 6.

END

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE F: PUBLIC WATER SUPPLIES
CHAPTER I: POLLUTION CONTROL BOARD

PART 611
PRIMARY DRINKING WATER STANDARDS

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12	611.101	Definitions
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14	611.103	Severability
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16	611.107	Agency Inspection of PWS Facilities (Repealed)
17	611.108	Delegation to Local Government
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19	611.110	Special Exception Permits
20	611.111	Relief Equivalent to SDWA Section 1415(a) Variances
21	611.112	Relief Equivalent to SDWA Section 1416 Exemptions
22	611.113	Alternative Treatment Techniques
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24	611.115	Source Water Quantity (Repealed)
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30	611.130	Special Requirements for Certain Variances and Adjusted Standards
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- 44 611.220 General Requirements
- 45 611.230 Filtration Effective Dates ([Repealed](#))
- 46 611.231 Source Water ~~Limitation~~[Quality Conditions](#)
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- 49 611.240 Disinfection
- 50 611.241 Unfiltered PWSs ([Repealed](#))
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- 54 611.262 Filtered PWSs: Reporting and Recordkeeping
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- 57 611.276 Recycle Provisions

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59 SUBPART C: USE OF NON-CENTRALIZED TREATMENT DEVICES

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62 611.280 Point-of-Entry Devices

63 611.290 ~~Use of~~ Point-of-Use Devices or Bottled Water

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65 SUBPART D: TREATMENT TECHNIQUES

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67 Section

68 611.295 General Requirements

69 611.296 Acrylamide and Epichlorohydrin

70 611.297 Corrosion Control ([Repealed](#))

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72 SUBPART F: MAXIMUM CONTAMINANT LEVELS (MCLs) AND
73 MAXIMUM RESIDUAL DISINFECTANT LEVELS (MRDLs)

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75 Section

76 611.300 ~~Old~~ [State-Only](#) MCLs for Inorganic Chemical Contaminants

77 611.301 Revised MCLs for Inorganic Chemical Contaminants

78 611.310 State-Only Maximum Contaminant Levels (MCLs) for Organic Chemical
79 Contaminants

80 611.311 Revised MCLs for Organic Chemical Contaminants

81 611.312 Maximum Contaminant Levels (MCLs) for Disinfection Byproducts (DBPs)

82 611.313 Maximum Residual Disinfectant Levels (MRDLs)

83 611.320 Turbidity ([Repealed](#))

84 611.325 Microbiological Contaminants

85 611.330 Maximum Contaminant Levels for Radionuclides

86 611.331 Beta Particle and Photon Radioactivity ([Repealed](#))

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- 611.350 General Requirements
- 611.351 Applicability of Corrosion Control
- 611.352 Corrosion Control Treatment
- 611.353 Source Water Treatment
- 611.354 Lead Service Line [Inventory and Replacing Lead Service Lines](#)~~Replacement~~
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AND DISINFECTION BYPRODUCT PRECURSORS

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- 611.381 Analytical Requirements
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- 611.385 Treatment Technique for Control of Disinfection Byproduct (DBP) Precursors

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134	611.524	Sanitary Surveys (Repealed)
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137	611.527	Response to Violation (Repealed)
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SUBPART M: TURBIDITY MONITORING AND ANALYTICAL REQUIREMENTS

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152	611.592	Frequency of State Monitoring
153	611.600	Applicability
154	611.601	Monitoring Frequency
155	611.602	Asbestos Monitoring Frequency
156	611.603	Inorganic Monitoring Frequency
157	611.604	Nitrate Monitoring
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159	611.606	Confirmation Samples
160	611.607	More Frequent Monitoring and Confirmation Sampling
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172	611.640	Definitions

173	611.641	State-Only MCLs
174	611.645	Analytical Methods for Organic Chemical Contaminants
175	611.646	Phase I, Phase II, and Phase V Volatile Organic Contaminants
176	611.647	Sampling for Phase I Volatile Organic Contaminants (Repealed)
177	611.648	Phase II, Phase IIB, and Phase V Synthetic Organic Contaminants
178	611.650	Monitoring for 36 Contaminants (Repealed)
179	611.657	Analytical Methods for 36 Contaminants (Repealed)
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182 SUBPART P: THM MONITORING AND ANALYTICAL REQUIREMENTS

183		
184	Section	
185	611.680	Sampling, Analytical, and other Requirements (Repealed)
186	611.683	Reduced Monitoring Frequency (Repealed)
187	611.684	Averaging (Repealed)
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193 SUBPART Q: RADIOLOGICAL MONITORING AND ANALYTICAL REQUIREMENTS

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201 SUBPART R: ENHANCED FILTRATION AND DISINFECTION:
202 SYSTEMS THAT SERVE 10,000 OR MORE PEOPLE

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204	Section	
205	611.740	General Requirements
206	611.741	Standards for Avoiding Filtration
207	611.742	Disinfection Profiling and Benchmarking
208	611.743	Filtration
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212 SUBPART S: GROUNDWATER RULE

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- 216 611.801 Sanitary Surveys for GWS Suppliers
- 217 611.802 Groundwater Source Microbial Monitoring and Analytical Methods
- 218 611.803 Treatment Technique Requirements for GWS Suppliers
- 219 611.804 Treatment Technique Violations for GWS Suppliers
- 220 611.805 Reporting and Recordkeeping for GWS Suppliers

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222 SUBPART T: REPORTING AND RECORDKEEPING

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- 225 611.830 Applicability
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- 227 611.832 Notice by Agency (Repealed)
- 228 611.833 Cross Connection Reporting (Repealed)
- 229 611.840 Reporting
- 230 611.851 Reporting MCL, MRDL, and other Violations (Repealed)
- 231 611.852 Reporting other Violations (Repealed)
- 232 611.853 Notice to New Billing Units (Repealed)
- 233 611.854 General Content of Public Notice (Repealed)
- 234 611.855 Mandatory Health Effects Language (Repealed)
- 235 611.856 Fluoride Notice (Repealed)
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- 237 611.860 Record Maintenance
- 238 611.870 List of 36 Contaminants (Repealed)

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240 SUBPART U: CONSUMER CONFIDENCE REPORTS

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- 252 611.901 General Public Notification Requirements
- 253 611.902 Tier 1 Public Notice: Form, Manner, and Frequency of Notice
- 254 611.903 Tier 2 Public Notice: Form, Manner, and Frequency of Notice
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- 256 611.905 Content of the Public Notice
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- 258 611.907 Special Notice of the Availability of Unregulated Contaminant Monitoring

- 259 Results
- 260 611.908 Special Notice for Exceedance of the Fluoride Secondary Standard
- 261 611.909 Special Notice for Nitrate Exceedances above the MCL by a Non-Community
- 262 Water System
- 263 611.910 Notice by the Agency on Behalf of a PWS
- 264 611.911 Special Notice for Cryptosporidium

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266 SUBPART W: INITIAL DISTRIBUTION SYSTEM EVALUATIONS

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- 270 611.921 Standard Monitoring
- 271 611.922 System-Specific Studies
- 272 611.923 40/30 Certification
- 273 611.924 Very Small System Waivers
- 274 611.925 Subpart Y Compliance Monitoring Location Recommendations

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276 SUBPART X: ENHANCED FILTRATION AND DISINFECTION –

277 SYSTEMS SERVING FEWER THAN 10,000 PEOPLE

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- 280 611.950 General Requirements
- 281 611.951 Finished Water Reservoirs
- 282 611.952 Additional Watershed Control Requirements for Unfiltered Systems
- 283 611.953 Disinfection Profile
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289 SUBPART Y: STAGE 2 DISINFECTION BYPRODUCTS REQUIREMENTS

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- 297 611.975 Conditions Requiring Increased Monitoring
- 298 611.976 Operational Evaluation Levels
- 299 611.977 Requirements for Remaining on Reduced TTHM and HAA5 Monitoring Based
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310	611.1002	Source Water Monitoring Requirements: Sampling Schedules
311	611.1003	Source Water Monitoring Requirements: Sampling Locations
312	611.1004	Source Water Monitoring Requirements: Analytical Methods
313	611.1005	Source Water Monitoring Requirements: Approved Laboratories
314	611.1006	Source Water Monitoring Requirements: Reporting Source Water Monitoring
315		Results
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334	611.1016	Requirements for Microbial Toolbox Components: Source Toolbox Components
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336		Toolbox Components
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344 611.1022 Reporting and Recordkeeping Requirements: Recordkeeping Requirements
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350 Section

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353 611.1053 General Monitoring Requirements for all PWSs
354 611.1054 Routine Monitoring Requirements for Non-CWSs That Serve 1,000 or Fewer
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356 611.1055 Routine Monitoring Requirements for CWSs That Serve 1,000 or Fewer People
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358 611.1056 Routine Monitoring Requirements for Subpart B Systems That Serve 1,000 or
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360 611.1057 Routine Monitoring Requirements for PWSs That Serve More Than 1,000 People
361 611.1058 Repeat Monitoring and E. coli Requirements
362 611.1059 Coliform Treatment Technique Triggers and Assessment Requirements for
363 Protection Against Potential Fecal Contamination
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365 611.1061 Reporting and Recordkeeping
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372 611.1352 Corrosion Control Treatment
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383 611.APPENDIX A Regulated Contaminants
384 611.APPENDIX B Percent Inactivation of G. Lamblia Cysts
385 611.APPENDIX C Common Names of Organic Chemicals
386 611.APPENDIX D Defined Substrate Method for the Simultaneous Detection of Total

387 Coliforms and Escherichia Coli from Drinking Water (Repealed)
 388 611.APPENDIX E Mandatory Lead Public Education Information for Community Water
 389 Systems
 390 611.APPENDIX F Mandatory Lead Public Education Information for Non-Transient Non-
 391 Community Water Systems
 392 611.APPENDIX G NPDWR Violations and Situations Requiring Public Notice
 393 611.APPENDIX H Standard Health Effects Language for Public Notification
 394 611.APPENDIX I Acronyms Used in Public Notification Regulation
 395 611.TABLE A Total Coliform Monitoring Frequency (Repealed)
 396 611.TABLE B Fecal or Total Coliform Density Measurements
 397 611.TABLE C Frequency of RDC Measurement
 398 611.TABLE D Number of Lead and Copper Monitoring Sites
 399 611.TABLE E Lead and Copper Monitoring Start Dates (Repealed)
 400 611.TABLE F Number of Water Quality Parameter Sampling Sites
 401 611.TABLE G Summary of Section 611.357 Monitoring Requirements for Water
 402 Quality Parameters [\(Repealed\)](#)
 403 611.TABLE H CT Values (mg·min/ℓ) for Cryptosporidium Inactivation by
 404 Chlorine Dioxide
 405 611.TABLE I CT Values (mg·min/ℓ) for Cryptosporidium Inactivation by Ozone
 406 611.TABLE J UV Dose Table for Cryptosporidium, Giardia lamblia, and Virus
 407 Inactivation Credit
 408 [611.TABLE R](#) [Radionuclide Conversion Factors](#)
 409 611.TABLE Z Federal Effective Dates

411 AUTHORITY: Implementing Sections 7.2, 17, and 17.5 and authorized by Section 27 of the
 412 Environmental Protection Act [415 ILCS 5/7.2, 17, 17.5, and 27].

413
 414 SOURCE: Adopted in R88-26 at 14 Ill. Reg. 16517, effective September 20, 1990; amended in
 415 R90-21 at 14 Ill. Reg. 20448, effective December 11, 1990; amended in R90-13 at 15 Ill. Reg.
 416 1562, effective January 22, 1991; amended in R91-3 at 16 Ill. Reg. 19010, effective December 1,
 417 1992; amended in R92-3 at 17 Ill. Reg. 7796, effective May 18, 1993; amended in R93-1 at 17
 418 Ill. Reg. 12650, effective July 23, 1993; amended in R94-4 at 18 Ill. Reg. 12291, effective July
 419 28, 1994; amended in R94-23 at 19 Ill. Reg. 8613, effective June 20, 1995; amended in R95-17
 420 at 20 Ill. Reg. 14493, effective October 22, 1996; amended in R98-2 at 22 Ill. Reg. 5020,
 421 effective March 5, 1998; amended in R99-6 at 23 Ill. Reg. 2756, effective February 17, 1999;
 422 amended in R99-12 at 23 Ill. Reg. 10348, effective August 11, 1999; amended in R00-8 at 23 Ill.
 423 Reg. 14715, effective December 8, 1999; amended in R00-10 at 24 Ill. Reg. 14226, effective
 424 September 11, 2000; amended in R01-7 at 25 Ill. Reg. 1329, effective January 11, 2001;
 425 amended in R01-20 at 25 Ill. Reg. 13611, effective October 9, 2001; amended in R02-5 at 26 Ill.
 426 Reg. 3522, effective February 22, 2002; amended in R03-4 at 27 Ill. Reg. 1183, effective January
 427 10, 2003; amended in R03-15 at 27 Ill. Reg. 16447, effective October 10, 2003; amended in
 428 R04-3 at 28 Ill. Reg. 5269, effective March 10, 2004; amended in R04-13 at 28 Ill. Reg. 12666,
 429 effective August 26, 2004; amended in R05-6 at 29 Ill. Reg. 2287, effective January 28, 2005;

430 amended in R06-15 at 30 Ill. Reg. 17004, effective October 13, 2006; amended in R07-2/R07-11
 431 at 31 Ill. Reg. 11757, effective July 27, 2007; amended in R08-7/R08-13 at 33 Ill. Reg. 633,
 432 effective December 30, 2008; amended in R10-1/R10-17/R11-6 at 34 Ill. Reg. 19848, effective
 433 December 7, 2010; amended in R12-4 at 36 Ill. Reg. 7110, effective April 25, 2012; amended in
 434 R13-2 at 37 Ill. Reg. 1978, effective February 4, 2013; amended in R14-8 at 38 Ill. Reg. 3608,
 435 effective January 27, 2014; amended in R14-9 at 38 Ill. Reg. 9792, effective April 21, 2014;
 436 amended in R15-6 at 39 Ill. Reg. 3713, effective February 24, 2015; amended in R15-23 at 39 Ill.
 437 Reg. 15144, effective November 9, 2015; amended in R16-4 at 39 Ill. Reg. 15352, effective
 438 November 13, 2015; amended in R17-12 at 42 Ill. Reg. 1140, effective January 4, 2018;
 439 amended in R18-9 at 42 Ill. Reg. 9316, effective May 29, 2018; amended in R18-17 at 43 Ill.
 440 Reg. 8206, effective July 26, 2019; amended in R19-16 at 44 Ill. Reg. 6996, effective April 17,
 441 2020; amended in R18-26 at 47 Ill. Reg. 7556, effective May 16, 2023; amended in R21-9/R22-
 442 10 at 47 Ill. Reg. _____, effective _____.

444 SUBPART A: GENERAL

445
 446 **Section 611.100 Purpose, Scope, and Applicability**

447
 448 a) This Part satisfies the ~~mandate in requirement of~~ Section 17.5 of the
 449 Environmental Protection Act (Act) ~~requiring that~~ the Board ~~to~~ adopt regulations
 450 that are identical in substance with federal regulations ~~promulgated by~~ the United
 451 States Environmental Protection Agency (USEPA) ~~adopted under pursuant to~~
 452 Sections 1412(b), 1414(c), 1417(a), and 1445(a) of the Safe Drinking Water Act
 453 (SDWA) (42 USC 300g-1(b), 300g-3(c), 300g-6(a), and 300j-4(a)).

454
 455 b) This Part establishes primary drinking water regulations (NPDWRs)
 456 ~~under pursuant to the SDWA. This Part, and~~ also includes additional, ~~related~~ State
 457 requirements that are consistent with and more stringent than the USEPA
 458 regulations (Section 7.2(a)(6) of the Act). The ~~Board marked the~~ latter provisions
 459 ~~are specifically marked as~~ "additional State requirements". ~~These additional State~~
 460 ~~requirements~~ They apply only to ~~community water systems~~ (CWSs).

461
 462 BOARD NOTE: This subsection (b) derives from 40 CFR 141.1.

463
 464 c) This Part applies to "suppliers", owners and operators of ~~"public water systems"~~
 465 ~~("PWSs, and persons affecting the quality of water the public consumes from~~
 466 ~~suppliers or PWSs").~~ PWSs include CWSs, ~~"non-community water systems~~
 467 ~~("non-CWSs"), and "non-transient non-community water systems ("NTNCWSs"),~~
 468 as ~~these terms are defined in~~ Section 611.101 ~~defines these terms.~~

469
 470 1) A CWS ~~must suppliers are required to~~ obtain a ~~permit permits~~ from the
 471 Illinois Environmental Protection Agency (Agency) ~~under pursuant to~~ 35
 472 Ill. Adm. Code 602.

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- 2) ~~A non-CWS supplier is~~Non-CWS suppliers are subject to additional rules of regulations promulgated by the Illinois Department of Public Health (Public Health or DPH) ~~underpursuant to~~ Section 9 of the Illinois Groundwater Protection Act [415 ILCS 55/9], including 77 Ill. Adm. Code 900.
- 3) ~~A non-CWS supplier needs not~~Non-CWS suppliers are not required to obtain ~~a permit~~permits or other ~~approval~~approvals from the Agency, ~~or to~~ file reports or other documents with the Agency. Any provision in this Part ~~requiring a non-CWS supplier to obtain a permit or approval or file reports or other documents require~~so providing is to be understood as requiring the non-CWS supplier to obtain the comparable form of permit or approval from, ~~or to~~ file the comparable report or other document with Public Health.
- 4) Any person introducing pipes; pipe or plumbing fittings; or fixtures, solder, or flux into commerce or installing or repairing a facility providing water for human consumption using these items must comply with Section 611.126.

BOARD NOTE: Section 611.126, requiring lead-free pipes, fittings, fixtures, solder, and flux for drinking water, applies to persons other than suppliers and PWSs.~~Derived from 40 CFR 141.1 (2016).~~

- d) This Part applies to ~~each~~ PWS, unless the PWS meets ~~these~~all of the following conditions:
 - 1) The PWS consists only of distribution and storage facilities (and does not have any collection and treatment facilities);
 - 2) The PWS obtains all of its water from, but is not owned or operated by, a supplier to which apply this Part, 40 CFR 141, or the comparable rules of a sister state that USEPA authorized under 40 CFR 142~~such regulations~~ apply;
 - 3) The PWS does not sell water to any person; and
 - 4) The PWS is not a carrier ~~conveying that conveys~~ passengers in interstate commerce.

BOARD NOTE: This subsection (d) derives~~Derived~~ from 40 CFR 141.3 ~~(2016)~~. The text of 40 CFR 141.3 is nearly identical to section 1411 of ~~the federal~~ SDWA

516 (42 USC 300g). On December 23, 2003 (at 68 Fed. Reg. 74233), USEPA
 517 ~~changed announced a change in~~ its policy relating to ~~section~~Section 1411. USEPA
 518 determined that a property owner ~~that is~~ not otherwise subject to ~~the~~SDWA
 519 national primary drinking water standards "submeters" water, and does not "sell"
 520 water within the meaning of ~~section~~Section 1411(3), if the property owner meters
 521 water to tenants on its property and bills the tenants for the water. USEPA
 522 charged the State with determining whether water is "submetered" or "sold" in a
 523 particular situation. USEPA stated that eligibility for exclusion requires that the
 524 owner obtain water from a regulated water system. USEPA ~~gaveset forth~~ factors
 525 ~~for consideration~~ to aid the ~~State's~~State in making such a determination: the
 526 property has a limited distribution system with no known backflow or cross-
 527 connection issues; the majority of the plumbing is within a structure, rather than
 528 in the ground; and property ownership is single or within an association of
 529 owners. USEPA cited apartment buildings, co-ops, and condominiums as
 530 examples of eligible properties. USEPA ~~further stated that it~~ does not intend ~~that~~
 531 the policy ~~to~~ apply to a large distribution system, ~~to one~~ ~~servinthat serves~~ a large
 532 population, or one ~~servinthat serves~~ a mixed commercial and residential
 533 population. USEPA cited "many military installations/facilities" and large mobile
 534 home parks as examples of systems to which the policy would not apply.
 535

536 (Source: Amended at 47 Ill. Reg. _____, effective _____)
 537

538 **Section 611.101 Definitions**
 539

540 ~~TheAs used in this Part, the following~~ terms ~~this Section defines~~ have the given meanings ~~in this~~
 541 Part:
 542

543 "Act" means the Environmental Protection Act [415 ILCS 5].
 544

545 "Agency" means the Illinois Environmental Protection Agency.
 546

547 BOARD NOTE: The Department of Public Health (Public Health or DPH)
 548 regulates ~~non-community water supplies ("non-CWSs", including non-transient,~~
 549 ~~non-community water supplies ("NTNCWSs") and transient non-community~~
 550 ~~water supplies ("transient non-CWSs").~~ "Agency" ~~meanswill mean~~ Public
 551 Health ~~ifwhere~~ implementation by Public Health occurs with regard to non-CWS
 552 suppliers.
 553

554 "Approved source of bottled water", for the purposes of Section 611.130(d)(4),
 555 means a source of water and the packaged water ~~it providestherefrom~~, whether ~~it~~
 556 ~~be~~ from a spring, artesian well, drilled well, municipal water supply, or any other
 557 source, that ~~the provider inspects, samples, analyzes, has been inspected and the~~
 558 ~~water sampled, analyzed, and finds hasfound to be~~ a safe and sanitary quality
~~underaeording to applicable~~ laws and regulations of State and local government

559 agencies having jurisdiction, as evidenced by ~~the presence in the plant of~~ current
 560 certificates or notations of approval in the packaging plant from each government
 561 agency ~~or agencies~~ having jurisdiction over the source, the water it bottles, and
 562 ~~distributing the distribution of~~ the water in commerce.

563 BOARD NOTE: ~~This definition derives~~ Derived from 40 CFR 142.62(g)(2) and
 564 21 CFR 129.3(a). The Board cannot compile an exhaustive listing of all federal,
 565 State, and local laws ~~regulating to which~~ bottled water and bottling water ~~may be~~
 566 ~~subjected~~. However, the ~~Board is aware of some statutes and regulations of which~~
 567 ~~the Board is aware are the following:~~ the Illinois Food, Drug and Cosmetic Act
 568 [410 ILCS 620], the Bottled Water Act [815 ILCS 310], the DPH Water Well
 569 Construction Code (77 Ill. Adm. Code 920), the DPH Water Well Pump
 570 Installation Code (77 Ill. Adm. Code 925), the federal bottled water quality
 571 standards (21 CFR 103.35), the federal drinking water processing and bottling
 572 standards (21 CFR 129), the federal Current Good Manufacturing Practice in
 573 Manufacturing, Packing, or Holding Human Food (21 CFR 110), the federal Fair
 574 Packaging and Labeling Act (15 USC 1451 et seq.), and the federal Fair
 575 Packaging and Labeling regulations (21 CFR 201).
 576

577 "Bag filters" means pressure-driven separation devices that remove particulate
 578 matter larger than one micrometer using an engineered porous filtration media.
 579 ~~These~~ They are typically ~~constructed of~~ a non-rigid, fabric filtration media housed
 580 in a pressure vessel ~~wherein which~~ the direction of flow is from the inside to
 581 ~~outside of~~ the bag ~~to outside~~.
 582

583 "Bank filtration" means a water treatment process ~~using that uses~~ a well to recover
 584 surface water ~~that has~~ naturally ~~infiltrating infiltrated~~ into groundwater through a
 585 river bed or banks. ~~A nearby pumping water supply or other wells typically~~
 586 ~~enhances infiltration~~ Infiltration is typically ~~enhanced~~ by the hydraulic gradient
 587 ~~they impose imposed by a nearby pumping water supply or other wells~~.
 588

589 "Best available technology" or "BAT" means the best technology, treatment
 590 techniques, or other means that USEPA ~~determines has found~~ are available for the
 591 contaminant in question. ~~Subpart F specifies~~ BAT ~~is specified in Subpart F~~.
 592

593 "Bin classification" or "bin" means, ~~for the purposes of~~ Subpart Z, the appropriate
 594 of the four treatment categories (Bin 1, Bin 2, Bin 3, or Bin 4) that ~~is assigned to~~ a
 595 filtered system supplier assigns itself under Section 611.1010 based on the results
 596 of ~~the~~ source water Cryptosporidium monitoring under Section
 597 611.1001 described in the previous section. This bin classification determines the
 598 degree of additional Cryptosporidium treatment, if any, the filtered system
 599 supplier PWS must provide.

600 BOARD NOTE: ~~This definition derives~~ Derived from 40 CFR 141.710 and ~~the~~
 601 ~~preamble discussion at~~ 71 Fed. Reg. 654, 657 (Jan. 5, 2006).

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"Board" means the Illinois Pollution Control Board.

"Cartridge ~~filter~~filters" means a pressure-driven separation ~~device~~devices that ~~removes~~remove particulate matter larger than 1 micrometer using an engineered porous filtration media. A cartridge filter~~They are~~ typically has~~constructed as~~ rigid or semi-rigid, self-supporting filter elements housed in a pressure ~~vessel~~vessels in which flow is from ~~the~~ outside to inside~~of~~ the cartridge ~~to the~~ inside.

"CAS No." means "Chemical Abstracts Services Number".

"Clean compliance history" means, for ~~the purposes of~~ Subpart AAA, a record of no MCL violations under Section 611.325; no monitoring violations under Subpart L or Subpart AA; and no coliform treatment technique trigger exceedances or treatment technique violations under Subpart AA.

"Coagulation" means a process using coagulant chemicals and mixing that destabilizes and agglomerates~~by which~~ colloidal and suspended materials ~~are destabilized and agglomerated~~ into flocs.

"Combined distribution system" means the interconnected distribution system comprising~~consisting of~~ the distribution systems of wholesale systems and of the consecutive systems that receive finished water.

"Community water system" or "CWS" means a public water system ~~(PWS serving) that serves~~ at least 15 service connections used by year-round residents or regularly servings~~serves~~ at least 25 year-round residents.
BOARD NOTE: This definition differs slightly from that of Section 3.145 of the Act.

"Compliance cycle" means the nine-calendar-year~~nine-year calendar year~~ cycle during which public water systems ~~(PWSs)~~ must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar cycle ran ~~calendar years~~began January 1, 1993 through, and ended December 31, 2001; the second ran~~began January 1, 2002 through, and ended December 31, 2010;~~ the third ran~~began January 1, 2011 through, and ends December 31, 2019, etc.~~

"Compliance period" means a three-calendar-year~~three-year calendar year~~ period within a compliance cycle. Each compliance cycle has three three-year compliance periods. For example, Within the first compliance cycle, the first compliance period ran ~~calendar years~~from January 1, 1993 through to December 31, 1995; the second ran ~~from January 1, 1996 through to December 31, 1998;~~

645 and the third ran ~~from January 1, 1999 through December 31, 2001~~ within the
 646 first compliance cycle.

647
 648 "Comprehensive performance evaluation" or "CPE" is a thorough review and
 649 analysis of a treatment plant's performance-based capabilities and associated
 650 administrative, operational, and maintenance practices. The supplier conducts a
 651 CPE~~It is conducted~~ to identify factors that may ~~be~~ adversely ~~affect~~impacting a
 652 plant's ability to comply. The supplier conducts a CPE~~capability~~ to achieve
 653 compliance and ~~emphasize~~emphasizes approaches ~~it that~~ can ~~implement~~be
 654 implemented without significant capital improvements.

655 BOARD NOTE: The final sentence of the definition of "comprehensive
 656 performance evaluation" in 40 CFR 141.2 is ~~codified as~~ Section 611.160(a)(2),
 657 since it contains substantive elements ~~that are more appropriately codified in a~~
 658 substantive provision.

659
 660 "Confluent growth" means a continuous bacterial growth covering the entire
 661 filtration area or portion of a membrane filter ~~or a portion thereof~~, in which
 662 bacterial colonies are not discrete.

663
 664 "Consecutive system" means a PWS receiving public water system that receives
 665 some or all of its finished water from one or more wholesale systems. Delivery
 666 may be through a direct connection or ~~through~~ the distribution system of one or
 667 more consecutive systems.

668
 669 "Contaminant" means any physical, chemical, biological, or radiological
 670 substance or matter in water.

671
 672 "Conventional filtration treatment" means a series of processes, including
 673 coagulation, flocculation, sedimentation, and filtration, resulting in substantial
 674 "particulate removal".

675
 676 "CT" or "CT_{calc}" is the product of residual disinfectant concentration (RDC or C)
 677 in mg/l, determined before or at the first customer, and the corresponding
 678 disinfectant contact time (T) in minutes. If a supplier applies disinfectants at
 679 more than one point prior to the first customer, it must determine the CT of each
 680 disinfectant sequence before or at the first customer to determine the total percent
 681 inactivation or "total inactivation ratio". In determining the total inactivation
 682 ratio, the supplier must determine the RDC of each disinfection sequence and
 683 corresponding contact time before any subsequent disinfection application points.
 684 (See the definition of "CT_{99.9}".)

685
 686 "CT_{99.9}" is the CT value required for 99.9 percent (3-log) inactivation of Giardia
 687 lamblia cysts. Tables 1.1 through 1.6, 2.1, and 3.1 of Appendix B list CT_{99.9}

688 values for a variety of disinfectants and conditions ~~appear in Tables 1.1 through~~
689 ~~1.6, 2.1, and 3.1 of Appendix B.~~ (See the definition of "inactivation ratio".)
690 BOARD NOTE: This definition derives~~Derived~~ from the definition of "CT" in 40
691 CFR 141.2.

692
693 "Diatomaceous earth filtration" means a process resulting in substantial
694 particulate removal ~~in which the following occur:~~

695
696 The process deposits a~~A~~ precoat cake of diatomaceous earth filter media ~~is~~
697 ~~deposited~~ on a support membrane (septum); and

698
699 The process continuously adds additional filter media, known as body
700 feed, to the feed water to maintain permeability of the filter cake while
701 filtering~~While the water is filtered~~ by passing through the cake on the
702 septum, ~~additional filter media known as body feed is continuously added~~
703 ~~to the feed water to maintain the permeability of the filter cake.~~

704
705 "Direct filtration" means a series of processes, including coagulation and filtration
706 but excluding sedimentation, resulting in substantial particulate removal.

707
708 "Disinfectant" means any oxidant, including chlorine, chlorine dioxide,
709 chloramines, and ozone, that a supplier adds~~added~~ to water in any part of the
710 treatment or distribution process, ~~that is intended~~ to kill or inactivate pathogenic
711 microorganisms.

712
713 "Disinfectant contact time" or "T" means the time in minutes that ~~it takes for~~
714 water ~~move to move~~ from the point of disinfectant application or the previous
715 point of RDC measurement to a point before or at the point where the supplier
716 measures RDC ~~is measured~~.

717
718 If the supplier measures~~Where~~ only one RDC ~~is measured~~, T is the time in
719 minutes that ~~it takes for~~ water ~~move to move~~ from the point of disinfectant
720 application to a point before or at the point where RDC is measured.

721
722 If the supplier measures~~Where~~ more than one RDC ~~is measured~~, T is as
723 follows:

724
725 For the first measurement of RDC, T is the time in minutes that ~~it~~
726 ~~takes for~~ water ~~move to move~~ from the first or only point of
727 disinfectant application to a point before or at the point where the
728 supplier measures the first RDC ~~is measured~~; and

729
730 For subsequent measurements of RDC, T is the time in minutes

731 that ~~it takes for~~ water ~~move to move~~ from the previous RDC
732 measurement point to the RDC measurement point where the
733 supplier calculates for which the particular T ~~is being calculated~~.

734
735 In T in pipelines, the supplier must calculate T ~~be calculated~~ based on "plug
736 flow" by dividing the internal volume of the pipe by the maximum hourly
737 flow rate through that pipe.

738
739 Within T within mixing basins and storage reservoirs, the supplier must
740 determine T using ~~be determined by~~ tracer studies or an equivalent
741 demonstration.

742
743 "Disinfection" means a process that inactivates pathogenic organisms in water by
744 chemical oxidants or equivalent agents.

745
746 "Disinfection byproduct" or "DBP" means a chemical byproduct forming that
747 forms when disinfectants used for microbial control react with naturally occurring
748 compounds already present in source water. DBPs include
749 bromodichloromethane, bromoform, chloroform, dichloroacetic acid, bromate,
750 chlorite, dibromochloromethane, and certain haloacetic acids.

751
752 "Disinfection profile" is a summary of daily Giardia lamblia inactivation through
753 at the treatment plant. The procedure for developing a disinfection profile is
754 contained in Section 611.742.

755
756 "Distribution system" includes all points downstream of an "entry point" to the
757 point of consumer ownership.

758
759 "Domestic or other non-distribution system plumbing problem" means a coliform
760 contamination problem in a PWS having with more than one service connection
761 that is limited to the specific service connection from which the supplier took the
762 coliform-positive sample ~~was taken~~.

763
764 "Dose equivalent" means the product of the absorbed dose from ionizing radiation
765 and the such factors accounting as account for differences in biological
766 effect effectiveness due to the type of radiation and its distribution in the body ~~as~~
767 specified by the International Commission on Radiological Units and
768 Measurements (ICRU).

769 BOARD NOTE: The International Commission on Radiation Units and
770 Measurements (ICRU) specifies "dose equivalent" as the product of the absorbed
771 dose (D), quality factor (QF), dose distribution factor (DF), and other necessary
772 factors. See "Radiation Quantities and Units", International Commission on
773 Radiological Units and Measurements (ICRU) Report 10a, Handbook 84, U.S.

Department of Commerce, National Bureau of Standards (1962).

"Dual sample set" means a set of two samples ~~the supplier collectseollected~~ at the same time and same location, ~~analyzingwith~~ one sample ~~analyzed~~ for TTHM and the other sample ~~analyzed~~ for HAA5. ~~A supplier collects dual~~Dual sample sets ~~to conductare collected for the purposes of conducting~~ an IDSE under Subpart W and ~~determinedetermining~~ compliance with the TTHM and HAA5 MCLs under Subpart Y.

"E. coli" means Escherichia coli, a species of bacteria used as a specific indicator of fecal contamination and potential harmful pathogens.
BOARD NOTE: ~~This definition derives~~Derived from ~~the discussion at~~78 Fed. Reg. 10270, 10271 (Feb. 13, 2013).

"Enhanced coagulation" means ~~addingthe addition of~~ sufficient coagulant ~~to improve removingfor improved removal of~~ disinfection byproduct (DBP) precursors by conventional filtration treatment.

"Enhanced softening" means ~~using precipitative softening to improve removingthe improved removal of~~ disinfection byproduct (DBP) precursors ~~by precipitative softening~~.

"Entry point" means a point just downstream of the final treatment operation, but upstream of the first user and ~~upstream of~~ any mixing with other water. If ~~the supplier uses~~ raw water ~~is used~~ without treatment, the "entry point" is the raw water source. If a PWS receives treated water from another PWS, the "entry point" is a point just downstream of the other PWS, but upstream of the first user ~~on the receiving PWS,~~ and ~~upstream of~~ any mixing with other water.

"Filter profile" is a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup ~~through to~~ backwash ~~inclusively,~~ ~~including that includes~~ an assessment of filter performance while ~~the supplier backwashes~~ another filter ~~is being backwashed~~.

"Filtration" means a process ~~passing water through porous media to removefor removing~~ particulate matter ~~from water by passage through porous media~~.

"Finished water" means water that ~~the supplier introducesis introduced~~ into the distribution system of a ~~PWS intending the waterpublic water system which is intended~~ for distribution and consumption without further treatment, except ~~that~~ treatment ~~which is~~ necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion control chemicals, etc.).

817
818 "Flocculation" means a process ~~enhancing to enhance~~ agglomeration or collection
819 of smaller floc particles into larger, more easily settleable particles through gentle
820 ~~hydraulic or mechanical~~ stirring ~~by hydraulic or mechanical means~~.

821
822 "Flowing stream" means a course of running water flowing in a definite channel.

823
824 "40/30 certification" means the certification ~~a supplier submits, submitted by the~~
825 ~~supplier~~ to the Agency under Section 611.923; that the supplier had no TTHM or
826 HAA5 monitoring violations; and ~~that~~ no individual sample from its system
827 exceeded 0.040 mg/l TTHM or 0.030 mg/l HAA5 during eight consecutive
828 calendar quarters.

829 BOARD NOTE: ~~This definition derives~~ ~~Derived~~ from 40 CFR 141.603(a).

830
831 "GAC10" means granular activated carbon (GAC) filter beds with an empty-bed
832 contact time of 10 minutes based on average daily flow and a carbon reactivation
833 frequency of every 180 days, except that the reactivation frequency for GAC10 ~~a~~
834 ~~supplier uses that is used~~ as a best available technology ~~to comply for compliance~~
835 with the MCLs ~~set forth in Subpart Y~~ under Section 611.312(b)(2) is 120 days.

836
837 "GAC20" means granular activated carbon filter beds with an empty-bed contact
838 time of 20 minutes based on average daily flow and a carbon reactivation
839 frequency of every 240 days.

840
841 "GC" means "gas chromatography" or "gas-liquid phase chromatography".

842
843 "GC/MS" means gas chromatography (GC) followed by mass spectrometry (MS).

844
845 "Gross alpha particle activity" means the total radioactivity due to alpha particle
846 emission as inferred from measurements on a dry sample.

847
848 "Gross beta particle activity" means the total radioactivity due to beta particle
849 emission as inferred from measurements on a dry sample.

850
851 "Groundwater system" or "GWS" means a ~~PWS using public water supply (PWS)~~
852 ~~that uses~~ only groundwater sources, including a consecutive system ~~that~~
853 ~~receiving receives~~ finished groundwater.

854 BOARD NOTE: ~~This definition derives~~ ~~Derived~~ from ~~40 CFR 141.23(b)(2),~~
855 ~~141.24(f)(2) note, and~~ 40 CFR 141.400(b).

856
857 "Groundwater under the direct influence of surface water" means any water
858 beneath the ~~ground~~ ~~surface of the ground~~ with significant occurrence of insects or
859 other macroorganisms, algae, or large-diameter pathogens, such as Giardia

860 lamblia or Cryptosporidium, or significant and relatively rapid shifts in water
 861 characteristics, such as turbidity, temperature, conductivity, or pH, that closely
 862 correlate to climatological or surface water conditions. "Groundwater under the
 863 direct influence of surface water" is as determined ~~under~~ Section 611.212.

864
 865 "Haloacetic acids (five)" or "HAA5" means the sum of the concentrations in
 866 milligrams per liter (mg/l) of five haloacetic acid compounds (monochloroacetic
 867 acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and
 868 dibromoacetic acid), rounded to two significant figures after ~~summing~~addition.

869
 870 "Halogen" means one of the chemical elements chlorine, bromine, or iodine.

871
 872 "HPC" means "heterotrophic plate count", ~~as~~ measured ~~under~~as specified in
 873 Section 611.531(a)(2)(C).

874
 875 "Hydrogeologic sensitivity assessment", ~~for the purposes of~~ Subpart S, means a
 876 determination of whether a GWS supplier obtains water from a hydrogeologically
 877 sensitive setting.

878 BOARD NOTE: ~~This definition derives~~Derived from 40 CFR 141.400(c)(5).

879
 880 "Inactivation ratio" or "Ai" means ~~the ratios follows~~:

$$A_i = CT_{\text{calc}}/CT_{99.9}$$

881
 882
 883
 884 The sum of the inactivation ratios, or "total inactivation ratio" (B), is
 885 calculated by adding together the inactivation ratio for each disinfection
 886 sequence ~~as follows~~:

$$B = \Sigma(A_i)$$

887
 888
 889
 890 A total inactivation ratio equal to or greater than 1.0 ~~assumedly provides~~is
 891 ~~assumed to provide~~ a 3-log inactivation of Giardia lamblia cysts.

892
 893 BOARD NOTE: ~~This definition derives~~Derived from the definition of "CT" in 40
 894 CFR 141.2.

895
 896 "Initial compliance period" means the three-year compliance period that began
 897 January 1, 1993, except for the MCLs for dichloromethane, 1,2,4-
 898 trichlorobenzene, 1,1,2-trichloroethane, benzo(a)pyrene, dalapon, di(2-
 899 ethylhexyl)adipate, di(2-ethylhexyl)phthalate, dinoseb, diquat, endothall, endrin,
 900 glyphosate, hexachlorobenzene, hexachlorocyclopentadiene, oxamyl, picloram,
 901 simazine, 2,3,7,8-TCDD, antimony, beryllium, cyanide, nickel, and thallium, as
 902 they apply to a supplier whose system has fewer than 150 service connections, for

903 which "initial compliance period"# means the three-year compliance period that
 904 began ~~on~~ January 1, 1996.

905
 906 "Initial distribution system evaluation" or "IDSE" means the evaluation,
 907 performed by the supplier under Section 611.921(c), to determine the locations in
 908 a distribution system that are representative of high TTHM and HAA5
 909 concentrations throughout the distribution system. An IDSE is used in
 910 conjunction with, but is distinct from, the compliance monitoring undertaken to
 911 identify and select monitoring locations used to determine compliance with
 912 Subpart I.

913 BOARD NOTE: This definition derives~~Derived~~ from 40 CFR 141.601(c).

914
 915 "Inorganic contaminants" or "IOCs" refers to that group of contaminants
 916 designated as such in United States Environmental Protection Agency (USEPA)
 917 regulatory discussions and guidance documents. IOCs include antimony, arsenic,
 918 asbestos, barium, beryllium, cadmium, chromium, cyanide, mercury, nickel,
 919 nitrate, nitrite, selenium, and thallium.

920 BOARD NOTE: This definition derives~~The IOCs are derived~~ from 40 CFR
 921 141.23(a)(4).

922
 923 "ℓ" means "liter".

924
 925 "Lake or reservoir" means a natural or man made basin or hollow on the Earth's
 926 surface in which water collects or is stored that may or may not have a current or
 927 single direction of flow.

928
 929 "Legionella" means a genus of bacteria, some species of which have caused a type
 930 of pneumonia called Legionnaires Disease.

931
 932 "Level 1 assessment" means an evaluation to identify the possible presence of
 933 sanitary defects, defects in distribution system coliform monitoring practices, and
 934 (when possible) the likely reason that the system triggered the assessment. The
 935 system owner or operator conducts a~~A Level 1 assessment is conducted by the~~
 936 system operator or owner. Minimum elements include review and identification
 937 of atypical events that could affect distributed water quality or indicate that
 938 distributed water quality ~~is~~~~was~~ impaired; changes in distribution system
 939 maintenance and operation that could affect distributed water quality (including
 940 water storage); source and treatment considerations that bear on distributed water
 941 quality, if~~where~~ appropriate (e.g., whether a groundwater system is disinfected);
 942 existing water quality monitoring data; and inadequacies in sample sites, sampling
 943 protocol, and sample processing. The supplier must conduct the assessment
 944 consistent with any Agency-imposed permit conditions that tailor specific

945 assessment elements with respect to the size and type of the system and the size,
 946 type, and characteristics of the distribution system.

947
 948 "Level 2 assessment" means an evaluation to identify the possible presence of
 949 sanitary defects, defects in distribution system coliform monitoring practices, and
 950 (when possible) the likely reason that the system triggered the assessment. A
 951 Level 2 assessment provides a more detailed examination of the system (including
 952 the system's monitoring and operational practices) than does a Level 1 assessment
 953 through the use of more comprehensive investigation and review of available
 954 information, additional internal and external resources, and other relevant
 955 practices. A person approved by the Agency in a SEP conducts a Level 2
 956 assessment ~~is conducted by a person approved by a SEP granted by the Agency,~~
 957 and that person may include the system operator. Minimum elements include
 958 review and identification of atypical events that could affect distributed water
 959 quality or indicate that distributed water quality ~~is~~was impaired; changes in
 960 distribution system maintenance and operation that could affect distributed water
 961 quality (including water storage); source and treatment considerations that bear on
 962 distributed water quality, ~~if~~where appropriate (e.g., whether a groundwater system
 963 is disinfected); existing water quality monitoring data; and inadequacies in sample
 964 sites, sampling protocol, and sample processing. The person conducting the Level
 965 2 assessment and the supplier must conduct the assessment consistent with any
 966 Agency-imposed permit conditions that tailor specific assessment elements with
 967 respect to the size and type of the system and the size, type, and characteristics of
 968 the distribution system. The person conducting the Level 2 assessment and the
 969 supplier must comply with any expedited actions or additional actions ~~therequired~~
 970 by a SEP requires in the instance of an E. coli MCL violation.

971
 972 "Locational running annual average" or "LRAA" means the average of sample
 973 analytical results for samples taken at a particular monitoring location during the
 974 previous four calendar quarters.

975
 976 "Man-made beta particle and photon emitters" means all radionuclides emitting
 977 beta particles or photons listed in NBS Handbook 69 (63), incorporated by
 978 reference in Section 611.102, except the daughter products of thorium-232,
 979 uranium-235 and uranium-238.

980 BOARD NOTE: The USEPA-recognized naturally occurring daughter products
 981 are ^{227,228}Ac, ^{210,212}Bi, ²¹²Pb, ²³²Pa, ²¹⁰Pb, ²¹⁰Po, ^{223,224, 226,228}Ra, ^{220,222}Rn, ^{227,}
 982 ^{230,231,232,234}Th, and ^{234,235,238}U. See 56 Fed. Reg. 33050, 33063-65 (July 18,
 983 1991).

984
 985 "Maximum contaminant level" or "MCL" means the maximum permissible
 986 concentration level of a contaminant in water a supplier delivers that is delivered to
 987 any user of its PWS a public water system. (See Section 611.121.)

988
989 "Maximum contaminant level goal" or "MCLG" means the maximum
990 concentration level of a contaminant in drinking water that USEPA determined
991 will cause at which no known or anticipated adverse effect on the health of
992 persons ~~would occur~~, allowing and which allows an adequate margin of safety.
993 MCLGs are nonenforceable health goals.

994 BOARD NOTE: The ~~Board has not routinely adopted the regulations relating to~~
995 ~~the~~ federal MCLGs ~~because they~~ are outside the scope of the Board's identical-in-
996 substance mandate under Section 17.5 of the Act.
997

998 "Maximum residual disinfectant level" or "MRDL" means the maximum
999 permissible concentration level of a disinfectant added for water treatment that
1000 USEPA determined a supplier may add and may not exceed may not be exceeded
1001 at the consumer's tap without an unacceptable risk possibility of adverse health
1002 effects. MRDLs are enforceable in the same manner as are MCLs. (See Section
1003 611.313 and Section 611.383.)
1004

1005 "Maximum residual disinfectant level goal" or "MRDLG" means the maximum
1006 concentration level of a disinfectant that USEPA determined a supplier may
1007 add added for water treatment that would not cause any at which no known or
1008 anticipated adverse effect on the health of persons ~~would occur~~, allowing and
1009 which allows an adequate margin of safety. MRDLGs are nonenforceable health
1010 goals and do not reflect the benefit of the addition of the chemical for control of
1011 waterborne microbial contaminants.
1012

1013 "Maximum total trihalomethane potential" or "MTP" means the maximum
1014 concentration of total trihalomethanes (TTHMs) produced in a given water
1015 containing a disinfectant residual after seven days at a temperature of 25° C or
1016 above.
1017

1018 "Membrane filtration" means a pressure-pressure or vacuum-driven vacuum-driven
1019 separation process in which particulate matter larger than one micrometer is
1020 rejected by an engineered barrier, primarily through a size exclusion mechanism,
1021 having and which has a measurable removal efficiency of a target organism that is
1022 verifiable using can be verified through the application of a direct integrity test.
1023 This definition includes the common membrane technologies of microfiltration,
1024 ultrafiltration, nanofiltration, and reverse osmosis.
1025

1026 "Method detection limit" or "MDL" means the minimum concentration of a
1027 substance that analysis can measure and report with 99 percent confidence that the
1028 analyte concentration is greater than zero, from analysis of a sample in a given
1029 matrix containing the analyte.
1030

1031 "MFL" means millions of fibers per liter larger than 10 micrometers.
1032 BOARD NOTE: [This definition derives](#) ~~Derived~~ from 40 CFR 141.23(a)(4)(i).
1033
1034 "mg" means milligrams (1/1000 of a gram).
1035
1036 ["µg" means micrograms \(1/1,000,000 of a gram\).](#)
1037
1038 "mg/ℓ" means milligrams per liter.
1039
1040 ["µg/ℓ" means micrograms per liter.](#)
1041
1042
1043 "Mixed system" means a PWS ~~using~~[that uses](#) both groundwater and surface water
1044 sources.
1045 BOARD NOTE: Derived from 40 CFR ~~141.400(b)~~[141.23\(b\)\(2\) and 141.24\(f\)\(2\)](#)
1046 ~~note~~.
1047
1048 "MUG" means 4-methyl-umbelliferyl-beta-d-glucuronide([IUPAC name:](#)
1049 [\(2S,3S,4S,5R,6S\)-3,4,5-trihydroxy-6-\(\(4-methyl-2-oxo-2Hchromen-7-](#)
1050 [yl\)oxy\)tetrahydro-2H-pyran-2-carboxylic acid; CAS no. 881005-91-0\).](#)
1051
1052 "Near the first service connection" means at one of the 20 percent of all service
1053 connections in the entire system that are nearest the ~~public water system (PWS)~~
1054 treatment facility, as measured by water transport time within the distribution
1055 system.
1056
1057 "nm" means nanometer (1/1,000,000,000 of a meter).
1058
1059 "Non-community water system" or "NCWS" or "non-CWS" means a ~~public water~~
1060 ~~system (PWS)~~ that is not a ~~community water system (CWS)~~. A ~~non-CWS~~[non-](#)
1061 ~~community water system~~ is either a "transient non-community water system
1062 (TWS)" or a ~~"non-transient non-community water system (NTNCWS)"~~.
1063
1064 "Non-transient, non-community water system" ~~or "non-transient, non-CWS"~~ or
1065 "NTNCWS" means a ~~public water system (PWS)~~ that is not a ~~community water~~
1066 ~~system (CWS)~~ and that regularly serves at least 25 of the same persons over six
1067 months per year.
1068
1069 "NPDWR" means "national primary drinking water regulation".
1070
1071 "NTU" means "nephelometric turbidity units".
1072
1073 ~~"Old MCL" means one of the inorganic maximum contaminant levels (MCLs),~~

1074 ~~codified at Section 611.300, or organic MCLs, codified at Section 611.310,~~
1075 ~~including any marked as "additional State requirements".~~

1076 ~~BOARD NOTE: Old MCLs are those derived prior to the implementation of the~~
1077 ~~USEPA "Phase II" regulations. The Section 611.640 definition of this term,~~
1078 ~~which applies only to Subpart O, differs from this definition in that the definition~~
1079 ~~does not include the Section 611.300 inorganic MCLs.~~

1080
1081 "P-A Coliform Test" means "Presence-Absence Coliform Test".

1082
1083 "Paired sample" means two samples of water for ~~total organic carbon~~Total
1084 ~~Organic Carbon~~ (TOC). One sample is of raw water ~~the supplier take~~taken prior
1085 to any treatment. The ~~supplier takes the~~ other sample ~~is taken~~ after the point of
1086 combined filter effluent ~~and is~~ representative of the treated water. ~~The supplier~~
1087 ~~takes these~~These samples ~~are taken~~ at the same time. (See Section 611.382.)

1088
1089 "Performance evaluation sample" or "PE sample" means a reference sample ~~the~~
1090 ~~Agency provides~~provided to a laboratory for ~~the purpose of~~ demonstrating that
1091 the laboratory can successfully analyze the sample within limits of performance
1092 ~~specified by~~ the Agency ~~specifies~~. ~~For; or, for~~ bacteriological laboratories, Public
1093 Health ~~provides the sample~~. ~~For; or, for~~ radiological laboratories, the Illinois
1094 ~~Emergency Management Agency provides the sample~~Department of Nuclear
1095 ~~Safety~~. The ~~laboratory does not know the~~ true value of the concentration of the
1096 reference material ~~is unknown to the laboratory~~ at the time of ~~the~~ analysis.

1097
1098 "Person" means an individual, corporation, company, association, partnership,
1099 state, unit of local government, or federal agency.

1100
1101 "Phase I" refers to that group of chemical contaminants and the accompanying
1102 regulations promulgated by USEPA on July 8, 1987, at 52 Fed. Reg. 25712.

1103
1104 "Phase II" refers to that group of chemical contaminants and the accompanying
1105 regulations promulgated by USEPA on January 30, 1991, at 56 Fed. Reg. 3578.

1106
1107 "Phase IIB" refers to that group of chemical contaminants and the accompanying
1108 regulations promulgated by USEPA on July 1, 1991, at 56 Fed. Reg. 30266.

1109
1110 "Phase V" refers to that group of chemical contaminants promulgated by USEPA
1111 on July 17, 1992, at 57 Fed. Reg. 31776.

1112
1113 "Picocurie" or "pCi" means the quantity of radioactive material producing 2.22
1114 nuclear transformations per minute.

1115

1116 "Plant intake" means the works or structures at the head of a conduit ~~diverting~~
1117 ~~through which~~ water ~~is diverted~~ from a source (e.g., a river or lake) into the
1118 treatment plant.

1119
1120 "Point of disinfectant application" is the point ~~where a supplier applies~~at which
1121 the disinfectant ~~is applied~~ and downstream of ~~where the~~which water is not subject
1122 to recontamination by surface water runoff.

1123
1124 "Point-of-entry treatment device" or "POE ~~device~~" is a treatment device ~~a~~
1125 ~~consumer applies~~applied to the drinking water entering a house or building ~~to~~
1126 ~~reduce for the purpose of reducing~~ contaminants in the drinking water distributed
1127 throughout the house or building.

1128
1129 "Point-of-use treatment device", ~~point-of-use device~~, or "POU" is a ~~water~~
1130 treatment device ~~a consumer applies~~applied to a single tap ~~to reduce~~used for the
1131 ~~purpose of reducing~~ contaminants in drinking water at that ~~one~~ tap. ~~Under Subpart~~
1132 ~~G, a manufacturer, importer, or accredited third-party certifying body must certify~~
1133 ~~a POU device as complying with NSF/ANSI 53 as in effect on the date of~~
1134 ~~manufacture or import to satisfy the rule.~~

1135 ~~BOARD NOTE: NSF/ANSI 53 is the health-based standard for lead and several~~
1136 ~~other contaminants for water filter devices, including tap filter-type treatment~~
1137 ~~devices. Identifying a device as certified under NSF/ANSI 53 at the time of~~
1138 ~~purchase is possible. NSF maintains an on-line list of certified devices at~~
1139 ~~info.nsf.org/Certified/dwtu/listings_leadreduction.asp. See the definition of~~
1140 ~~"accredited third-party certifying body" in 35 Ill. Adm. Code 611.126(b) relating~~
1141 ~~to NSF/ANSI 372.~~

1142
1143 "Presedimentation" means a preliminary treatment process ~~a supplier uses~~used to
1144 remove gravel, sand, and other particulate material from the source water through
1145 settling before the water enters the primary clarification and filtration processes in
1146 a treatment plant.

1147
1148 "Public Health" or "DPH" means the Illinois Department of Public Health.
1149 BOARD NOTE: See the definition of "Agency" in this Section.

1150
1151 "Public water system" or "PWS" means a system ~~providing water for the provision~~
1152 to the public ~~of water~~for human consumption through pipes or other constructed
1153 conveyances; if ~~the~~such system has at least 15 service connections or regularly
1154 serves an average of at least 25 individuals daily at least 60 days out of the year.
1155 A PWS is either a ~~community water system (CWS)~~ or ~~a non-community water~~
1156 ~~system (non-CWS)~~. A PWS does not include any ~~facility defined as~~"special
1157 irrigation district". ~~"PWS"~~Such term includes ~~certain facilities~~the following:
1158

1159 Any collection, treatment, storage, and distribution facilities under control
 1160 of the PWS operator ~~that the operator uses of such system and used~~
 1161 primarily in connection with ~~thesuch~~ system; and

1162
 1163 Any collection or pretreatment storage facilities not under ~~such~~ control of
 1164 the PWS operator that ~~the operator uses-are used~~ primarily in connection
 1165 with ~~thesuch~~ system.

1166 BOARD NOTE: SDWA and USEPA rules use "public water system". The Act
 1167 uses "public water supply". The Board intends that~~Where used in Subpart F,~~
 1168 "public water supply" means the same as "public water system" and both terms
 1169 refer both to the facilities providing water and the persons owning and operating
 1170 those facilities.

1171
 1172 "Radioactive contaminants" ~~means those refers to that group of~~ contaminants for
 1173 which Section 611.330 imposes an MCL designated "radioactive contaminants" in
 1174 USEPA regulatory discussions and guidance documents. "Radioactive
 1175 contaminants" include radium-226 and -228, tritium, strontium-89, strontium-90,
 1176 iodine-131, cesium-134, uranium, gross alpha emitters, gross beta emitters,
 1177 photon emitters, and other nuclides emitting energetic nuclear particles or
 1178 photons.

1179 BOARD NOTE: This definition derives~~Derived~~ from Table C in 40 CFR
 1180 141.25(c), 141.66, appendix A to subpart O, and appendices A and B to subpart Q
 1181 of 40 CFR 141-Table B. These radioactive contaminants must be reported in
 1182 Consumer Confidence Reports under Subpart U when they are detected above the
 1183 levels indicated in Section 611.720(e)(3).

1184
 1185 "Reliably and consistently below the MCL" ~~below a specified level~~ for a
 1186 contaminant means an Agency determination based on analytical results
 1187 following the initial detection of a contaminant to determine the qualitative
 1188 condition of water from an individual sampling point or source. The Agency
 1189 must base this determination on the consistency of analytical results, the degree
 1190 below the MCL, the susceptibility of source water to variation, and other
 1191 vulnerability factors pertinent to the detected contaminant ~~detected~~ that may
 1192 influence the quality of water.

1193 BOARD NOTE: This definition derives~~Derived~~ from 40 CFR 141.23(b)(9),
 1194 (c)(8), (d)(2), and (e)(3) and 141.24(f)(11)(ii), and 141.24(f)(11)(iii), (f)(12),
 1195 (h)(6)(ii), and (h)(8).

1196
 1197 "Rem" means the unit of dose equivalent from ionizing radiation to the total body
 1198 or any internal organ or organ system. A "millirem (mrem)" is 1/1000 of a rem.

1199
 1200 "Repeat compliance period" means a compliance period that begins after the
 1201 initial compliance period.

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"Representative" means that a sample ~~reflects~~must reflect the quality of water a supplier delivers~~that is delivered~~ to consumers under conditions when the supplier uses all raw water sources it requires~~required~~ to supply water under normal use conditions ~~are in use~~ and all treatment ~~is~~ properly operates~~operating~~.

"Residual disinfectant concentration" (~~"RDC"~~ or the variable "C" in CT calculations) means the concentration of disinfectant measured in mg/l in a representative sample of water. For purposes of the requirement of Section 611.241(d) of maintaining a detectable RDC in the distribution system, "RDC" means a residual of free or combined chlorine.

"Safe Drinking Water Act" or "SDWA" means the Public Health Service Act, as amended by the Safe Drinking Water Act, Pub. L. 93-523, 42 USC 300f et seq.

"Sanitary defect" means a defect that could provide a pathway of entry for microbial contamination of a supplier's~~into the~~ distribution system or that indicates~~which is indicative of~~ a failure or imminent failure in an existing~~a~~ barrier to microbial contamination~~that is already in place~~.

"Sanitary survey" means an onsite review of the delineated WHPAs (identifying sources of contamination within the WHPAs and evaluations or the hydrogeologic sensitivity of the delineated WHPAs the Agency conducted under source water assessments or utilizing other relevant information if~~where~~ available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system~~(PWS supplier)~~ to evaluate the adequacy of the system, its sources, and operations for the production and distribution of safe drinking water.

BOARD NOTE: This definition derives~~Derived~~ from 40 CFR 141.2 and 40 CFR 142.16(o)(2).

"Seasonal system" means a non-CWS ~~that is~~ not operating~~operated~~ as a PWS on a year-round basis and starting~~which starts~~ up and shutting~~shuts~~ down at the beginning and end of each operating season.

"Sedimentation" means a process for removing~~removal of~~ solids before filtration by gravity or separation.

"SEP" means special exception permit the Agency issued under 35 Ill. Adm. Code 602.600.

"Service connection", as used in the definition of PWS~~public water system~~, does not include a connection to a system delivering~~that delivers~~ water by a constructed conveyance other than a pipe if any of certain conditions exist~~the~~

following is true:

~~Consumers use the~~The water ~~is used~~ exclusively for purposes other than residential use (consisting of drinking, bathing, and cooking, or other similar uses);

The Agency ~~issues a SEP determining~~determines by issuing a SEP that ~~the supplier provides~~ alternative water for residential use or similar uses for drinking and cooking ~~is provided~~ to achieve the equivalent level of public health protection ~~that provided by~~ the applicable national primary drinking water regulations ~~provide~~; or

The Agency ~~issues a SEP determining~~determines by issuing a SEP that the water provided for residential use or similar uses for drinking, cooking, and bathing is centrally treated or treated at the point of entry by the provider, a pass-through entity, or the user to achieve the equivalent level of ~~public health~~ protection ~~to that provided by~~ the applicable national primary drinking water regulations ~~provide~~.

BOARD NOTE: See ~~SDWA~~ sections 1401(4)(B)(i)(II) and (4)(B)(i)(III) ~~of SDWA~~ (42 USC 300f(4)(B)(i)(II) and (4)(B)(i)(III)).

"Significant deficiency" means a deficiency ~~identified by~~ the Agency ~~identifies~~ in a groundwater system under Section 611.803. A significant deficiency might include a defect in system design, operation, or maintenance or a failure or malfunction of the sources, treatment, storage, or distribution system that the Agency determines ~~causes to be causing~~ or ~~could cause have potential for causing~~ ~~the~~ introduction of contamination into the water ~~the supplier delivers~~delivered to consumers.

BOARD NOTE: ~~This definition derives~~Derived from 40 CFR 142.16(o)(2)(iv). The Agency must submit to USEPA a definition and description of at least one significant deficiency in each of the eight sanitary survey elements listed in Section 611.801(c) as part of the federal primacy requirements. The Board added the general description of what a significant deficiency might include in non-limiting terms, ~~not intending to limit Agency discretion submitting what USEPA requires in order to provide this important definition within the body of the Illinois rules.~~ ~~What the~~No Agency ~~submits~~submission to USEPA ~~cannot~~can provide a definition within the ~~context of~~Board regulations ~~without Board rulemaking action~~.

"Slow sand filtration" means a process involving ~~passing~~passage of raw water through a bed of sand at low velocity (generally less than 0.4 meters per hour (m/h)) resulting in ~~physical and biological mechanisms substantially removing~~substantial particulate ~~material~~removal by physical and biological

1288 mechanisms.

1289
1290 "SOC" or "Synthetic organic chemical contaminant" refers to that group of
1291 contaminants designated as "SOCs" ~~in Section 611.311(c), or "synthetic organic~~
1292 ~~chemicals" or "synthetic organic contaminants", in USEPA regulatory discussions~~
1293 ~~and guidance documents. "SOCs" include alachlor, aldicarb, aldicarb sulfone,~~
1294 ~~aldicarb sulfoxide, atrazine, benzo(a)pyrene, carbofuran, chlordane, dalapon,~~
1295 ~~dibromoethylene (ethylene dibromide or EDB), dibromochloropropane (DBCP),~~
1296 ~~di(2-ethylhexyl)adipate, di(2-ethylhexyl)phthalate, dinoseb, diquat, endothall,~~
1297 ~~endrin, glyphosate, heptachlor, heptachlor epoxide, hexachlorobenzene,~~
1298 ~~hexachlorocyclopentadiene, lindane, methoxychlor, oxamyl, pentachlorophenol,~~
1299 ~~picloram, simazine, toxaphene, polychlorinated biphenyls (PCBs), 2,4-D, 2,3,7,8-~~
1300 ~~TCDD, and 2,4,5-TP.~~

1301 BOARD NOTE: ~~See the Board note appended to Section 611.311 for~~
1302 ~~information relating to implementation of requirements relating to aldicarb,~~
1303 ~~aldicarb sulfone, and aldicarb sulfoxide.~~

1304
1305 "Source" means a well, reservoir, or other source of raw water.

1306
1307 "Special irrigation district" means an irrigation district in existence prior to May
1308 18, 1994 that provides primarily agricultural service through a piped water system
1309 with only incidental residential use or similar use ~~if, where~~ the Agency issues a
1310 SEP making either of two determinationssystem or the residential users or similar
1311 users of the system comply with either of the following exclusion conditions:

1312
1313 The Agency determines ~~by issuing a SEP~~ that the supplier or another
1314 person provides alternative water ~~is provided~~ for residential use or similar
1315 uses for drinking or cooking to achieve the equivalent level of public
1316 health protection ~~that provided by~~ the applicable national primary drinking
1317 water regulations provide; or

1318
1319 The Agency issues a SEP determining~~determines by issuing a SEP~~ that the
1320 water provided for residential use or similar uses for drinking, cooking,
1321 and bathing is centrally treated or treated at the point of entry by the
1322 provider, a pass-through entity, or the user to protect public health at a
1323 levelachieve the equivalent thatlevel of protection provided by the
1324 applicable NPDWRs providenational primary drinking water regulations.

1325 BOARD NOTE: This definition derives~~Derived~~ from 40 CFR 141.2 and
1326 sections 1401(4)(B)(i)(II) and (4)(B)(i)(III) of SDWA (42 USC
1327 300f(4)(B)(i)(II) and (4)(B)(i)(III)).

1328
1329 "Standard monitoring" means the monitoring, ~~performed by~~ the supplier performs
1330 under Section 611.921(a) and (b); at various specified locations in itsa distribution

1331 system, including near entry points, at points ~~representing that represent~~ the
1332 average residence time in ~~its the~~ distribution system, and at points in ~~its the~~
1333 distribution system ~~representing that are representative of~~ high TTHM and HAA5
1334 concentrations throughout the ~~distribution~~ system.

1335 BOARD NOTE: ~~This definition derives~~ Derived from 40 CFR 141.601(a) and
1336 (b).

1337
1338 "Standard sample" means the aliquot of finished drinking water the supplier or
1339 laboratory examines~~that is examined~~ for the presence of coliform bacteria.

1340
1341 "State-only MCL" means one of the inorganic maximum contaminant levels
1342 (MCLs) in Section 611.300 or organic MCLs in Section 611.310.

1343 BOARD NOTE: State-only MCLs are those derived prior to the implementation
1344 of the USEPA "Phase II" regulations. The Section 611.640 definition of this
1345 term, applying only to Subpart O, does not include the Section 611.300 inorganic
1346 MCLs.

1347
1348 "Subpart B system" means a PWS using public water system that uses surface
1349 water or groundwater under the direct influence of surface water as a source
1350 that and which is subject to ~~the requirements of~~ Subpart B and the analytical and
1351 monitoring requirements of Sections 611.531, 611.532, and 611.533 and
1352 Appendices B and C.

1353 BOARD NOTE: USEPA rules define these "subpart H systems".

1354
1355 "Subpart I compliance monitoring" means monitoring required under Subpart I to
1356 demonstrate compliance with requirements for disinfectant residuals, disinfection
1357 byproducts, and disinfection byproduct precursors ~~requirements of Subpart I.~~

1358 BOARD NOTE: The equivalent to Subpart I is subpart L of 40 CFR 141 under
1359 USEPA's rules.

1360
1361 "~~Subpart I system~~" means ~~a public water system that uses surface water or~~
1362 ~~groundwater as a source and which is subject to the disinfectant residuals,~~
1363 ~~disinfection byproducts, and disinfection byproduct precursors requirements of~~
1364 ~~Subpart I.~~

1365
1366 "Subpart Y compliance monitoring" or "Subpart Y monitoring" means monitoring
1367 Subpart Y requires~~required~~ to demonstrate compliance with Stage 2 requirements
1368 for disinfection byproducts ~~requirements of Subpart Y.~~

1369 BOARD NOTE: The equivalent to Subpart Y is subpart V of 40 CFR 141 under
1370 USEPA's rules.

1371
1372 "Supplier ~~of water~~" ~~or "supplier"~~ means any person owning or operating a who
1373 owns or operates a public water system (PWS). This term includes the "official

1374 custodian". Under several rules, "supplier" includes a person performing a
 1375 compliance-related activity on behalf of the owner or operator (e.g., a laboratory
 1376 performing analyses; an engineer performing an assessment, design review,
 1377 system evaluation, or other work; or a property owner or occupant sampling a
 1378 tap).

1379
 1380 "Surface water" means any water that is open to the atmosphere and subject to
 1381 surface runoff.

1382
 1383 "SUVA" means specific ultraviolet absorption at 254 nanometers (nm), ~~which is~~
 1384 an indicator of the humic content of water. ~~"SUVA" is a calculated parameter~~
 1385 ~~obtained by dividing~~ a sample's ultraviolet absorption at a wavelength of 254 nm
 1386 (UV₂₅₄) (in m⁻¹) divided by its concentration of dissolved organic carbon (in
 1387 mg/ℓ).

1388
 1389 "SWS" means "surface water system", a ~~public water supply (PWS using) that~~
 1390 ~~uses~~ only surface water sources, including "groundwater under the direct
 1391 influence of surface water".

1392 BOARD NOTE: This definition derives~~Derived~~ from 40 CFR 141.23(a)(2) note,
 1393 141.24(h)(2) note, 141.70(a), and 141.88(a)(1)(ii)~~141.23(b)(2) and 141.24(f)(2)~~
 1394 note.

1395
 1396 "System-specific study plan" means the plan ~~a, submitted by the~~ supplier submits
 1397 to the Agency under Section 611.922, for studying the occurrence of TTHM and
 1398 HAA5 in ~~the~~ supplier's distribution system based on either monitoring results or
 1399 modelling of the system.

1400 BOARD NOTE: This definition derives~~Derived~~ from 40 CFR 141.602.

1401
 1402 "System with a single service connection" means a system ~~supplying that supplies~~
 1403 drinking water to consumers via a single service line.

1404
 1405 "Too numerous to count" means that the total number of bacterial colonies
 1406 exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.

1407
 1408 "Total organic carbon" or "TOC" means total organic carbon (in mg/ℓ) measured
 1409 using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of
 1410 these ~~to oxidize oxidants that convert~~ organic carbon to carbon dioxide, rounded to
 1411 two significant figures.

1412
 1413 "Total trihalomethanes" or "TTHM" means the sum of the concentration of
 1414 trihalomethanes (THMs), in milligrams per liter (mg/ℓ), rounded to two
 1415 significant figures.

1416 BOARD NOTE: The~~See the~~ definition of "trihalomethanes" lists for a listing of

1417 the four compounds that USEPA considers TTHMs ~~to comprise~~.

1418
1419 "Transient, non-community water system" or "transient non-CWS" means a non-
1420 CWS ~~that does~~ not regularly servingserve at least 25 of the same persons over six
1421 months of the year.

1422 BOARD NOTE: The federal regulations apply to all "public water systems",
1423 ~~which are~~ defined as all systems havingthat have at least 15 service connections
1424 or ~~which~~ regularly servingserve water to at least 25 persons. (See 42 USC
1425 300f(4).) The Act mandates that the Board and the Agency regulate "public water
1426 supplies", definedwhich it defines as having at least 15 service connections or
1427 regularly serving 25 persons daily at least 60 days per year. (See Section 3.365 of
1428 the Act.) The Department of Public Health regulates transient non-CWSs, non-
1429 community water systems.

1430
1431 "Treatment" means any process changingthat changes the physical, chemical,
1432 microbiological, or radiological properties of water that; is under the control of
1433 the supplier; and is not a point-of-use treatment device or a point-of-entry
1434 treatment device ~~as defined in this Section~~. Treatment includes aeration,
1435 coagulation, sedimentation, filtration, activated carbon treatment, disinfection, or
1436 fluoridation.

1437
1438 "Trihalomethane" or "THM" means one of four specificthe family of organic
1439 compounds, named as derivatives of methane; in which halogens substitute three
1440 of the four hydrogen atoms in methane are each substituted by a halogen atom in
1441 the molecular structure. There are fourThe THMs are the following compounds:

1442
1443 Trichloromethane (chloroform),
1444 Dibromochloromethane,
1445 Bromodichloromethane, and
1446 Tribromomethane (bromoform)

1447
1448 "Two-stage lime softening" means a process in which adding chemical
1449 precipitantaddition and precipitating hardness precipitation occur in each of two
1450 distinct unit clarification process unitsprocesses in series prior to filtration.

1451
1452 "µg" means micrograms (1/1,000,000 of a gram).

1453
1454 "USEPA" means the U.S. Environmental Protection Agency.

1455
1456 "Uncovered finished water storage facility" is a tank, reservoir, or other facility
1457 directly open to the atmosphere a supplier uses~~that is used~~ to store water
1458 thatwhich will undergo no further treatment to reduce microbial pathogens except
1459 residual disinfection ~~and which is directly open to the atmosphere~~.

1460
1461 "Very small system waiver" means ~~at~~the conditional waiver from ~~the requirements~~
1462 ~~of~~ Subpart W ~~available under Section 611.924~~applicable to a supplier ~~servicing~~that
1463 ~~serves~~ fewer than 500 persons ~~that took~~and ~~which has taken~~ TTHM and HAA5
1464 samples under Subpart I.

1465 BOARD NOTE: ~~This definition derives~~Derived from 40 CFR 141.604.

1466
1467 "Virus" means a virus of fecal origin that is infectious to humans by waterborne
1468 transmission.

1469
1470 "VOC" or "volatile organic chemical contaminant" refers to that group of
1471 contaminants designated as "VOCs" ~~in Section 611.311(a), "volatile organic~~
1472 ~~chemicals", or "volatile organic contaminants", in USEPA regulatory discussions~~
1473 ~~and guidance documents. "VOCs" include benzene, dichloromethane,~~
1474 ~~tetrachloromethane (carbon tetrachloride), trichloroethylene, vinyl chloride, 1,1,1-~~
1475 ~~trichloroethane (methyl chloroform), 1,1-dichloroethylene, 1,2-dichloroethane,~~
1476 ~~cis-1,2-dichloroethylene, ethylbenzene, monochlorobenzene, o-dichlorobenzene,~~
1477 ~~styrene, 1,2,4-trichlorobenzene, 1,1,2-trichloroethane, tetrachloroethylene,~~
1478 ~~toluene, trans-1,2-dichloroethylene, xylene, and 1,2-dichloropropane.~~

1479
1480 "Waterborne disease outbreak" means ~~at~~the significant occurrence of acute
1481 infectious illness, epidemiologically associated with the ingestion of water from a
1482 ~~public water system (PWS)~~ that is deficient in treatment, as determined by ~~an~~the
1483 appropriate local or State agency.

1484
1485 "Wellhead protection area" or "WHPA" means the surface and subsurface
1486 recharge area surrounding a ~~CWS~~community water supply well or well
1487 field, delineated outside of any applicable setback zones (under Section
1488 17.1 of the Act) under Illinois' Wellhead Protection Program, through
1489 which contaminants are reasonably likely to move toward such well or
1490 well field.

1491 BOARD NOTE: The Agency uses two guidance documents for
1492 identification of WHPAs:

1493
1494 "Guidance Document for Groundwater Protection Needs Assessments",
1495 Illinois Environmental Protection Agency, Illinois State Water Survey,
1496 and Illinois State Geologic Survey joint report, January 1995; and

1497
1498 "The Illinois Wellhead Protection Program under Section 1428 of the
1499 Federal Safe Drinking Water Act", Illinois Environmental Protection
1500 Agency, No. 22480, October 1992.

1501
1502 "Wellhead protection program" means the Illinois wellhead protection program

1503 ~~for the State of Illinois~~, approved by USEPA under section 1428 of the SDWA,
1504 42 USC 300h-7.

1505 BOARD NOTE: ~~This definition derives~~Derived from 40 CFR 141.71(b). The
1506 wellhead protection program includes the "groundwater protection needs
1507 assessment" under Section 17.1 of the Act and 35 Ill. Adm. Code 615 through
1508 617.

1509
1510 "Wholesale system" means a ~~PWS treating public water system that treats~~ source
1511 water as necessary to produce finished water, ~~delivering which then delivers~~ some
1512 or all of that finished water to another ~~PWS public water system~~. ~~A Delivery by a~~
1513 wholesale system may ~~deliver water~~be through a direct connection or through the
1514 distribution system of one or more consecutive systems.

1515 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.2 ~~and other~~
1516 ~~sources as noted~~.

1517
1518 (Source: Amended at 47 Ill. Reg. _____, effective _____)
1519

1520 Section 611.102 Incorporations by Reference

- 1521
1522 a) Analytical Methods. The Board incorporates by reference the following
1523 analytical methods. The ~~methods appear in the body of the rules~~ refer to the
1524 ~~methods~~ by the defined short-form ~~names given them~~name indicated in this
1525 Section.

1526
1527 "AMI Turbiwell (09)" means "Continuous Measurement of Turbidity
1528 Using a SWAN AMI Turbiwell Turbidimeter" (August 10, 2009).
1529 Available from SWAN Analytische Instrumente AG, Studbachstrasse 13,
1530 CH-8340, Hinwil, Switzerland. Referenced in Section 611.531. Available
1531 from the publisher; NEMI; and USEPA, OGWDW (under "Surface Water
1532 Treatment Rule (PDF)").

1533
1534 ASTM Methods. Available from ASTM International, 100 Barr Harbor
1535 Drive, West Conshohocken, PA 19428-2959 (610-832-9585 or
1536 www.astm.org/Standard/standards-and-publications).

1537
1538 "ASTM D511-93 A" means "Standard Test Methods for Calcium
1539 and Magnesium in Water", "Test Method A – Complexometric
1540 Titration", approved 1993, referenced in Section 611.611.

1541
1542 "ASTM D511-03 A" means "Standard Test Methods for Calcium
1543 and Magnesium in Water", "Test Method A – Complexometric
1544 Titration", approved 2003, referenced in Section 611.611.
1545

1546 "ASTM D511-09 A" means "Standard Test Methods for Calcium
1547 and Magnesium in Water", "Test Method A – Complexometric
1548 Titration", approved 2009, referenced in Section 611.611.
1549

1550 "ASTM D511-14 A" means "Standard Test Methods for Calcium
1551 and Magnesium in Water", "Test Method A – Complexometric
1552 Titration", approved 2014, referenced in Section 611.611.
1553

1554 "ASTM D511-93 B" means "Standard Test Methods for Calcium
1555 and Magnesium in Water", "Test Method B – Atomic Absorption
1556 Spectrophotometric", approved 1993, referenced in Section
1557 611.611.
1558

1559 "ASTM D511-03 B" means "Standard Test Methods for Calcium
1560 and Magnesium in Water", "Test Method B – Atomic Absorption
1561 Spectrophotometric", approved 2003, referenced in Section
1562 611.611.
1563

1564 "ASTM D511-09 B" means "Standard Test Methods for Calcium
1565 and Magnesium in Water", "Test Method B – Atomic Absorption
1566 Spectrophotometric", approved 2009, referenced in Section
1567 611.611.
1568

1569 "ASTM D511-14 B" means "Standard Test Methods for Calcium
1570 and Magnesium in Water", "Test Method B – Atomic Absorption
1571 Spectrophotometric", approved 2014, referenced in Section
1572 611.611.
1573

1574 "ASTM D515-88 A" means "Standard Test Methods for
1575 Phosphorus in Water", "Test Method A – Colorimetric Ascorbic
1576 Acid Reduction", approved August 19, 1988, referenced in Section
1577 611.611.
1578

1579 "ASTM D859-94" means "Standard Test Method for Silica in
1580 Water", approved 1994, referenced in Section 611.611.
1581

1582 "ASTM D859-00" means "Standard Test Method for Silica in
1583 Water", approved 2000, referenced in Section 611.611.
1584

1585 "ASTM D859-05" means "Standard Test Method for Silica in
1586 Water", approved 2005, referenced in Section 611.611.
1587

1588 "ASTM D859-10" means "Standard Test Method for Silica in
1589 Water", approved 2010, referenced in Section 611.611.
1590
1591 "ASTM D859-16" means "Standard Test Method for Silica in
1592 Water", approved 2016, referenced in Section 611.611.
1593
1594 "ASTM D1067-92 B" means "Standard Test Methods for Acidity
1595 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1596 Change Titration", approved May 15, 1992, referenced in Section
1597 611.611.
1598
1599 "ASTM D1067-02 B" means "Standard Test Methods for Acidity
1600 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1601 Change Titration", approved in 2002, referenced in Section
1602 611.611.
1603
1604 "ASTM D1067-06 B" means "Standard Test Methods for Acidity
1605 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1606 Change Titration", approved in 2006, referenced in Section
1607 611.611.
1608
1609 "ASTM D1067-11 B" means "Standard Test Methods for Acidity
1610 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1611 Change Titration", approved in 2011, referenced in Section
1612 611.611.
1613
1614 "ASTM D1067-16 B" means "Standard Test Methods for Acidity
1615 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1616 Change Titration", approved in 2006, referenced in Section
1617 611.611.
1618
1619 "ASTM D1125-95 (1999) A" means "Standard Test Methods for
1620 Electrical Conductivity and Resistivity of Water", "Test Method A
1621 – Field and Routine Laboratory Measurement of Static (Non-
1622 Flowing) Samples", approved 1995, reapproved 1999, referenced
1623 in Section 611.611.
1624
1625 "ASTM D1179-93 B" means "Standard Test Methods for Fluoride
1626 in Water", "Test Method B – Ion Selective Electrode", approved
1627 1993, referenced in Section 611.611.
1628

1629 "ASTM D1179-99 B" means "Standard Test Methods for Fluoride
1630 in Water", "Test Method B – Ion Selective Electrode", approved
1631 1999, referenced in Section 611.611.
1632
1633 "ASTM D1179-04 B" means "Standard Test Methods for Fluoride
1634 in Water", "Test Method B – Ion Selective Electrode", approved
1635 2004, referenced in Section 611.611.
1636
1637 "ASTM D1179-10 B" means "Standard Test Methods for Fluoride
1638 in Water", "Test Method B – Ion Selective Electrode", approved
1639 2010, referenced in Section 611.611.
1640
1641 "ASTM D1179-16 B" means "Standard Test Methods for Fluoride
1642 in Water", "Test Method B – Ion Selective Electrode", approved
1643 2010, referenced in Section 611.611.
1644
1645 "ASTM D1253-86" means "Standard Test Method for Residual
1646 Chlorine in Water", reapproved 1992, referenced in Section
1647 611.381.
1648
1649 "ASTM D1253-96" means "Standard Test Method for Residual
1650 Chlorine in Water", approved 1996, referenced in Section 611.381.
1651
1652 "ASTM D1253-03" means "Standard Test Method for Residual
1653 Chlorine in Water", approved 2003, referenced in Sections 611.381
1654 and 611.531.
1655
1656 "ASTM D1253-08" means "Standard Test Method for Residual
1657 Chlorine in Water", approved 2008, referenced in Sections 611.381
1658 and 611.531.
1659
1660 "ASTM D1253-14" means "Standard Test Method for Residual
1661 Chlorine in Water", approved 2014, referenced in Sections 611.381
1662 and 611.531.
1663
1664 "ASTM D1293-95" means "Standard Test Methods for pH of
1665 Water", approved 1995, referenced in Section 611.611.
1666
1667 "ASTM D1293-99" means "Standard Test Methods for pH of
1668 Water", approved 1999, referenced in Section 611.611.
1669
1670 "ASTM D1293-12" means "Standard Test Methods for pH of
1671 Water", approved 2012, referenced in Section 611.611.

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"ASTM D1293-18" means "Standard Test Methods for pH of Water", approved 2018, referenced in Section 611.611.

"ASTM D1688-95 A" means "Standard Test Methods for Copper in Water", "Test Method A – Atomic Absorption, Direct", approved 1995, referenced in Section 611.611.

"ASTM D1688-02 A" means "Standard Test Methods for Copper in Water", "Test Method A – Atomic Absorption, Direct", approved 2002, referenced in Section 611.611.

"ASTM D1688-07 A" means "Standard Test Methods for Copper in Water", "Test Method A – Atomic Absorption, Direct", approved 2007, referenced in Section 611.611.

"ASTM D1688-12 A" means "Standard Test Methods for Copper in Water", "Test Method A – Atomic Absorption, Direct", approved 2012, referenced in Section 611.611.

"ASTM D1688-17 A" means "Standard Test Methods for Copper in Water", "Test Method A – Atomic Absorption, Direct", approved 2017, referenced in Section 611.611.

"ASTM D1688-95 C" means "Standard Test Methods for Copper in Water", "Test Method C – Atomic Absorption, Graphite Furnace", approved 1995, referenced in Section 611.611.

"ASTM D1688-02 C" means "Standard Test Methods for Copper in Water", "Test Method C – Atomic Absorption, Graphite Furnace", approved 2002, referenced in Section 611.611.

"ASTM D1688-07 C" means "Standard Test Methods for Copper in Water", "Test Method C – Atomic Absorption, Graphite Furnace", approved 2007, referenced in Section 611.611.

"ASTM D1688-12 C" means "Standard Test Methods for Copper in Water", "Test Method C – Atomic Absorption, Graphite Furnace", approved 2012, referenced in Section 611.611.

"ASTM D1688-17 C" means "Standard Test Methods for Copper in Water", "Test Method C – Atomic Absorption, Graphite Furnace", approved 2017, referenced in Section 611.611.

1715
1716 "ASTM D2036-98 A" means "Standard Test Methods for Cyanide
1717 in Water", "Test Method A – Total Cyanides after Distillation",
1718 approved 1998, referenced in Section 611.611.
1719
1720 "ASTM D2036-06 A" means "Standard Test Methods for Cyanide
1721 in Water", "Test Method A – Total Cyanides after Distillation",
1722 approved 2006, referenced in Section 611.611.
1723
1724 "ASTM D2036-98 B" means "Standard Test Methods for Cyanide
1725 in Water", "Test Method B – Cyanides Amenable to Chlorination
1726 by Difference", approved 1998, referenced in Section 611.611.
1727
1728 "ASTM D2036-06 B" means "Standard Test Methods for Cyanide
1729 in Water", "Test Method B – Cyanides Amenable to Chlorination
1730 by Difference", approved 2006, referenced in Section 611.611.
1731
1732 "ASTM D2459-72" means "Standard Test Method for Gamma
1733 Spectrometry in Water", approved July 28, 1972, discontinued
1734 1988, referenced in Section 611.720.
1735
1736 "ASTM D2460-97" means "Standard Test Method for
1737 Radionuclides of Radium in Water", approved 1997, referenced in
1738 Section 611.720.
1739
1740 "ASTM D2460-07" means "Standard Test Method for
1741 Radionuclides of Radium in Water", approved 2007, referenced in
1742 Section 611.720.
1743
1744 "ASTM D2907-97" means "Standard Test Methods for
1745 Microquantities of Uranium in Water by Fluorometry", approved
1746 1997, referenced in Section 611.720.
1747
1748 "ASTM D2972-97 B" means "Standard Test Methods for Arsenic
1749 in Water", "Test Method B – Atomic Absorption, Hydride
1750 Generation", approved 1997, referenced in Section 611.611.
1751
1752 "ASTM D2972-03 B" means "Standard Test Methods for Arsenic
1753 in Water", "Test Method B – Atomic Absorption, Hydride
1754 Generation", approved 2003, referenced in Section 611.611.
1755

1756 "ASTM D2972-15 B" means "Standard Test Methods for Arsenic
1757 in Water", "Test Method B – Atomic Absorption, Hydride
1758 Generation", approved 2015, referenced in Section 611.611.
1759

1760 "ASTM D2972-97 C" means "Standard Test Methods for Arsenic
1761 in Water", "Test Method C – Atomic Absorption, Graphite
1762 Furnace", approved 1997, referenced in Section 611.611.
1763

1764 "ASTM D2972-03 C" means "Standard Test Methods for Arsenic
1765 in Water", "Test Method C – Atomic Absorption, Graphite
1766 Furnace", approved 2003, referenced in Section 611.611.
1767

1768 "ASTM D2972-15 C" means "Standard Test Methods for Arsenic
1769 in Water", "Test Method C – Atomic Absorption, Graphite
1770 Furnace", approved 2015, referenced in Section 611.611.
1771

1772 "ASTM D3223-97" means "Standard Test Method for Total
1773 Mercury in Water", approved 1997, referenced in Section 611.611.
1774

1775 "ASTM D3223-02" means "Standard Test Method for Total
1776 Mercury in Water", approved 2002, referenced in Section 611.611.
1777

1778 "ASTM D3223-12" means "Standard Test Method for Total
1779 Mercury in Water", approved 2012, referenced in Section 611.611.
1780

1781 ["ASTM D3223-17" means "Standard Test Method for Total](#)
1782 [Mercury in Water", approved 2017, referenced in Section 611.611.](#)
1783

1784 "ASTM D3454-97" means "Standard Test Method for Radium-226
1785 in Water", approved 1997, referenced in Section 611.720.
1786

1787 "ASTM D3454-05" means "Standard Test Method for Radium-226
1788 in Water", approved 2005, referenced in Section 611.720.
1789 ["ASTM D3454-18" means "Standard Test Method for Radium-226](#)
1790 [in Water", approved 2005, referenced in Section 611.720.](#)
1791

1792 "ASTM D3559-96 D" means "Standard Test Methods for Lead in
1793 Water", "Test Method D – Atomic Absorption, Graphite Furnace",
1794 approved August 6, 1990, referenced in Section 611.611.
1795

1796 "ASTM D3559-03 D" means "Standard Test Methods for Lead in
1797 Water", "Test Method D – Atomic Absorption, Graphite Furnace",
1798 approved 2003, referenced in Section 611.611.

1799
1800 "ASTM D3559-08 D" means "Standard Test Methods for Lead in
1801 Water", "Test Method D – Atomic Absorption, Graphite Furnace",
1802 approved 2008, referenced in Section 611.611.
1803
1804 "ASTM D3559-15 D" means "Standard Test Methods for Lead in
1805 Water", "Test Method D – Atomic Absorption, Graphite Furnace",
1806 approved 2015, referenced in Section 611.611.
1807
1808 "ASTM D3645-97 B" means "Standard Test Methods for
1809 Beryllium in Water", "Method B – Atomic Absorption, Graphite
1810 Furnace", approved 1997, referenced in Section 611.611.
1811
1812 "ASTM D3645-03 B" means "Standard Test Methods for
1813 Beryllium in Water", "Method B – Atomic Absorption, Graphite
1814 Furnace", approved 2003, referenced in Section 611.611.
1815
1816 "ASTM D3645-08 B" means "Standard Test Methods for
1817 Beryllium in Water", "Method B – Atomic Absorption, Graphite
1818 Furnace", approved 2008, referenced in Section 611.611.
1819
1820 "ASTM D3645-15 B" means "Standard Test Methods for
1821 Beryllium in Water", "Method B – Atomic Absorption, Graphite
1822 Furnace", approved 2015, referenced in Section 611.611.
1823
1824 "ASTM D3649-91" means "Standard Test Method for High-
1825 Resolution Gamma-Ray Spectrometry of Water", approved 1991,
1826 referenced in Section 611.720.
1827
1828 "ASTM D3649-98a" means "Standard Test Method for High-
1829 Resolution Gamma-Ray Spectrometry of Water", approved 1998,
1830 referenced in Section 611.720.
1831
1832 "ASTM D3649-06" means "Standard Test Method for High-
1833 Resolution Gamma-Ray Spectrometry of Water", approved 2006,
1834 referenced in Section 611.720.
1835
1836 "ASTM D3697-92" means "Standard Test Method for Antimony in
1837 Water", approved 1992, referenced in Section 611.611.
1838
1839 "ASTM D3697-02" means "Standard Test Method for Antimony in
1840 Water", approved 2002, referenced in Section 611.611.
1841

1842 "ASTM D3697-07" means "Standard Test Method for Antimony in
1843 Water", approved 2007, referenced in Section 611.611.
1844
1845 "ASTM D3697-12" means "Standard Test Method for Antimony in
1846 Water", approved 2012, referenced in Section 611.611.
1847
1848 ["ASTM D3697-17" means "Standard Test Method for Antimony in](#)
1849 [Water", approved 2017, referenced in Section 611.611.](#)
1850
1851 "ASTM D3859-98 A" means "Standard Test Methods for
1852 Selenium in Water", "Method A – Atomic Absorption, Hydride
1853 Method", approved 1998, referenced in Section 611.611.
1854
1855 "ASTM D3859-03 A" means "Standard Test Methods for
1856 Selenium in Water", "Method A – Atomic Absorption, Hydride
1857 Method", approved 2003, referenced in Section 611.611.
1858
1859 "ASTM D3859-08 A" means "Standard Test Methods for
1860 Selenium in Water", "Method A – Atomic Absorption, Hydride
1861 Method", approved 2008, referenced in Section 611.611.
1862
1863 "ASTM D3859-15 A" means "Standard Test Methods for
1864 Selenium in Water", "Method A – Atomic Absorption, Hydride
1865 Method", approved 2015, referenced in Section 611.611.
1866
1867 "ASTM D3859-98 B" means "Standard Test Methods for Selenium
1868 in Water", "Method B – Atomic Absorption, Graphite Furnace",
1869 approved 1998, referenced in Section 611.611.
1870
1871 "ASTM D3859-03 B" means "Standard Test Methods for Selenium
1872 in Water", "Method B – Atomic Absorption, Graphite Furnace",
1873 approved 2003, referenced in Section 611.611.
1874
1875 "ASTM D3859-08 B" means "Standard Test Methods for Selenium
1876 in Water", "Method B – Atomic Absorption, Graphite Furnace",
1877 approved 2008, referenced in Section 611.611.
1878
1879 "ASTM D3859-15 B" means "Standard Test Methods for Selenium
1880 in Water", "Method B – Atomic Absorption, Graphite Furnace",
1881 approved 2015, referenced in Section 611.611.
1882

1883 "ASTM D3867-90 A" means "Standard Test Methods for Nitrite-
1884 Nitrate in Water", "Test Method A – Automated Cadmium
1885 Reduction", approved 1990, referenced in Section 611.611.
1886
1887 "ASTM D3867-90 B" means "Standard Test Methods for Nitrite-
1888 Nitrate in Water", "Test Method B – Manual Cadmium
1889 Reduction", approved January 10, 1990, referenced in Section
1890 611.611.
1891
1892 "ASTM D3972-97" means "Standard Test Method for Isotopic
1893 Uranium in Water by Radiochemistry", approved 1997, referenced
1894 in Section 611.720.
1895
1896 "ASTM D3972-02" means "Standard Test Method for Isotopic
1897 Uranium in Water by Radiochemistry", approved 2002, referenced
1898 in Section 611.720.
1899
1900 "ASTM D3972-09" means "Standard Test Method for Isotopic
1901 Uranium in Water by Radiochemistry", approved 2009, referenced
1902 in Section 611.720.
1903
1904 "ASTM D4107-91" means "Standard Test Method for Tritium in
1905 Drinking Water", approved 1991, referenced in Section 611.720.
1906
1907 "ASTM D4107-98" means "Standard Test Method for Tritium in
1908 Drinking Water", approved 1998, referenced in Section 611.720.
1909
1910 "ASTM D4107-08" means "Standard Test Method for Tritium in
1911 Drinking Water", approved 2008, referenced in Section 611.720.
1912
1913 "ASTM D4327-97" means "Standard Test Method for Anions in
1914 Water by Ion Chromatography", approved 1997, referenced in
1915 Section 611.611.
1916
1917 "ASTM D4327-03" means "Standard Test Method for Anions in
1918 Water by Ion Chromatography", approved 2003, referenced in
1919 Section 611.611.
1920
1921 "ASTM D4327-11" means "Standard Test Method for Anions in
1922 Water by Ion Chromatography", approved 2011, referenced in
1923 Section 611.611.
1924

1925	
1926	
1927	<u>"ASTM D4327-17" means "Standard Test Method for Anions in Water by Ion Chromatography", approved 2017, referenced in Section 611.611.</u>
1928	
1929	
1930	"ASTM D4785-93" means "Standard Test Method for Low-Level Iodine-131 in Water", approved 1993, referenced in Section
1931	611.720.
1932	
1933	"ASTM D4785-00a" means "Standard Test Method for Low-Level Iodine-131 in Water", approved 2000, referenced in Section
1934	611.720.
1935	
1936	
1937	"ASTM D4785-08" means "Standard Test Method for Low-Level Iodine-131 in Water", approved 2008, referenced in Section
1938	611.720.
1939	
1940	
1941	"ASTM D5174-97" means "Standard Test Method for Trace Uranium in Water by Pulsed-Laser Phosphorimetry", approved
1942	1997, referenced in Section 611.720.
1943	
1944	
1945	"ASTM D5174-02" means "Standard Test Method for Trace Uranium in Water by Pulsed-Laser Phosphorimetry", approved
1946	2002, referenced in Section 611.720.
1947	
1948	
1949	"ASTM D5174-07" means "Standard Test Method for Trace Uranium in Water by Pulsed-Laser Phosphorimetry", approved
1950	2007, referenced in Section 611.720.
1951	
1952	
1953	"ASTM D5317-93" means "Standard Test Method for Determination of Chlorinated Organic Acid Compounds in Water
1954	by Gas Chromatography with an Electron Capture Detector",
1955	approved 1993, referenced in Section 611.645.
1956	
1957	
1958	"ASTM D5317-98(2003)" means "Standard Test Method for Determination of Chlorinated Organic Acid Compounds in Water
1959	by Gas Chromatography with an Electron Capture Detector",
1960	approved 1998 (reapproved 2003), referenced in Section 611.645.
1961	
1962	
1963	"ASTM D5673-03" means "Standard Test Method for Elements in Water by Inductively Coupled Plasma-Mass Spectrometry",
1964	approved 2003, referenced in Section 611.720.
1965	
1966	

1967	"ASTM D5673-05" means "Standard Test Method for Elements in Water by Inductively Coupled Plasma-Mass Spectrometry", approved 2005, referenced in Section 611.720.
1968	
1969	
1970	
1971	"ASTM D5673-10" means "Standard Test Method for Elements in Water by Inductively Coupled Plasma-Mass Spectrometry", approved 2010, referenced in Section 611.720.
1972	
1973	
1974	
1975	"ASTM D5673-16" means "Standard Test Method for Elements in Water by Inductively Coupled Plasma-Mass Spectrometry", approved 2016, referenced in Section 611.720.
1976	
1977	
1978	
1979	"ASTM D6239-09" means "Standard Test Method for Uranium in Drinking Water by High-Resolution Alpha-Liquid-Scintillation Spectrometry", approved 2009, referenced in Section 611.720.
1980	
1981	
1982	
1983	"ASTM D6508-00(2005)" means "Standard Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte", approved 2000 (revised 2005), referenced in Section 611.611.
1984	
1985	
1986	
1987	
1988	
1989	"ASTM D6508-15" means "Standard Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte", approved 2015, referenced in Section 611.611.
1990	
1991	
1992	
1993	"ASTM D6581-00" means "Standard Test Method for Bromate, Bromide, Chlorate, and Chlorite in Drinking Water by Chemically Suppressed Ion Chromatography", approved 2000, referenced in Section 611.381.
1994	
1995	
1996	
1997	
1998	"ASTM D6581-08 A" means "Standard Test Method for Bromate, Bromide, Chlorate, and Chlorite in Drinking Water by Suppressed Ion Chromatography", "Test Method A – Chemically Suppressed Ion Chromatography", approved 2008, referenced in Section 611.381.
1999	
2000	
2001	
2002	
2003	
2004	"ASTM D6581-08 B" means "Standard Test Method for Bromate, Bromide, Chlorate, and Chlorite in Drinking Water by Suppressed Ion Chromatography", "Test Method B – Electrolytically Suppressed Ion Chromatography", approved 2008, referenced in Section 611.381.
2005	
2006	
2007	
2008	
2009	

2010 "ASTM D6888-04" means "Standard Test Method for Available
2011 Cyanide with Ligand Displacement and Flow Injection Analysis
2012 (FIA) Utilizing Gas Diffusion Separation and Amperometric
2013 Detection", approved 2004, referenced in Section 611.611.
2014

2015 "ASTM D6919-03" means "Standard Test Method for
2016 Determination of Dissolved Alkali and Alkaline Earth Cations and
2017 Ammonium in Water and Wastewater by Ion Chromatography",
2018 approved 2003, referenced in Section 611.611.
2019

2020 "ASTM D6919-09" means "Standard Test Method for
2021 Determination of Dissolved Alkali and Alkaline Earth Cations and
2022 Ammonium in Water and Wastewater by Ion Chromatography",
2023 approved 2009, referenced in Section 611.611.
2024

2025 ["ASTM D6919-17" means "Standard Test Method for](#)
2026 [Determination of Dissolved Alkali and Alkaline Earth Cations and](#)
2027 [Ammonium in Water and Wastewater by Ion Chromatography"](#),
2028 [approved 2017, referenced in Section 611.611.](#)
2029

2030 "ASTM D7283-17" means "Standard Test Method for Alpha and
2031 Beta Activity in Water by Liquid Scintillation Counting", approved
2032 2017, referenced in Section 611.720.
2033

2034 "ATI Orion Technical Bulletin 601 (94)" means "Standard Method of
2035 Testing for Nitrate in Drinking Water" (July 1994), Part Number 221890-
2036 001. Available from Thermo-Fisher Scientific, 168 Third Ave, Waltham,
2037 MA 02451 (800-556-2323; www.thermofisher.com). Referenced in
2038 Section 611.611.
2039

2040 "Charm Fast Phage (12)" means "Fast Phage Test: Presence/Absence for
2041 Coliphage in Ground Water with Same Day Positive Prediction", ATP
2042 Case No. D09-0007, Version 009 (November 28, 2012). Available from
2043 Charm Sciences, Inc., 659 Andover St., Lawrence, MA 01843-1032.
2044 Referenced in Section 611.802 and USEPA, OGWDW (under "Ground
2045 Water Rule (PDF)").
2046

2047 "Chromocult® (00)" means "Chromocult® Coliform Agar
2048 Presence/Absence Membrane Filter Test Method for Detection and
2049 Identification of Coliform Bacteria and Escherichia coli in Finished
2050 Waters", Version 1.0 (November 2000). Available from EMD Millipore
2051 (division of Merck KGaA, Darmstadt, Germany), 290 Concord Road,
2052 Billerica, MA 01821 (800-645-5476 or 781-533-6000) and USEPA,

2053 OGWDW (under "Ground Water Rule (PDF)" and "Revised Total
2054 Coliforms Rules (PDF)"). Referenced in Sections 611.802 and 611.1052.
2055
2056 "E*Colite (98)" means "Alternative Test Procedure Case #D95-0007:
2057 Charm E*Colite Presence/Absence Test for Detection and Identification of
2058 Coliform Bacteria and Escherichia coli in Drinking Water" (January 9,
2059 1998). Available from Charm Sciences, Inc., 659 Andover St., Lawrence,
2060 MA 01843-1032 and USEPA, OGWDW (under "Ground Water Rule
2061 (PDF)" and "Revised ~~Total~~Tetast Coliforms Rules (PDF)"). Referenced in
2062 Sections 611.802 and 611.1052.
2063
2064 EML Methods. Available from USEPA, OGWDW (listed under
2065 "Radionuclides (PDF)" by individual method numbers).
2066
2067 EML (90). In "EML Procedures Manual", HASL 300, Volumes 1
2068 and 2, 27th ed. (November 1990).
2069
2070 "EML (90) Ga-01" means section 4.5.2.3, Ga-01, "Gamma
2071 Radioassay", in section 4.5.2.3, "Radiometrology", in 27th
2072 ed. Referenced in Section 611.720. USEPA, OGWDW
2073 lists EML (90) Ga-01 as "4.5.2.3".
2074
2075 "EML (90) Ra-05" means Ra-05, "Radium-226 in Tap
2076 Water, Urine, and Feces", in section 4.5.4,
2077 "Radiochemical", in 27th ed. Referenced in Section
2078 611.720.
2079
2080 "EML (90) Sr-01" means Sr-01, "Strontium-89", in section
2081 4.5.4, "Radiochemical", in 27th ed. Referenced in Section
2082 611.720.
2083
2084 "EML (90) Sr-02" means Sr-02, "Strontium-90", in section
2085 4.5.4, "Radiochemical", in 27th ed. Referenced in Section
2086 611.720.
2087
2088 "EML (90) U-02" means U-02, "Isotopic Uranium in
2089 Biological and Environmental Materials", in section 4.5.4,
2090 "Radiochemical", in 27th ed.
2091
2092 "EML (90) U-04" means U-04, "Uranium in Biological and
2093 Environmental Materials", in section 4.5.4,
2094 "Radiochemical", in 27th ed. Referenced in Section
2095 611.720.

2096
 2097 EML (97). In "EML Procedures Manual", HASL 300, Volumes 1
 2098 and 2, 28th ed., Revision 0 (February 1997). Currently available
 2099 on-line from United States Department of Homeland Security,
 2100 Science and Technology Directorate (formerly United States
 2101 Department of Energy, Environmental Measurements Laboratory)
 2102 (www.hSDL.org/?abstract&doc=100185&coll=limited or
 2103 www.wipp.energy.gov/namp/emllegacy/procman.htm).
 2104
 2105 "EML (97) Ga-01-R" means Ga-01-R, "Gamma
 2106 Radioassay", in section 4.5.2, "Radiometry", in 28th ed.
 2107 Referenced in Section 611.720.
 2108
 2109 "EML (97) Ra-04" means Ra-04-RC, "Radium-226 in Tap
 2110 Water, Urine, and Feces", in section 4.5.4,
 2111 "Radiochemical", in 28th ed. Referenced in Section
 2112 611.720.
 2113
 2114 "EML (97) Sr-01" means Sr-01-RC, "Strontium-89", in
 2115 section 4.5.4, "Radiochemical", in 28th ed. Referenced in
 2116 Section 611.720.
 2117
 2118 "EML (97) Sr-02" means Sr-02-RC, "Strontium-90", in
 2119 section 4.5.4, "Radiochemical", in 28th ed. Referenced in
 2120 Section 611.720.
 2121
 2122 "EML (97) U-02" means U-02-RC, "Isotopic Uranium in
 2123 Biological and Environmental Materials", in section 4.5.4,
 2124 "Radiochemical", in 28th ed.
 2125
 2126 "EML (97) U-04" means U-04-RC, "Uranium in Biological
 2127 and Environmental Materials", in section 4.5.4,
 2128 "Radiochemical", in 28th ed. Referenced in Section
 2129 611.720.
 2130
 2131 "Enterolert (96)" means "Evaluation of Enterolert for Enumeration of
 2132 Enterococci in Recreational Waters", Applied and Environmental
 2133 Microbiology, Oct. 1996, vol. 62, no. 10, p. 3881. Available from
 2134 American Society for Microbiology, 1752 N Street N.W., Washington,
 2135 DC 20036 (202-737-3600). Referenced in Section 611.802.
 2136 BOARD NOTE: ~~In At the table to~~ 40 CFR 141.402(c)(2), USEPA
 2137 approved the method ~~as described in~~ the above literature review [describes](#).
 2138 The method itself is ~~embodied~~ in the printed instructions to the proprietary

2139 kit available from IDEXX Laboratories, Inc. (accessible on-line and
 2140 available by download from www.asm.org, as "Enterolert™ Procedure").
 2141 ASTM approved the method as "Standard Test Method for Enterococci in
 2142 Water Using Enterolert™", which is available in two versions from ASTM:
 2143 ASTM D6503-99 and ASTM D6503-99(2005). While it is more
 2144 conventional to incorporate by reference the method as presented in the kit
 2145 instructions or as approved by ASTM, the Board is constrained to
 2146 incorporate by reference the version that USEPA ~~has~~ explicitly
 2147 [approves](#)~~approved~~, which is the version ~~that appears in~~ the technical
 2148 literature [describes](#).

2149
 2150 "Georgia Radium (04)" means "Method for the Determination of Radium-
 2151 226 and Radium-228 in Drinking Water by Gamma-ray Spectrometry
 2152 Using HPGE or Ge(Li) Detectors", Revision 1.2 (December 2004).
 2153 Available from Georgia Tech Research Institute, Robert Rosson, 925
 2154 Dalney Road, Atlanta, GA 30332 (404-407-6339) and USEPA, OGWDW
 2155 (under "Radionuclides (PDF)"). Referenced in Section 611.720.

2156
 2157 "GLI Method 2 (92)" means "Turbidity GLI Method 2" (November 2,
 2158 1992). Available from Great Lakes Instruments, Inc., 8855 North 55th
 2159 Street, Milwaukee, WI 53223. Also available from USEPA, OGWDW
 2160 (under "Surface Water Treatment Rule (PDF)"). Referenced in Section
 2161 611.531.

2162
 2163 "Guidance Manual for Filtration and Disinfection (91)" means "Guidance
 2164 Manual for Compliance with the Filtration and Disinfection Requirements
 2165 for Public Water Systems Using Surface Water Sources" (March 1991),
 2166 EPA 570/3-91-001, USEPA, Office of Drinking Water, Criteria and
 2167 Standards Division, Science and Technology Branch. Available from
 2168 NTRL (document number PB93-222933) and USEPA, NSCEP (search
 2169 "570391001"). Referenced in Sections 611.111 and 611.212.

2170
 2171 Hach Methods. Available from Hach Company, P.O. Box 389, Loveland,
 2172 CO 80539-0389 (800-227-4224 or www.hach.com).

2173
 2174 "Hach 8026 (15)" means Hach Method 8026, "Spectrophotometric
 2175 Measurement of Copper in Finished Drinking Water", Revision 1.2
 2176 (December 2015). Referenced in Section 611.611.

2177 BOARD NOTE: Also available from USEPA, OGWDW (under
 2178 "Inorganic Contaminants and Other Inorganic Constituents
 2179 (PDF)").

2180

2181 "Hach 8195 (18)" means Hach Method 8195, "Determination of
2182 Turbidity by Nephelometry", Revision 3.0 (March 2018).
2183 Referenced in Section 611.531.
2184
2185 "Hach 10029 (99) (m-ColiBlue24®)" means m-ColiBlue24® Test,
2186 Method No. 10029, "Total Coliforms and E. coli Membrane
2187 Filtration Method with m-ColiBlue24® Broth", Revision 2 (August
2188 17, 1999), document number DOC316.53.001213. Referenced in
2189 Sections 611.802 and 611.1052.
2190 BOARD NOTE: Also available from USEPA, OGWDW (under
2191 "Ground Water Rule (PDF)").
2192
2193 "Hach 10133 (00) (FilterTrak)" means Hach FilterTrak Method
2194 10133, "Determination of Turbidity by Laser Nephelometry",
2195 Revision 2.0 (January 7, 2000) in Appendix A of "Introduction to
2196 Laser Nephelometry: An Alternative to Conventional Particulate
2197 Analysis Methods". Referenced in Section 611.531.
2198 BOARD NOTE: Also available from USEPA, OGWDW (under
2199 "Surface Water Treatment Rule (PDF)").
2200
2201 "Hach 10206 (11) (TNTplus 835/836)" means Hach TNTplus
2202 835/836 Method 10206, "Spectrophotometric Measurement of
2203 Nitrate in Water and Wastewater", Revision 2.0 (January 2011).
2204 Referenced in Section 611.611.
2205 BOARD NOTE: Also available from USEPA, OGWDW (under
2206 "Inorganic Contaminants and Other Inorganic Constituents
2207 (PDF)").
2208
2209 "Hach 10225 (11) (SPADNS 2)" means Hach SPADNS 2 Method
2210 10225, "Fluoride, USEPA SPADNS 2 Method 10225", Revision
2211 2.0 (January 2011). Referenced in Section 611.611.
2212 BOARD NOTE: Also available from USEPA, OGWDW (under
2213 "Inorganic Contaminants and Other Inorganic Constituents
2214 (PDF)").
2215
2216 "Hach 10241 (15)" means Hach Method 10241,
2217 "Spectrophotometric Measurement of Free Chlorine (Cl₂) in
2218 Finished Drinking Water", Revision 1.2 (November 2015).
2219 Referenced in Sections 611.381 and 611.531.
2220 BOARD NOTE: Also available from USEPA, OGWDW (under
2221 "Disinfection Byproduct Rules (PDF)").
2222

2223 "Hach 10258 (16)" means Hach Method 10258, "Determination of
2224 Turbidity by 360° Nephelometry", Revision 1.0 (January 2016).
2225 Referenced in Section 611.531.
2226 BOARD NOTE: Also available from USEPA, OGWDW (under
2227 "Surface Water Treatment Rule (PDF)").
2228
2229 "Hach 10258 (18)" means Hach Method 10258, "Determination of
2230 Turbidity by 360° Nephelometry", Revision 2.0 (March 2018).
2231 Referenced in Section 611.531.
2232
2233 "Hach 10260 (13)" means Hach Method 10260, "Determination of
2234 Chlorinated Oxidants (Free and Total) in Water Using Disposable
2235 Planar Reagent-filled Cuvettes and Mesofluic Channel
2236 Colorimetry" (April 2013). Referenced in Sections 611.381 and
2237 611.531.
2238 BOARD NOTE: Also available from USEPA, OGWDW (under
2239 "Disinfection Byproduct Rules (PDF)").
2240
2241 "Hach 10261 (15)" means Hach Method 10261, "Total Organic
2242 Carbon in Finished Drinking Water by Catalyzed Ozone Hydroxyl
2243 Radical Oxidation Infrared Analysis", Revision 1.2 (December
2244 2015). Referenced in Section 611.381.
2245 BOARD NOTE: Also available from USEPA, OGWDW (under
2246 "Disinfection Byproduct Rules (PDF)").
2247
2248 "Hach 10267 (15)" means Hach Method 10267,
2249 "Spectrophotometric Measurement of Total Organic Carbon
2250 (TOC) in Finished Drinking Water", Revision 1.2 (December
2251 2015). Referenced in Section 611.381.
2252 BOARD NOTE: Also available from USEPA, OGWDW (under
2253 "Disinfection Byproduct Rules (PDF)").
2254
2255 "Hach 10272 (15)" means Hach Method 10272,
2256 "Spectrophotometric Measurement of Copper in Finished Drinking
2257 Water", Revision 1.2 (December 2015). Referenced in Section
2258 611.611.
2259 BOARD NOTE: Also available from USEPA, OGWDW (under
2260 "Inorganic Contaminants and Other Inorganic Constituents
2261 (PDF)").
2262
2263 "ITS D99-003 (03)" means "Method # (D99-003): Free Chlorine Species
2264 (HOCl- and OCl-) by Test Strip", Revision 3.0 (November 21, 2003).
2265 Available from Industrial Test Systems, Inc., 1875 Langston St., Rock

2266 Hill, SC 29730 (803-329-2999) and USEPA, OGWDW (under
2267 "Disinfection Byproduct Rules (PDF)"). Referenced in Section 611.381.

2268
2269 "Kelada 01 (01)" means "Method Kelada-01: Kelada Automated Test
2270 Methods for Total Cyanide, Acid Dissociable Cyanide, and Thiocyanate",
2271 Revision 1.2 (August 2001), USEPA Office of Water, document number
2272 EPA 821/B-01-009. Available from NTRL (document number PB2001-
2273 108275) and USEPA, OGWDW (under "Inorganic Contaminants and
2274 Other Inorganic Constituents (PDF)"). Referenced in Section 611.611.

2275
2276 Lovibond Methods. Available from Tintometer, Inc., 6456 Parkland
2277 Drive, Sarasota, FL 34243 (800-922-5242, 941-758-6410, or
2278 www.lovibond.us) and USEPA, OGWDW (under "Surface Water
2279 Treatment Rule (PDF)").

2280
2281 "Lovibond PTV 1000 (16)" means "Continuous Measurement of
2282 Drinking Water Turbidity Using a Lovibond PTV 1000 White
2283 Light LED Turbidimeter", Revision 1.0 (December 20, 2016).
2284 Referenced in Section 611.531.

2285
2286 "Lovibond PTV 2000 (16)" means "Continuous Measurement of
2287 Drinking Water Turbidity Using a Lovibond PTV 2000 660-nm
2288 LED Turbidimeter", Revision 1.0 (December 20, 2016).
2289 Referenced in Section 611.531.

2290
2291 "Lovibond PTV 6000 (16)" means "Continuous Measurement of
2292 Drinking Water Turbidity Using a Lovibond PTV 6000 Laser
2293 Turbidimeter", Revision 1.0 (December 20, 2016). Referenced in
2294 Section 611.531.

2295
2296 [Maine Methods. Available from Maine Health and Environmental Testing](#)
2297 [Laboratory, 221 State Street, Augusta, ME 04333 \(207-287-2727\).](#)

2298
2299 "ME355.01 (09)" means "Determination of Cyanide in Drinking
2300 Water by GC/MS Headspace Analysis", Revision 1 (May 26,
2301 2009). ~~Available from H&E Testing Laboratory, 221 State Street,~~
2302 ~~Augusta, ME 04333 (207-287-2727).~~ Referenced in Section
2303 611.611. ~~Also available~~ Available from ~~the publisher;~~ NEMI; and
2304 USEPA, OGWDW (under "Inorganic Contaminants and Other
2305 Inorganic Constituents (PDF)").

2306
2307 ["ME 531 \(19\)" means "Measurement or N-](#)
2308 [Methylcarbamoyloximes and N-Methylcarbamates in Drinking](#)

2309 [Water by LC-MS/MS", version 1.0 \(September 2019\). Referenced](#)
2310 [in Section 611.645.](#)

2311
2312 Mitchell Methods. Available from Leck Mitchell, PhD, PE, 656
2313 Independence Valley Dr., Grand Junction, CO 81507 (920-244-8661); ,
2314 NEMI (except for Mitchell M5331 (16)); and USEPA, OGWDW (under
2315 "Surface Water Treatment Rule (PDF)").

2316
2317 "Mitchell M5271 (09)" means Mitchell Method M5271,
2318 "Determination of Turbidity by Laser Nephelometry", Revision 1.1
2319 (March 5, 2009). Referenced in Section 611.531.

2320
2321 "Mitchell M5331 (09)" means Mitchell Method M5331,
2322 "Determination of Turbidity by Laser Nephelometry", Revision 1.1
2323 (March 2009). Referenced in Section 611.531.

2324
2325 "Mitchell M5331 (16)" means Mitchell Method M5331,
2326 "Determination of Turbidity by Laser Nephelometry", Revision 1.2
2327 (February 2016). Referenced in Section 611.531.

2328
2329 "Modified Colitag™ (09)" means "Modified Colitag™ Test Method for
2330 Simultaneous Detection of E. coli and other Total Coliforms in Water",
2331 (ATP D05-0035) (August 28, 2009). Available from CPI International,
2332 Inc., 5580 Skylane Blvd., Santa Rosa, CA 95403 (800-878-7654;
2333 www.cpiinternational.com); NEMI; and USEPA, OGWDW (under
2334 "Ground Water Rule (PDF)" and "Revised Total Coliforms Rules
2335 (PDF)"). Referenced in Sections 611.802 and 611.1052.

2336
2337 ["Modified Colitag™ \(20\)" means "Modified Colitag™ Test Method for](#)
2338 [Simultaneous Detection of Total Coliforms and E. coli in Water", Version](#)
2339 [2.0, \(June 2020\). Available from Neogen Corporation, 620 Lesher Place,](#)
2340 [Lansing, MI 48912. Referenced in Sections 611.802 and 611.1052.](#)

2341
2342 "NBS Handbook 69 (63)" means "Maximum Permissible Body Burdens
2343 and Maximum Permissible Concentrations of Radionuclides in Air and in
2344 Water for Occupational Exposure" (August 1963), U.S. Department of
2345 Commerce, National Bureau of Standards. Available from International
2346 Atomic Energy Agency (IAEA), Vienna International Centre, PO Box
2347 100, 1400 Vienna, Austria, ((+43-1) 2600-0; www.iaea.org/~/Public/
2348 /048/37048205.pdf) or Oak Ridge Associated Universities (ORAU),
2349 MC100-44, PO Box 117, Oak Ridge, TN 37831-0117 (865-576-3146).
2350 Referenced in Sections 611.101 and 611.330.

2351 BOARD NOTE: The 1963 version of National Bureau of Standards
 2352 Handbook 69 modifies the 1959 publication of the National Committee on
 2353 Radiation Protection, NCRP Report No. 22, of the same title. The version
 2354 available on the NCRP website is the 1959 document.

2355
 2356 "NECi Nitrate Reductase (06)" means "Method for Nitrate Reductase
 2357 Nitrate-Nitrogen Analysis of Drinking Water", Version 1.0, Revision 2.0
 2358 (February 1, 2016). Available from Superior Enzymes Inc., 334 Hecla
 2359 Street, Lake Linden, Michigan 49945 (906-296-1115). Also available
 2360 from USEPA, OGWDW (under "Inorganic Contaminants and Other
 2361 Inorganic Constituents (PDF)"). Referenced in Section 611.611.
 2362

2363 "New Jersey Radium (90)" means "Determination of Ra-228 in Drinking
 2364 Water" (August 1990), New Jersey Department of Environmental
 2365 Protection, Division of Environmental Quality, Bureau of Radiation and
 2366 Inorganic Analytical Services. Available from publisher, 9 Ewing Street,
 2367 Trenton, NJ 08625. Referenced in Section 611.720.
 2368

2369 "New York Radium (82)" means "Determination of 226Ra and 228Ra,
 2370 Ra-02" (January 1980, revised June 1982), Radiological Sciences Institute,
 2371 Center for Laboratories and Research, New York State Department of
 2372 Health. Available from publisher, Empire State Plaza, Albany, NY
 2373 12201. Referenced in Section 611.720.
 2374

2375 "OIA-1677 (04)" means "Method OIA-1677 DW, Available Cyanide by
 2376 Flow Injection, Ligand Exchange, and Amperometry" (January 2004),
 2377 document number EPA 821/R-04/001. Referenced in Section 611.611.
 2378 Available from ALPKEM, Division of OI Analytical, P.O. Box 9010,
 2379 College Station, TX 77842-9010, telephone: 979-690-1711, Internet:
 2380 www.oico.com; USEPA, NSCEP (search "821R04001"); and USEPA,
 2381 OGWDW (under "Inorganic Contaminants and Other Inorganic
 2382 Constituents (PDF)").
 2383

2384 "Orion AQ4500 (09)" means "Determination of Turbidity by LED
 2385 Nephelometry", Revision 5 (March 12, 2009). Available from Thermo-
 2386 Fisher Scientific, 168 Third Ave, Waltham, MA 02451 (800-556-2323 or
 2387 www.thermofisher.com); NEMI; and USEPA, OGWDW (under "Surface
 2388 Water Treatment Rule (PDF)"). Referenced in Section 611.531.
 2389

2390 Palintest Methods. Available from Palintest, Ltd., [600 Corporate Circle,](#)
 2391 [Suite F, Golden, CO 80401 \(720-221-6878\)](#)~~1455 Jamike Avenue, Suite~~
 2392 ~~100, Erlanger, KY (800-835-9629).~~
 2393

2394 "Palintest 1001 (99)" means "Method 1001: Lead in Drinking
2395 Water by Differential Pulse Anodic Stripping Voltammetry",
2396 August 1999, referenced in Section 611.611.
2397 BOARD NOTE: Also available from USEPA, OGWDW (under
2398 "Inorganic Contaminants and Other Inorganic Constituents
2399 (PDF)").

2400
2401 "Palintest 1001 (20)" means "Method 1001: Lead in Drinking
2402 Water by Differential Pulse Anodic Stripping Voltammetry", May
2403 2020, Revision 1.1, referenced in Section 611.611.
2404 BOARD NOTE: Also available from USEPA, OGWDW (under
2405 "Inorganic Contaminants and Other Inorganic Constituents
2406 (PDF)").

2407
2408 "Palintest ChlordioX Plus (13)" means "Chlorine Dioxide and
2409 Chlorite in Drinking Water by Amperometry using Disposable
2410 Sensors", November 2013, referenced in Sections 611.381 and
2411 611.531.
2412 BOARD NOTE: Also available from USEPA, OGWDW (under
2413 "Disinfection Byproduct Rules (PDF)").

2414
2415 "Palintest ChlordioX Plus (20)" means "Chlorine Dioxide and
2416 Chlorite in Drinking Water by Amperometry using Disposable
2417 Sensors", Version 1.1 (February 2020), referenced in Sections
2418 611.381 and 611.531.

2419
2420 "Palintest ChloroSense (09)" means "Measurement of Free and
2421 Total Chlorine in Drinking Water by Palintest ChloroSense",
2422 September 2009, referenced in Sections 611.381 and 611.531.
2423 BOARD NOTE: Also available from NEMI and USEPA,
2424 OGWDW (under "Disinfection Byproduct Rules (PDF)").

2425
2426 "Palintest ChloroSense (20)" means "Free and Total Chlorine in
2427 Drinking Water by Amperometry using disposable sensors",
2428 Revision 1.1 (February 2020), referenced in Sections 611.381 and
2429 611.531.

2430
2431 "QuikChem 10-204-00-1-X (00)" means "Digestion and distillation of
2432 total cyanide in drinking and wastewaters using MICRO DIST and
2433 determination of cyanide by flow injection analysis", Revision 2.1
2434 (November 30, 2000). Available from Lachat Instruments, 6645 W. Mill
2435 Rd., Milwaukee, WI 53218 (414-358-4200) and USEPA, OGWDW

2436 (under "Inorganic Contaminants and Other Inorganic Constituents
2437 (PDF)"). Referenced in Section 611.611.

2438
2439 ["RAPID'E. coli \(20\)" means "Simultaneous Detection of Total Coliform](#)
2440 [Bacteria and Escherichia coli Using RAPID'E. coli 2 \(REC2\) in Drinking](#)
2441 [Water" \(May 2020\). Available from Bio-Rad Laboratories, 2000 Nobel](#)
2442 [Drive, Hercules, California 94547. Referenced in Sections 611.802 and](#)
2443 [611.1052.](#)

2444
2445 "Readycult® (07)" means "Readycult Coliforms 100 Presence/Absence
2446 Test for Detection and Identification of Coliform Bacteria and Escherichia
2447 coli in Finished Waters", Version 1.1 (January 2007). Available from
2448 EMD Millipore (division of Merck KGaA, Darmstadt, Germany), 290
2449 Concord Road, Billerica, MA 01821 (800-645-5476 or 781-533-6000)
2450 and USEPA, OGWDW (under "Ground Water Rule (PDF)" and "Revised
2451 Total Coliforms Rules (PDF)"). Referenced in Sections 611.802 and
2452 611.1052.

2453
2454 "SimPlate (00)" means "IDEXX SimPlate™ HPC Test Method for
2455 Heterotrophs in Water" (November 29, 2000). ~~Available~~ Available from
2456 IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092
2457 (800-321-0207). Referenced in Section 611.531.

2458
2459 SM Methods. Approved as the version in the indicated editions of
2460 "Standard Methods for the Examination of Water and Wastewater"
2461 Available from the American Public Health Association, 800 I Street NW,
2462 Washington, DC 20005, 202-777-2742, www.awwa.org/store; American
2463 Water Works Association, 6666 West Quincy Ave., Denver, CO 80235,
2464 303-794-7711; Water Environment Federation, 601 Wythe Street,
2465 Alexandria, VA 22314, 800-666-0206, www.wef.org; or Standard
2466 Methods Online, 800-633-4931, www.standardmethods.org.

2467
2468 BOARD NOTE: The Board ~~did~~ does not separately list versions of
2469 methods from Standard Methods Online ~~that also appearing~~ appear in the
2470 same version in a printed edition. ~~Using a~~ Use of the approved method in
2471 the approved version ~~as available~~ indicated from Standard Methods Online
2472 is acceptable.

2473
2474 "SM 302 (71)" means Method 302, "Gross Alpha and Gross Beta
2475 Radioactivity in Water (Total, Suspended, and Dissolved)", only
2476 the version in the 13th edition. Referenced in Section 611.720.

2477

2478 "SM 303 (71)" means Method 303, "Total Radioactive Strontium
2479 and Strontium 90 in Water", only the version in the 13th edition.
2480 Referenced in Section 611.720.
2481
2482 "SM 304 (71)" means Method 304, "Radium in Water by
2483 Precipitation", only the version in the 13th edition. Referenced in
2484 Section 611.720.
2485
2486 "SM 305 (71)" means Method 305, "Radium 226 by Radon in
2487 Water (Soluble, Suspended, and Total)", only the version in the
2488 13th edition. Referenced in Section 611.720.
2489
2490 "SM 306 (71)" means Method 306, "Tritium in Water", in
2491 "Standard Methods for the Examination of Water and
2492 Wastewater", only the version in the 13th edition. Referenced in
2493 Section 611.720.
2494
2495 "SM 2130 B (88)" means Method 2130 B, "Turbidity",
2496 "Nephelometric Method", only the version in the 18th edition.
2497 Referenced in Section 611.531.
2498
2499 "SM 2130 B (94)" means Method 2130 B, "Turbidity",
2500 "Nephelometric Method", only the version in the 19th and 20th
2501 editions. Referenced in Section 611.531.
2502
2503 "SM 2130 B (01)" means Method 2130 B, "Turbidity",
2504 "Nephelometric Method", only the version in the 21st, 22nd, and
2505 23rd editions. Referenced in Section 611.531.
2506
2507 "SM 2320 B (91)" means Method 2320 B, "Alkalinity", "Titration
2508 Method", only the version in the 18th and 19th editions. Referenced
2509 in Section 611.611.
2510
2511 "SM 2320 B (97)" means Method 2320 B, "Alkalinity", "Titration
2512 Method", only the version in the 20th, 21st, 22nd, and 23rd editions.
2513 Referenced in Section 611.611.
2514
2515 "SM 2510 B (91)" means Method 2510 B, "Conductivity",
2516 "Laboratory Method", only the version in the 18th and 19th editions.
2517 Referenced in Section 611.611.
2518

2519 "SM 2510 B (97)" means Method 2510 B, "Conductivity",
2520 "Laboratory Method", only the version in the 20th, 21st, 22nd, and
2521 23rd editions. Referenced in Section 611.611.
2522
2523 "SM 2550 (88)" means Method 2550, "Temperature, Laboratory
2524 and Field Methods", only the version in the 18th edition.
2525 Referenced in Section 611.611.
2526
2527 "SM 2550 (93)" means Method 2550, "Temperature, Laboratory
2528 and Field Methods", only the version in the 19th and 20th editions.
2529 Referenced in Section 611.611.
2530
2531 "SM 2550 (00)" means Method 2550, "Temperature, Laboratory
2532 and Field Methods", only the version in the 21st edition.
2533 Referenced in Section 611.611.
2534
2535 "SM 2550 (10)" means Method 2550, "Temperature, Laboratory
2536 and Field Methods", only the version in the 22nd and 23rd editions.
2537 Referenced in Section 611.611.
2538
2539 "SM 3111 B (89)" means Method 3111 B, "Metals by Flame
2540 Atomic Absorption Spectrometry", "Direct Air-Acetylene Flame
2541 Method", only the version in the 18th edition. Referenced in
2542 Sections 611.611 and 611.612.
2543
2544 "SM 3111 B (93)" means Method 3111 B, "Metals by Flame
2545 Atomic Absorption Spectrometry", "Direct Air-Acetylene Flame
2546 Method", only the version in the 19th edition. Referenced in
2547 Sections 611.611 and 611.612.
2548
2549 "SM 3111 B (99)" means Method 3111 B, "Metals by Flame
2550 Atomic Absorption Spectrometry", "Direct Air-Acetylene Flame
2551 Method". Referenced in Sections 611.611 and 611.612.
2552
2553 "SM 3111 D (89)" means Method 3111 D, "Metals by Flame
2554 Atomic Absorption Spectrometry", "Direct Nitrous Oxide-
2555 Acetylene Flame Method", only the version in the 19th edition.
2556 Referenced in Section 611.611.
2557
2558 "SM 3111 D (93)" means Method 3111 D, "Metals by Flame
2559 Atomic Absorption Spectrometry", "Direct Nitrous Oxide-
2560 Acetylene Flame Method", only the version in the 19th edition.
2561 Referenced in Section 611.611.

2562
 2563 "SM 3111 D (99)" means Method 3111 D, "Metals by Flame
 2564 Atomic Absorption Spectrometry", "Direct Nitrous Oxide-
 2565 Acetylene Flame Method", only the version in the 21st, 22nd, and
 2566 23rd editions. Referenced in Section 611.611.
 2567
 2568 "SM 3112 B (88)" means Method 3112 B, "Metals by Cold-Vapor
 2569 Atomic Absorption Spectrometry", "Cold-Vapor Atomic
 2570 Absorption Spectrometric Method", only the version in the 18th
 2571 edition. Referenced in Section 611.611.
 2572
 2573 "SM 3112 B (93)" means Method 3112 B, "Metals by Cold-Vapor
 2574 Atomic Absorption Spectrometry", "Cold-Vapor Atomic
 2575 Absorption Spectrometric Method", only the version in the 19th
 2576 edition. Referenced in Section 611.611.
 2577
 2578 "SM 3112 B (99)" means Method 3112 B, "Metals by Cold-Vapor
 2579 Atomic Absorption Spectrometry", "Cold-Vapor Atomic
 2580 Absorption Spectrometric Method", only the version in the 21st
 2581 edition. Referenced in Section 611.611.
 2582
 2583 "SM 3112 B (09)" means Method 3112 B, "Metals by Cold-Vapor
 2584 Atomic Absorption Spectrometry", "Cold-Vapor Atomic
 2585 Absorption Spectrometric Method", only the version in the 22nd
 2586 and 23rd editions. Referenced in Section 611.611.
 2587
 2588 "SM 3113 B (89)" means Method 3113 B, "Metals by
 2589 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
 2590 Atomic Absorption Spectrometric Method", only the version in the
 2591 18th edition. Referenced in Sections 611.611 and 611.612.
 2592
 2593 "SM 3113 B (93)" means Method 3113 B, "Metals by
 2594 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
 2595 Atomic Absorption Spectrometric Method", only the version in the
 2596 19th edition. (The same version appears in the 20th edition but
 2597 USEPA does ~~has not~~ approve ~~approved~~ that edition.) Referenced
 2598 in Sections 611.611 and 611.612.
 2599
 2600 "SM 3113 B (99)" means Method 3113 B, "Metals by
 2601 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
 2602 Atomic Absorption Spectrometric Method", only the version in the
 2603 21st edition. Referenced in Sections 611.611 and 611.612.
 2604

2605 "SM 3113 B (04)" means Method 3113 B, "Metals by
 2606 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
 2607 Atomic Absorption Spectrometric Method", only the version from
 2608 Standard Methods Online as Method 3113 B-04. Referenced in
 2609 Sections 611.611 and 611.612.

2610
 2611 "SM 3113 B (10)" means Method 3113 B, "Metals by
 2612 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
 2613 Atomic Absorption Spectrometric Method", only the version in the
 2614 22nd and 23rd editions. Referenced in Sections 611.611 and
 2615 611.612.

2616
 2617 "SM 3114 B (89)" means Method 3114 B, "Metals by Hydride
 2618 Generation/Atomic Absorption Spectrometry", "Manual Hydride
 2619 Generation/Atomic Absorption Spectrometric Method", only the
 2620 version in the 18th edition. Referenced in Section 611.611.

2621
 2622 "SM 3114 B (93)" means Method 3114 B, "Metals by Hydride
 2623 Generation/Atomic Absorption Spectrometry", "Manual Hydride
 2624 Generation/Atomic Absorption Spectrometric Method", only the
 2625 version in the 19th edition. Referenced in Section 611.611.

2626
 2627 "SM 3114 B (97)" means Method 3114 B, "Metals by Hydride
 2628 Generation/Atomic Absorption Spectrometry", "Manual Hydride
 2629 Generation/Atomic Absorption Spectrometric Method", only the
 2630 version in the 21st edition. (The same version appears in the 20th
 2631 edition, but USEPA ~~does~~has not ~~approve~~approved that edition.)
 2632 Referenced in Section 611.611.

2633
 2634 "SM 3114 B (09)" means Method 3114 B, "Metals by Hydride
 2635 Generation/Atomic Absorption Spectrometry", "Manual Hydride
 2636 Generation/Atomic Absorption Spectrometric Method", only the
 2637 version in the 22nd and 23rd editions. Referenced in Section
 2638 611.611.

2639
 2640 "SM 3120 B (89)" means Method 3120 B, "Metals by Plasma
 2641 Emission Spectroscopy", "Inductively Coupled Plasma (ICP)
 2642 Method", only the version in the 18th edition. Referenced in
 2643 Sections 611.611 and 611.612.

2644
 2645 "SM 3120 B (93)" means Method 3120 B, "Metals by Plasma
 2646 Emission Spectroscopy", "Inductively Coupled Plasma (ICP)

2647 Method", only the version in the 19th and 20th editions. Referenced
 2648 in Sections 611.611 and 611.612.
 2649
 2650 "SM 3120 B (99)" means Method 3120 B, "Metals by Plasma
 2651 Emission Spectroscopy", "Inductively Coupled Plasma (ICP)
 2652 Method", only the version in the 21st, 22nd, and 23rd editions.
 2653 Referenced in Sections 611.611 and 611.612.
 2654
 2655 "SM 3125 (97)" means Method 3125, "Metals by Inductively
 2656 Coupled Plasma/Mass Spectrometry", only the version in the 20th
 2657 and 21st editions. Referenced in Section 611.720.
 2658
 2659 "SM 3500-Ca B (97)" means Method 3500-Ca B, "Calcium",
 2660 "EDTA Titrimetric Method", only the version in the 20th, 21st, 22nd,
 2661 and 23rd editions. Referenced in Section 611.611.
 2662
 2663 "SM 3500-Ca D (91)" means Method 3500-Ca D, "Calcium",
 2664 "EDTA Titrimetric Method", only the version in the 18th and 19th
 2665 editions. Referenced in Section 611.611.
 2666
 2667 "SM 3500-Mg B (97)" means Method 3500-Mg B, "Magnesium",
 2668 "Calculation Method", only the version in the 20th, 21st, 22nd, and
 2669 23rd editions. Referenced in Section 611.611.
 2670
 2671 "SM 3500-Mg E (90)" means Method 3500-Mg E, "Magnesium",
 2672 "Calculation Method", only the version in the 18th edition.
 2673 Referenced in Section 611.611.
 2674
 2675 "SM 3500-Mg E (91)" means Method 3500-Mg E, "Magnesium",
 2676 "Calculation Method", only the version in the 19th edition.
 2677 Referenced in Section 611.611.
 2678
 2679 "SM 4110 B (90)" means Method 4110 B, "Determination of
 2680 Anions by Ion Chromatography", "Ion Chromatography with
 2681 Chemical Suppression of Eluent Conductivity", only the version in
 2682 the 18th edition. Referenced in Section 611.611.
 2683
 2684 "SM 4110 B (91)" means Method 4110 B, "Determination of
 2685 Anions by Ion Chromatography", "Ion Chromatography with
 2686 Chemical Suppression of Eluent Conductivity", only the version in
 2687 the 19th edition. Referenced in Section 611.611.
 2688

2689 "SM 4110 B (97)" means Method 4110 B, "Determination of
 2690 Anions by Ion Chromatography", "Ion Chromatography with
 2691 Chemical Suppression of Eluent Conductivity", only the version in
 2692 the 20th edition. Referenced in Section 611.611.
 2693
 2694 "SM 4110 B (00)" means Method 4110 B, "Determination of
 2695 Anions by Ion Chromatography", "Ion Chromatography with
 2696 Chemical Suppression of Eluent Conductivity", only the version in
 2697 the 21st, 22nd, and 23rd editions. Referenced in Section 611.611.
 2698
 2699 "SM 4500-Cl D (89)" means Method 4500-Cl D, "Chlorine
 2700 (Residual)", "Amperometric Titration Method", only the version in
 2701 the 18th edition. Referenced in Section 611.531.
 2702
 2703 "SM 4500-Cl D (93)" means Method 4500-Cl D, "Chlorine
 2704 (Residual)", "Amperometric Titration Method", only the version in
 2705 the 19th and 20th editions. Referenced in Sections 611.381 and
 2706 611.531.
 2707
 2708 "SM 4500-Cl D (00)" means Method 4500-Cl D, "Chlorine
 2709 (Residual)", "Amperometric Titration Method", only the version in
 2710 the 21st, 22nd, and 23rd editions. Referenced in Sections 611.381
 2711 and 611.531.
 2712
 2713 "SM 4500-Cl E (89)" means Method 4500-Cl E, "Chlorine
 2714 (Residual)", "Low-Level Amperometric Titration Method", only
 2715 the version in the 18th edition. Referenced in Section 611.531.
 2716
 2717 "SM 4500-Cl E (93)" means Method 4500-Cl E, "Chlorine
 2718 (Residual)", "Low-Level Amperometric Titration Method", only
 2719 the version in the 19th and 20th editions. Referenced in Sections
 2720 611.381 and 611.531.
 2721
 2722 "SM 4500-Cl E (00)" means Method 4500-Cl E, "Chlorine
 2723 (Residual)", "Low-Level Amperometric Titration Method", only
 2724 the version in the 21st, 22nd, and 23rd editions. Referenced in
 2725 Sections 611.381 and 611.531.
 2726
 2727 "SM 4500-Cl F (89)" means Method 4500-Cl F, "Chlorine
 2728 (Residual)", "DPD Ferrous Titrimetric Method", only the version
 2729 in the 18th edition. Referenced in Section 611.531.
 2730

2731 "SM 4500-Cl F (93)" means Method 4500-Cl F, "Chlorine
 2732 (Residual)", "DPD Ferrous Titrimetric Method", only the version
 2733 in the 19th and 20th editions. Referenced in Sections 611.381 and
 2734 611.531.
 2735
 2736 "SM 4500-Cl F (00)" means Method 4500-Cl F, "Chlorine
 2737 (Residual)", "DPD Ferrous Titrimetric Method", only the version
 2738 in the 21st, 22nd, and 23rd editions. Referenced in Sections 611.381
 2739 and 611.531.
 2740
 2741 "SM 4500-Cl G (89)" means Method 4500-Cl G, "Chlorine
 2742 (Residual)", "DPD Colorimetric Method", only the version in the
 2743 18th edition. Referenced in Section 611.531.
 2744
 2745 "SM 4500-Cl G (93)" means Method 4500-Cl G, "Chlorine
 2746 (Residual)", "DPD Colorimetric Method", only the version in the
 2747 19th and 20th editions. Referenced in Sections 611.381 and
 2748 611.531.
 2749
 2750 "SM 4500-Cl G (00)" means Method 4500-Cl G, "Chlorine
 2751 (Residual)", "DPD Colorimetric Method", only the version in the
 2752 21st, 22nd, and 23rd editions. Referenced in Sections 611.381 and
 2753 611.531.
 2754
 2755 "SM 4500-Cl H (89)" means Method 4500-Cl H, "Chlorine
 2756 (Residual)", "Syringaldazine (FACTS) Method", only the version
 2757 in the 18th edition. Referenced in Section 611.531.
 2758
 2759 "SM 4500-Cl H (93)" means Method 4500-Cl H, "Chlorine
 2760 (Residual)", "Syringaldazine (FACTS) Method", only the version
 2761 in the 19th and 20th editions. Referenced in Sections 611.381 and
 2762 611.531.
 2763
 2764 "SM 4500-Cl H (00)" means Method 4500-Cl H, "Chlorine
 2765 (Residual)", "Syringaldazine (FACTS) Method", only the version
 2766 in the 21st, 22nd, and 23rd editions. Referenced in Sections 611.381
 2767 and 611.531.
 2768
 2769 "SM 4500-Cl I (89)" means Method 4500-Cl I, "Chlorine
 2770 (Residual)", "Iodometric Electrode Method", only the version in
 2771 the 18th edition. Referenced in Section 611.531.
 2772

2773 "SM 4500-Cl I (93)" means Method 4500-Cl I, "Chlorine
 2774 (Residual)", "Iodometric Electrode Method", only the version in
 2775 the 19th and 20th editions. Referenced in Sections 611.381 and
 2776 611.531.
 2777
 2778 "SM 4500-Cl I (00)" means Method 4500-Cl I, "Chlorine
 2779 (Residual)", "Iodometric Electrode Method", only the version in
 2780 the 21st, 22nd, and 23rd editions. Referenced in Sections 611.381
 2781 and 611.531.
 2782
 2783 "SM 4500-ClO₂ C (88)" means Method 4500-ClO₂ C, "Chlorine
 2784 Dioxide", "Amperometric Method I", only the version in the 18th
 2785 edition. Referenced in Sections 611.381 and 611.531.
 2786
 2787 "SM 4500-ClO₂ C (93)" means Method 4500-ClO₂ C, "Chlorine
 2788 Dioxide", "Amperometric Method I", only the version in the 19th
 2789 and 20th editions. Referenced in Section 611.531.
 2790
 2791 "SM 4500-ClO₂ C (00)" means Method 4500-ClO₂ C, "Chlorine
 2792 Dioxide", "Amperometric Method I", only the version in the 21st,
 2793 22nd, and 23rd editions. Referenced in Section 611.531.
 2794
 2795 "SM 4500-ClO₂ D (88)" means Method 4500-ClO₂ D, "Chlorine
 2796 Dioxide", "DPD Method", only the version in the 18th edition.
 2797 Referenced in Section 611.531.
 2798
 2799 "SM 4500-ClO₂ D (93)" means Method 4500-ClO₂ D, "Chlorine
 2800 Dioxide", "DPD Method", only the version in the 19th and 20th
 2801 editions. Referenced in Sections 611.381 and 611.531.
 2802
 2803 "SM 4500-ClO₂ D (00)" means Method 4500-ClO₂ D, "Chlorine
 2804 Dioxide", "DPD Method", only the version in the 21st edition.
 2805 Referenced in Section 611.381.
 2806
 2807 "SM 4500-ClO₂ E (88)" means Method 4500-ClO₂ E, "Chlorine
 2808 Dioxide", "Amperometric Method II (Proposed)", only the version
 2809 in the 18th edition. Referenced in Section 611.531.
 2810
 2811 "SM 4500-ClO₂ E (93)" means Method 4500-ClO₂ E, "Chlorine
 2812 Dioxide", "Amperometric Method II", only the version in the 19th
 2813 and 20th editions. Referenced in Sections 611.381 and 611.531.
 2814

2815 "SM 4500-ClO₂ E (00)" means Method 4500-ClO₂ E, "Chlorine
 2816 Dioxide", "Amperometric Method II", only the version in the 21st,
 2817 22nd, and 23rd editions. Referenced in Sections 611.381 and
 2818 611.531.
 2819

2820 "SM 4500-CN⁻ C (90)" means Method 4500-CN⁻ C, "Cyanide",
 2821 "Total Cyanide after Distillation", only the version in the 18th and
 2822 19th editions. Referenced in Section 611.611.
 2823

2824 "SM 4500-CN⁻ C (97)" means Method 4500-CN⁻ C, "Cyanide",
 2825 "Total Cyanide after Distillation", only the version in the 20th
 2826 edition. Referenced in Section 611.611.
 2827

2828 "SM 4500-CN⁻ C (99)" means Method 4500-CN⁻ C, "Cyanide",
 2829 "Total Cyanide after Distillation", only the version in the 21st and
 2830 22nd editions. Referenced in Section 611.611.
 2831

2832 "SM 4500-CN⁻ C (16)" means Method 4500-CN⁻ C, "Cyanide",
 2833 "Total Cyanide after Distillation", only the version in the 23rd
 2834 edition. Referenced in Section 611.611.
 2835

2836 "SM 4500-CN⁻ E (90)" means Method 4500-CN⁻ E, "Cyanide",
 2837 "Colorimetric Method", only the version in the 18th and 19th
 2838 editions. Referenced in Section 611.611.
 2839

2840 "SM 4500-CN⁻ E (97)" means Method 4500-CN⁻ E, "Cyanide",
 2841 "Colorimetric Method", only the version in the 20th edition.
 2842 Referenced in Section 611.611.
 2843

2844 "SM 4500-CN⁻ E (99)" means Method 4500-CN⁻ E, "Cyanide",
 2845 "Colorimetric Method", only the version in the 21st and 22nd
 2846 editions. Referenced in Section 611.611.
 2847

2848 "SM 4500-CN⁻ E (16)" means Method 4500-CN⁻ E, "Cyanide",
 2849 "Colorimetric Method", only the version in the 23rd edition.
 2850 Referenced in Section 611.611.
 2851

2852 "SM 4500-CN⁻ F (90)" means Method 4500-CN⁻ F, "Cyanide",
 2853 "Cyanide-Selective Electrode Method", only the version in the 18th
 2854 and 19th editions. Referenced in Section 611.611.
 2855

2856 "SM 4500-CN⁻ F (97)" means Method 4500-CN⁻ F, "Cyanide",
 2857 "Cyanide-Selective Electrode Method", only the version in the 20th
 2858 edition. Referenced in Section 611.611.

2859
 2860 "SM 4500-CN⁻ F (99)" means Method 4500-CN⁻ F, "Cyanide",
 2861 "Cyanide-Selective Electrode Method", only the version in the 21st
 2862 and 22nd editions. Referenced in Section 611.611.

2863
 2864 "SM 4500-CN⁻ F (16)" means Method 4500-CN⁻ F, "Cyanide",
 2865 "Cyanide-Ion Selective Electrode Method", only the version in the
 2866 23rd edition. Referenced in Section 611.611.

2867
 2868 "SM 4500-CN⁻ G (90)" means Method 4500-CN⁻ G, "Cyanide",
 2869 "Cyanides Amenable to Chlorination after Distillation", only the
 2870 version in the 18th and 19th editions. Referenced in Section
 2871 611.611.

2872
 2873 "SM 4500-CN⁻ G (97)" means Method 4500-CN⁻ G, "Cyanide",
 2874 "Cyanides Amenable to Chlorination after Distillation", only the
 2875 version in the 20th edition. Referenced in Section 611.611.

2876
 2877 "SM 4500-CN⁻ G (99)" means Method 4500-CN⁻ G, "Cyanide",
 2878 "Cyanides Amenable to Chlorination after Distillation", only the
 2879 version in the 21st and 22nd editions. Referenced in Section
 2880 611.611.

2881
 2882 "SM 4500-CN⁻ G (16)" means Method 4500-CN⁻ G, "Cyanide",
 2883 "Cyanides Amenable to Chlorination after Distillation", only the
 2884 version in the 23rd edition. Referenced in Section 611.611.

2885
 2886 "SM 4500-F⁻ B (88)" means Method 4500-F⁻ B, "Fluoride",
 2887 "Preliminary Distillation Step", only the version in the 18th edition.
 2888 Referenced in Section 611.611.

2889
 2890 "SM 4500-F⁻ B (94)" means Method 4500-F⁻ B, "Fluoride",
 2891 "Preliminary Distillation Step", only the version in the 19th edition.
 2892 Referenced in Section 611.611.

2893
 2894 "SM 4500-F⁻ B (97)" means Method 4500-F⁻ B, "Fluoride",
 2895 "Preliminary Distillation Step", only the version in the 20th, 21st,
 2896 22nd, and 23rd editions. Referenced in Section 611.611.

2897

2898 "SM 4500-F⁻ C (88)" means Method 4500-F⁻ C, "Fluoride", "Ion-
 2899 Selective Electrode Method", only the version in the 18th edition.
 2900 Referenced in Section 611.611.
 2901
 2902 "SM 4500-F⁻ C (94)" means Method 4500-F⁻ C, "Fluoride", "Ion-
 2903 Selective Electrode Method", only the version in the 19th edition.
 2904 Referenced in Section 611.611.
 2905
 2906 "SM 4500-F⁻ C (97)" means Method 4500-F⁻ C, "Fluoride", "Ion-
 2907 Selective Electrode Method", only the version in the 20th, 21st,
 2908 22nd, and 23rd editions. Referenced in Section 611.611.
 2909
 2910 "SM 4500-F⁻ D (88)" means Method 4500-F⁻ D, "Fluoride",
 2911 "SPADNS Method", only the version in the 18th edition.
 2912 Referenced in Section 611.611.
 2913
 2914 "SM 4500-F⁻ D (94)" means Method 4500-F⁻ D, "Fluoride",
 2915 "SPADNS Method", only the version in the 19th edition.
 2916 Referenced in Section 611.611.
 2917
 2918 "SM 4500-F⁻ D (97)" means Method 4500-F⁻ D, "Fluoride",
 2919 "SPADNS Method", only the version in the 20th, 21st, 22nd, and
 2920 23rd editions. Referenced in Section 611.611.
 2921
 2922 "SM 4500-F⁻ E (88)" means Method 4500-F⁻ E, "Fluoride",
 2923 "Complexone Method", only the version in the 18th edition.
 2924 Referenced in Section 611.611.
 2925
 2926 "SM 4500-F⁻ E (94)" means Method 4500-F⁻ E, "Fluoride",
 2927 "Complexone Method", only the version in the 19th edition.
 2928 Referenced in Section 611.611.
 2929
 2930 "SM 4500-F⁻ E (97)" means Method 4500-F⁻ E, "Fluoride",
 2931 "Complexone Method", only the version in the 20th, 21st, 22nd, and
 2932 23rd editions. Referenced in Section 611.611.
 2933
 2934 "SM 4500-H⁺ B (90)" means Method 4500-H⁺ B, "pH Value",
 2935 "Electrometric Method", only the version in the 18th and 19th
 2936 editions. Referenced in Section 611.611.
 2937
 2938 "SM 4500-H⁺ B (96)" means Method 4500-H⁺ B, "pH Value",
 2939 "Electrometric Method", only the version in the 20th edition.
 2940 Referenced in Section 611.611.

2941
 2942 "SM 4500-H⁺ B (00)" means Method 4500-H⁺ B, "pH Value",
 2943 "Electrometric Method", only the version in the 21st, 22nd, and 23rd
 2944 editions. Referenced in Section 611.611.
 2945
 2946 "SM 4500-NO₃⁻ D (88)" means Method 4500-NO₃⁻ D, "Nitrogen
 2947 (Nitrate)", "Nitrate Electrode Method", only the version in the 18th
 2948 edition. Referenced in Section 611.611.
 2949
 2950 "SM 4500-NO₃⁻ D (93)" means Method 4500-NO₃⁻ D, "Nitrogen
 2951 (Nitrate)", "Nitrate Electrode Method", only the version in the 19th
 2952 edition. Referenced in Section 611.611.
 2953
 2954 "SM 4500-NO₃⁻ D (97)" means Method 4500-NO₃⁻ D, "Nitrogen
 2955 (Nitrate)", "Nitrate Electrode Method", only the version in the 20th
 2956 edition. Referenced in Section 611.611.
 2957
 2958 "SM 4500-NO₃⁻ D (00)" means Method 4500-NO₃⁻ D, "Nitrogen
 2959 (Nitrate)", "Nitrate Electrode Method", only the version in the 21st
 2960 and 22nd editions. Referenced in Section 611.611.
 2961
 2962 "SM 4500-NO₃⁻ D (16)" means Method 4500-NO₃⁻ D, "Nitrogen
 2963 (Nitrate)", "Nitrate Electrode Method", only the version in the 23rd
 2964 edition. Referenced in Section 611.611.
 2965
 2966 "SM 4500-NO₃⁻ E (88)" means Method 4500-NO₃⁻ E, "Nitrogen
 2967 (Nitrate)", "Cadmium Reduction Method", only the version in the
 2968 18th edition. Referenced in Section 611.611.
 2969
 2970 "SM 4500-NO₃⁻ E (93)" means Method 4500-NO₃⁻ E, "Nitrogen
 2971 (Nitrate)", "Cadmium Reduction Method", only the version in the
 2972 19th edition. Referenced in Section 611.611.
 2973
 2974 "SM 4500-NO₃⁻ E (97)" means Method 4500-NO₃⁻ E, "Nitrogen
 2975 (Nitrate)", "Cadmium Reduction Method", only the version in the
 2976 20th edition. Referenced in Section 611.611.
 2977
 2978 "SM 4500-NO₃⁻ E (00)" means Method 4500-NO₃⁻ E, "Nitrogen
 2979 (Nitrate)", "Cadmium Reduction Method", only the version in the
 2980 21st and 22nd editions. Referenced in Section 611.611.
 2981

2982 "SM 4500-NO₃⁻ E (16)" means Method 4500-NO₃⁻ E, "Nitrogen
2983 (Nitrate)", "Cadmium Reduction Method", only the version in the
2984 23rd edition. Referenced in Section 611.611.
2985
2986 "SM 4500-NO₃⁻ F (88)" means Method 4500-NO₃⁻ F, "Nitrogen
2987 (Nitrate)", "Automated Cadmium Reduction Method", only the
2988 version in the 18th edition. Referenced in Section 611.611.
2989
2990 "SM 4500-NO₃⁻ F (93)" means Method 4500-NO₃⁻ F, "Nitrogen
2991 (Nitrate)", "Automated Cadmium Reduction Method", only the
2992 version in the 19th edition. Referenced in Section 611.611.
2993
2994 "SM 4500-NO₃⁻ F (97)" means Method 4500-NO₃⁻ F, "Nitrogen
2995 (Nitrate)", "Automated Cadmium Reduction Method", only the
2996 version in the 20th edition. Referenced in Section 611.611.
2997
2998 "SM 4500-NO₃⁻ F (00)" means Method 4500-NO₃⁻ F, "Nitrogen
2999 (Nitrate)", "Automated Cadmium Reduction Method", only the
3000 version in the 21st and 22nd editions. Referenced in Section
3001 611.611.
3002
3003 "SM 4500-NO₃⁻ F (16)" means Method 4500-NO₃⁻ F, "Nitrogen
3004 (Nitrate)", "Automated Cadmium Reduction Method", only the
3005 version in the 23rd edition. Referenced in Section 611.611.
3006
3007 "SM 4500-NO₂⁻ B (88)" means Method 4500-NO₂⁻ B, "Nitrogen
3008 (Nitrite)", "Colorimetric Method", only the version in the 18th
3009 edition. Referenced in Section 611.611.
3010
3011 "SM 4500-NO₂⁻ B (93)" means Method 4500-NO₂⁻ B, "Nitrogen
3012 (Nitrite)", "Colorimetric Method", only the version in the 19th and
3013 20th editions. Referenced in Section 611.611.
3014
3015 "SM 4500-NO₂⁻ B (00)" means Method 4500-NO₂⁻ B, "Nitrogen
3016 (Nitrite)", "Colorimetric Method", only the version in the 21st,
3017 22nd, and 23rd editions. Referenced in Section 611.611.
3018
3019 "SM 4500-O₃ B (88)" means Method 4500-O₃ B, "Ozone
3020 (Residual) (Proposed)", "Indigo Colorimetric Method", only the
3021 version in the 18th edition. Referenced in Section 611.531.
3022

3023 "SM 4500-O₃ B (93)" means Method 4500-O₃ B, "Ozone
3024 (Residual)", "Indigo Colorimetric Method", only the version in the
3025 19th edition. Referenced in Section 611.531.

3026
3027 "SM 4500-O₃ B (97)" means Method 4500-O₃ B, "Ozone
3028 (Residual)", "Indigo Colorimetric Method", only the version in the
3029 20th, 21st, 22nd, and 23rd editions. Referenced in Section 611.531.

3030
3031 "SM 4500-P E (88)" means Method 4500-P E, "Phosphorus",
3032 "Ascorbic Acid Method", only the version in the 18th edition.
3033 Referenced in Section 611.611.

3034
3035 "SM 4500-P E (93)" means Method 4500-P E, "Phosphorus",
3036 "Ascorbic Acid Method", only the version in the 19th edition.
3037 Referenced in Section 611.611.

3038
3039 "SM 4500-P E (97)" means Method 4500-P E, "Phosphorus",
3040 "Ascorbic Acid Method", only the version in the 20th edition.
3041 Referenced in Section 611.611.

3042
3043 "SM 4500-P E (99)" means Method 4500-P E, "Phosphorus",
3044 "Ascorbic Acid Method", only the version in the 21st and 22nd
3045 editions. Referenced in Section 611.611.

3046
3047 "SM 4500-P E (05)" means Method 4500-P E, "Phosphorus",
3048 "Ascorbic Acid Method", only the version in the 23rd edition.
3049 Referenced in Section 611.611.

3050
3051 "SM 4500-P F (88)" means Method 4500-P F, "Phosphorus",
3052 "Automated Ascorbic Acid Reduction Method", only the version
3053 in the 18th edition. Referenced in Section 611.611.

3054
3055 "SM 4500-P F (93)" means Method 4500-P F, "Phosphorus",
3056 "Automated Ascorbic Acid Reduction Method", only the version
3057 in the 19th edition. Referenced in Section 611.611.

3058
3059 "SM 4500-P F (97)" means Method 4500-P F, "Phosphorus",
3060 "Automated Ascorbic Acid Reduction Method", only the version
3061 in the 20th edition. Referenced in Section 611.611.

3062
3063 "SM 4500-P F (99)" means Method 4500-P F, "Phosphorus",
3064 "Automated Ascorbic Acid Reduction Method", only the version
3065 in the 21st and 22nd editions. Referenced in Section 611.611.

3066
 3067 "SM 4500-P F (05)" means Method 4500-P F, "Phosphorus",
 3068 "Automated Ascorbic Acid Reduction Method", only the version
 3069 in the 23rd edition. Referenced in Section 611.611.
 3070
 3071 "SM 4500-Si D (88)" means Method 4500-Si D, "Silica",
 3072 "Molybdosilicate Method", only the version in the 18th edition.
 3073 Referenced in Section 611.611.
 3074
 3075 "SM 4500-Si D (93)" means Method 4500-Si D, "Silica",
 3076 "Molybdosilicate Method", only the version in the 19th edition.
 3077 Referenced in Section 611.611.
 3078
 3079 "SM 4500-Si E (88)" means Method 4500-Si E, "Silica",
 3080 "Molybdosilicate Method", only the version in the 18th edition.
 3081 Referenced in Section 611.611.
 3082
 3083 "SM 4500-Si E (93)" means Method 4500-Si E, "Silica",
 3084 "Molybdosilicate Method", only the version in the 19th edition.
 3085 Referenced in Section 611.611.
 3086
 3087 "SM 4500-Si F (88)" means Method 4500-Si F, "Silica",
 3088 "Molybdosilicate Method", only the version in the 18th edition.
 3089 Referenced in Section 611.611.
 3090
 3091 "SM 4500-Si F (93)" means Method 4500-Si F, "Silica",
 3092 "Molybdosilicate Method", only the version in the 19th edition.
 3093 Referenced in Section 611.611.
 3094
 3095 "SM 4500-SiO₂ C (97)" means Method 4500-SiO₂ C, "Silica",
 3096 "Molybdosilicate Method", only the version in the 20th, 21st, 22nd,
 3097 and 23rd editions. Referenced in Section 611.611.
 3098
 3099 "SM 4500-SiO₂ D (97)" means Method 4500-SiO₂ D, "Silica",
 3100 "Heteropoly Blue Method", only the version in the 20th, 21st, 22nd,
 3101 and 23rd editions. Referenced in Section 611.611.
 3102
 3103 "SM 4500-SiO₂ E (97)" means Method 4500-SiO₂ E, "Silica",
 3104 "Automated Method for Molybdate-Reactive Silica", only the
 3105 version in the 20th, 21st, 22nd, and 23rd editions. Referenced in
 3106 Section 611.611.
 3107

3108 "SM 5310 B (92)" means Method 5310 B, "Total Organic Carbon
3109 (TOC)", "Combustion-Infrared Method", only the version in the
3110 supplement to the 19th edition. Referenced in Section 611.381.

3111
3112 "SM 5310 B (96)" means Method 5310 B, "Total Organic Carbon
3113 (TOC)", "High-Temperature Combustion Method", only the
3114 version in the 20th edition. Referenced in Section 611.381.

3115
3116 "SM 5310 B (00)" means Method 5310 B, "Total Organic Carbon
3117 (TOC)", "High-Temperature Combustion Method", only the
3118 version in the 21st and 22nd editions. Referenced in Section
3119 611.381.

3120
3121 "SM 5310 B (14)" means Method 5310 B, "Total Organic Carbon
3122 (TOC)", "High-Temperature Combustion Method", only the
3123 version in the 23rd edition. Referenced in Section 611.381.

3124
3125 "SM 5310 C (92)" means Method 5310 C, "Total Organic Carbon
3126 (TOC)", "Persulfate-Ultraviolet Oxidation Method", only the
3127 version in the supplement to the 19th edition. Referenced in
3128 Section 611.381.

3129
3130 "SM 5310 C (96)" means Method 5310 C, "Total Organic Carbon
3131 (TOC)", "Persulfate-Ultraviolet or Heated-Persulfate Oxidation
3132 Method", only the version in the 20th edition. Referenced in
3133 Section 611.381.

3134
3135 "SM 5310 C (00)" means Method 5310 C, "Total Organic Carbon
3136 (TOC)", "Persulfate-Ultraviolet or Heated-Persulfate Oxidation
3137 Method", only the version in the 21st and 22nd editions. Referenced
3138 in Section 611.381.

3139
3140 "SM 5310 C (14)" means Method 5310 C, "Total Organic Carbon
3141 (TOC)", "Persulfate-Ultraviolet or Heated-Persulfate Oxidation
3142 Method", only the version in the 23rd edition. Referenced in
3143 Section 611.381.

3144
3145 "SM 5310 D (92)" means Method 5310 D, "Total Organic Carbon
3146 (TOC)", "Wet-Oxidation Method", only the version in the
3147 supplement to the 19th edition. Referenced in Section 611.381.

3148

3149 "SM 5310 D (96)" means Method 5310 D, "Total Organic Carbon
 3150 (TOC)", "Wet-Oxidation Method", only the version in the 20th
 3151 edition. Referenced in Section 611.381.

3152
 3153 "SM 5310 D (00)" means Method 5310 D, "Total Organic Carbon
 3154 (TOC)", "Wet-Oxidation Method", only the version in the 21st and
 3155 22nd editions. Referenced in Section 611.381.

3156
 3157 "SM 5910 B (94)" means Method 5910 B, "UV-Absorbing
 3158 Organic Constituents", "Ultraviolet Absorption Method", only the
 3159 version in the 19th and 20th editions. Referenced in Section
 3160 611.381.

3161
 3162 "SM 5910 B (00)" means Method 5910 B, "UV-Absorbing
 3163 Organic Constituents", "Ultraviolet Absorption Method", only the
 3164 version in the 21st edition. Referenced in Section 611.381.

3165
 3166 "SM 5910 B (11)" means Method 5910 B, "UV-Absorbing
 3167 Organic Constituents", "Ultraviolet Absorption Method", only the
 3168 version in the 22nd edition. Referenced in Section 611.381.

3169
 3170 "SM 5910 B (13)" means Method 5910 B, "UV-Absorbing
 3171 Organic Constituents", "Ultraviolet Absorption Method", only the
 3172 version in the 23rd edition. Referenced in Section 611.381.

3173
 3174 "SM 6251 B (94)" means Method 6251 B, "Disinfection By-
 3175 Products: Haloacetic Acids and Trichlorophenol", "Micro Liquid-
 3176 Liquid Extraction Gas Chromatographic Method", only the version
 3177 in the 19th, 20th, and 21st editions. Referenced in Section 611.381.

3178
 3179 "SM 6251 B (07)" means Method 6251 B, "Disinfection By-
 3180 Products: Haloacetic Acids and Trichlorophenol", "Micro Liquid-
 3181 Liquid Extraction Gas Chromatographic Method", only the version
 3182 in the 22nd and 23rd editions. Referenced in Section 611.381.

3183
 3184 "SM 6610 (92)" means Method 6610, "Carbamate Pesticides
 3185 (Proposed)", only the version in the supplement to the 18th edition
 3186 and the 19th edition. Referenced in Section 611.645.

3187
 3188 "SM 6610 (96)" means Method 6610, "Carbamate Pesticides",
 3189 only the version in the 20th edition. Referenced in Section
 3190 611.645.

3191

3192 "SM 6610 B (99)" means Method 6610, "Carbamate Pesticides",
3193 "High-Performance Liquid Chromatographic Method", only the
3194 version in the 21st edition. Referenced in Section 611.645.
3195
3196 "SM 6610 B (04)" means Method 6610, "Carbamate Pesticides",
3197 "High-Performance Liquid Chromatographic Method", only the
3198 version in 22nd and 23rd editions. Referenced in Section 611.645.
3199
3200 "SM 6640 B (01)" means Method 6640 B, "Acidic Herbicide
3201 Compounds", "Micro Liquid-Liquid Extraction Gas
3202 Chromatographic Method", only the version in 21st edition.
3203 Referenced in Section 611.645.
3204
3205 "SM 6640 B (06)" means Method 6640 B, "Acidic Herbicide
3206 Compounds", "Micro Liquid-Liquid Extraction Gas
3207 Chromatographic Method", only the version in 22nd and 23rd
3208 editions. Referenced in Section 611.645.
3209
3210 "SM 6651 B (91)" means Method 6651 B, "Glyphosate Herbicide
3211 (Proposed)", "Liquid Chromatographic Post-Column Fluorescence
3212 Method", only the version in 18th edition, or "Glyphosate
3213 Herbicide", "Liquid Chromatographic Post-Column Fluorescence
3214 Method", in 19th edition. Referenced in Section 611.645.
3215
3216 "SM 6651 B (96)" means Method 6651 B, "Glyphosate Herbicide",
3217 "Liquid Chromatographic Post-Column Fluorescence Method",
3218 only the version in 20th edition. Referenced in Section 611.645.
3219
3220 "SM 6651 B (00)" means Method 6651 B, "Glyphosate Herbicide",
3221 "Liquid Chromatographic Post-Column Fluorescence Method",
3222 only the version in 21st edition. Referenced in Section 611.645.
3223
3224 "SM 6651 B (05)" means Method 6651 B, "Glyphosate Herbicide",
3225 "Liquid Chromatographic Post-Column Fluorescence Method",
3226 only the version in 22nd and 23rd editions. Referenced in Section
3227 611.645.
3228
3229 "SM 7110 B (85)" means Method 7110 B, "Gross Alpha and Beta
3230 Radioactivity (Total, Suspended, and Dissolved)", "Counting
3231 Method", only the version in 17th edition. Referenced in Section
3232 611.720.
3233

3234 "SM 7110 B (91)" means Method 7110 B, "Gross Alpha and Beta
3235 Radioactivity (Total, Suspended, and Dissolved)", "Evaporation
3236 Method for Gross Alpha-Beta", only the version in 18th and 19th
3237 editions. Referenced in Section 611.720.

3238
3239 "SM 7110 B (96)" means Method 7110 B, "Gross Alpha and Beta
3240 Radioactivity (Total, Suspended, and Dissolved)", "Evaporation
3241 Method for Gross Alpha-Beta", only the version in 20th edition.
3242 Referenced in Section 611.720.

3243
3244 "SM 7110 B (00)" means Method 7110 B, "Gross Alpha and Beta
3245 Radioactivity (Total, Suspended, and Dissolved)", "Evaporation
3246 Method for Gross Alpha-Beta", only the version in 21st, 22nd, and
3247 23rd editions. Referenced in Section 611.720.

3248
3249 "SM 7110 C (91)" means Method 7110 C, "Gross Alpha and Beta
3250 Radioactivity (Total, Suspended, and Dissolved)", "Coprecipitation
3251 Method for Gross Alpha Radioactivity in Drinking Water
3252 (Proposed)", only the version in 18th and 19th editions. Referenced
3253 in Section 611.720.

3254
3255 "SM 7110 C (96)" means Method 7110 C, "Gross Alpha and Beta
3256 Radioactivity (Total, Suspended, and Dissolved)", "Coprecipitation
3257 Method for Gross Alpha Radioactivity in Drinking Water", only
3258 the version in 20th edition. Referenced in Section 611.720.

3259
3260 "SM 7110 C (00)" means Method 7110 C, "Gross Alpha and Beta
3261 Radioactivity (Total, Suspended, and Dissolved)", "Coprecipitation
3262 Method for Gross Alpha Radioactivity in Drinking Water", only
3263 the version in 21st, 22nd, and 23rd editions. Referenced in Section
3264 611.720.

3265
3266 "SM 7110 D (17)" means Method 7110 D, "Gross Alpha and Beta
3267 Radioactivity (Total, Suspended, and Dissolved)", "Liquid
3268 Scintillation Spectroscopic Method for Gross Alpha-Beta
3269 Radioactivity in Drinking Water", only the version from Standard
3270 Methods Online as Method 7110 D-17. Referenced in Section
3271 611.720.

3272
3273 "SM 7120 (94)" means Method 7120, "Gamma-Emitting
3274 Radionuclides", only the version in the 19th edition. Referenced in
3275 Section 611.720.

3276

3277 "SM 7120 (97)" means Method 7120, "Gamma-Emitting
 3278 Radionuclides", only the version in the 20th, 21st, 22nd, and 23rd
 3279 editions. Referenced in Section 611.720.
 3280
 3281 "SM 7500-Cs B (88)" means Method 7500-Cs B, "Radioactive
 3282 Cesium", "Precipitation Method", only the version in the 17th and
 3283 18th editions. Referenced in Section 611.720.
 3284
 3285 "SM 7500-Cs B (93)" means Method 7500-Cs B, "Radioactive
 3286 Cesium", "Precipitation Method", only the version in the 19th and
 3287 20th editions. Referenced in Section 611.720.
 3288
 3289 "SM 7500-Cs B (00)" means Method 7500-Cs B, "Radioactive
 3290 Cesium", "Precipitation Method", only the version in the 21st, 22nd,
 3291 and 23rd editions. Referenced in Section 611.720.
 3292
 3293 "SM 7500-I B (88)" means Method 7500-I B, "Radioactive
 3294 Iodine", "Precipitation Method", only the version in the 17th and
 3295 18th editions. Referenced in Section 611.720.
 3296
 3297 "SM 7500-I B (93)" means Method 7500-I B, "Radioactive
 3298 Iodine", "Precipitation Method", only the version in the 19th and
 3299 20th editions. Referenced in Section 611.720.
 3300
 3301 "SM 7500-I B (00)" means Method 7500-I B, "Radioactive
 3302 Iodine", "Precipitation Method", only the version in the 21st, 22nd,
 3303 and 23rd editions. Referenced in Section 611.720.
 3304
 3305 "SM 7500-I C (88)" means Method 7500-I C, "Radioactive
 3306 Iodine", "Ion-Exchange Method", only the version in the 17th and
 3307 18th editions. Referenced in Section 611.720.
 3308
 3309 "SM 7500-I C (93)" means Method 7500-I C, "Radioactive
 3310 Iodine", "Ion-Exchange Method", only the version in the 19th and
 3311 20th editions. Referenced in Section 611.720.
 3312
 3313 "SM 7500-I C (00)" means Method 7500-I C, "Radioactive
 3314 Iodine", "Ion-Exchange Method", only the version in the 21st, 22nd,
 3315 and 23rd editions. Referenced in Section 611.720.
 3316
 3317 "SM 7500-I D (88)" means Method 7500-I D, "Radioactive
 3318 Iodine", "Distillation Method", only the version in the 17th and 18th
 3319 editions. Referenced in Section 611.720.

3320
3321 "SM 7500-I D (93)" means Method 7500-I D, "Radioactive
3322 Iodine", "Distillation Method", only the version in the 19th and 20th
3323 editions. Referenced in Section 611.720.
3324
3325 "SM 7500-I D (00)" means Method 7500-I D, "Radioactive
3326 Iodine", "Distillation Method", only the version in the 21st, 22nd,
3327 and 23rd editions. Referenced in Section 611.720.
3328
3329 "SM 7500-Ra B (88)" means Method 7500-Ra B, "Radium",
3330 "Precipitation Method", only the version in the 17th and 18th
3331 editions. Referenced in Section 611.720.
3332
3333 "SM 7500-Ra B (93)" means Method 7500-Ra B, "Radium",
3334 "Precipitation Method", only the version in the 19th and 20th
3335 editions. Referenced in Section 611.720.
3336
3337 "SM 7500-Ra B (01)" means Method 7500-Ra B, "Radium",
3338 "Precipitation Method", only the version in the 21st, 22nd, and 23rd
3339 editions. Referenced in Section 611.720.
3340
3341 "SM 7500-Ra C (88)" means Method 7500-Ra C, "Radium",
3342 "Emanation Method", only the version in the 17th and 18th editions.
3343 Referenced in Section 611.720.
3344
3345 "SM 7500-Ra C (93)" means Method 7500-Ra C, "Radium",
3346 "Emanation Method", only the version in the 19th and 20th editions.
3347 Referenced in Section 611.720.
3348
3349 "SM 7500-Ra C (01)" means Method 7500-Ra C, "Radium",
3350 "Emanation Method", only the version in the 21st, 22nd, and 23rd
3351 editions. Referenced in Section 611.720.
3352
3353 "SM 7500-Ra D (88)" means Method 7500-Ra D, "Radium",
3354 "Sequential Precipitation Method", only the version in the 17th and
3355 18th editions. Referenced in Section 611.720.
3356
3357 "SM 7500-Ra D (93)" means Method 7500-Ra D, "Radium",
3358 "Sequential Precipitation Method", only the version in the 19th and
3359 20th editions. Referenced in Section 611.720.
3360

3361 "SM 7500-Ra D (01)" means Method 7500-Ra D, "Radium",
 3362 "Sequential Precipitation Method", only the version in the 21st,
 3363 22nd, and 23rd editions. Referenced in Section 611.720.
 3364
 3365 "SM 7500-Ra E (01)" means Method 7500-Ra E, "Radium",
 3366 "Gamma Spectrometry Method", only the version in the 22nd
 3367 edition. Referenced in Section 611.720.
 3368
 3369 "SM 7500-Ra E (07)" means Method 7500-Ra E, "Radium",
 3370 "Gamma Spectrometry Method", only the version in the 23rd
 3371 edition. Referenced in Section 611.720.
 3372
 3373 "SM 7500-Sr B (88)" means Method 7500-Sr B, "Total
 3374 Radioactive Strontium and Strontium 90", "Precipitation Method",
 3375 only the version in the 17th and 18th editions. Referenced in
 3376 Section 611.720.
 3377
 3378 "SM 7500-Sr B (93)" means Method 7500-Sr B, "Total
 3379 Radioactive Strontium and Strontium 90", "Precipitation Method",
 3380 only the version in the 19th and 20th editions. Referenced in
 3381 Section 611.720.
 3382
 3383 "SM 7500-Sr B (01)" means Method 7500-Sr B, "Total
 3384 Radioactive Strontium and Strontium 90", "Precipitation Method",
 3385 only the version in the 21st, 22nd, and 23rd editions. Referenced in
 3386 Section 611.720.
 3387
 3388 "SM 7500-³H B (88)" means Method 7500-³H B, "Tritium",
 3389 "Liquid Scintillation Spectrometric Method", only the version in
 3390 the 17th and 18th editions. Referenced in Section 611.720.
 3391
 3392 "SM 7500-³H B (93)" means Method 7500-³H B, "Tritium",
 3393 "Liquid Scintillation Spectrometric Method", only the version in
 3394 the 19th and 20th editions. Referenced in Section 611.720.
 3395
 3396 "SM 7500-³H B (00)" means Method 7500-³H B, "Tritium",
 3397 "Liquid Scintillation Spectrometric Method", only the version in
 3398 the 21st, 22nd, and 23rd editions. Referenced in Section 611.720.
 3399
 3400 "SM 7500-U B (88)" means Method 7500-U B, "Uranium",
 3401 "Radiochemical Method (Proposed)", only the version in the 17th
 3402 edition. Referenced in Section 611.720.
 3403

3404 "SM 7500-U B (91)" means only Method 7500-U B, "Uranium",
3405 "Radiochemical Method (Proposed)", the version in the 18th
3406 edition, and "Uranium", "Radiochemical Method", the version in
3407 the 19th edition. Referenced in Section 611.720.
3408
3409 "SM 7500-U B (96)" means Method 7500-U B, "Uranium",
3410 "Radiochemical Method", only the version in the 20th edition.
3411 Referenced in Section 611.720.
3412
3413 "SM 7500-U B (00)" means Method 7500-U B, "Uranium",
3414 "Radiochemical Method", only the version in the 21st, 22nd, and
3415 23rd editions. Referenced in Section 611.720.
3416
3417 "SM 7500-U C (88)" means Method 7500-U C, "Uranium",
3418 "Fluorometric Method (Proposed)", only the version in the 17th
3419 edition. Referenced in Section 611.720.
3420
3421 "SM 7500-U C (91)" means Method 7500-U C, "Uranium",
3422 "Isotopic Method (Proposed)", only the version in the 18th and 19th
3423 editions. Referenced in Section 611.720.
3424
3425 "SM 7500-U C (96)" means Method 7500-U C, "Uranium",
3426 "Isotopic Method", only the version in the 20th edition. Referenced
3427 in Section 611.720.
3428
3429 "SM 7500-U C (00)" means Method 7500-U C, "Uranium",
3430 "Isotopic Method", only the version in the 21st, 22nd, and 23rd
3431 editions. Referenced in Section 611.720.
3432
3433 "SM 9060 A (97)" means Method 9060 A, "Samples",
3434 "Collection", only the version in the 20th and 21st editions.
3435 Referenced in Section 611.1052.
3436
3437 "SM 9215 B (88)" means Method 9215 B, "Heterotrophic Plate
3438 Count", "Pour Plate Method", only the version in the 18th edition.
3439 Referenced in Section 611.531.
3440
3441 "SM 9215 B (94)" means Method 9215 B, "Heterotrophic Plate
3442 Count", "Pour Plate Method", only the version in the 19th and 20th
3443 editions. Referenced in Section 611.531.
3444

3445 "SM 9215 B (00)" means Method 9215 B, "Heterotrophic Plate
3446 Count", "Pour Plate Method", only the version in the 21st edition.
3447 Referenced in Section 611.531.
3448
3449 "SM 9215 B (04)" means Method 9215 B, "Heterotrophic Plate
3450 Count", "Pour Plate Method", only the version in the 22nd edition.
3451 Referenced in Section 611.531.
3452
3453 "SM 9215 B (16)" means Method 9215 B, "Heterotrophic Plate
3454 Count", "Pour Plate Method", only the version in the 23rd edition.
3455 Referenced in Section 611.531.
3456
3457 "SM 9221 A (93)" means Method 9221 A, "Multiple-Tube
3458 Fermentation Technique for Members of the Coliform Group",
3459 "Introduction", only the version in the 18th edition. Referenced in
3460 Section 611.531.
3461
3462 "SM 9221 A (94)" means Method 9221 A, "Multiple-Tube
3463 Fermentation Technique for Members of the Coliform Group",
3464 "Introduction", only the version in the 19th and 20th editions.
3465 Referenced in Section 611.531.
3466
3467 "SM 9221 A (99)" means Method 9221 A, "Multiple-Tube
3468 Fermentation Technique for Members of the Coliform Group",
3469 "Introduction", only the version in the 21st edition. Referenced in
3470 Section 611.531.
3471
3472 "SM 9221 A (06)" means Method 9221 A, "Multiple-Tube
3473 Fermentation Technique for Members of the Coliform Group",
3474 "Introduction", only the version in the 22nd edition. Referenced in
3475 Section 611.531.
3476
3477 "SM 9221 A (14)" means Method 9221 A, "Multiple-Tube
3478 Fermentation Technique for Members of the Coliform Group",
3479 "Introduction", only the version in the 23rd edition. Referenced in
3480 Section 611.531.
3481
3482 "SM 9221 B (93)" means Method 9221 B, "Multiple-Tube
3483 Fermentation Technique for Members of the Coliform Group",
3484 "Standard Total Coliform Fermentation Technique", only the
3485 version in the 18th edition. Referenced in Section 611.531.
3486

3487 "SM 9221 B (94)" means Method 9221 B, "Multiple-Tube
3488 Fermentation Technique for Members of the Coliform Group",
3489 "Standard Total Coliform Fermentation Technique", only the
3490 version in the 19th and 20th editions. Referenced in Sections
3491 611.531 and 611.1052.
3492
3493 "SM 9221 B (99)" means Method 9221 B, "Multiple-Tube
3494 Fermentation Technique for Members of the Coliform Group",
3495 "Standard Total Coliform Fermentation Technique", only the
3496 version in the 21st edition. Referenced in Sections 611.531 and
3497 611.1052.
3498
3499 "SM 9221 B (06)" means Method 9221 B, "Multiple-Tube
3500 Fermentation Technique for Members of the Coliform Group",
3501 "Standard Total Coliform Fermentation Technique", only the
3502 version in the 22nd edition. Referenced in Sections 611.531 and
3503 611.1052.
3504
3505 "SM 9221 B (14)" means Method 9221 B, "Multiple-Tube
3506 Fermentation Technique for Members of the Coliform Group",
3507 "Standard Total Coliform Fermentation Technique", only the
3508 version in the 23rd edition. Referenced in Sections 611.531 and
3509 611.1052.
3510
3511 "SM 9221 C (93)" means Method 9221 C, "Multiple-Tube
3512 Fermentation Technique for Members of the Coliform Group",
3513 "Estimation of Bacterial Density", only the version in the 18th
3514 edition. Referenced in Section 611.531.
3515
3516 "SM 9221 C (94)" means Method 9221 C, "Multiple-Tube
3517 Fermentation Technique for Members of the Coliform Group",
3518 "Estimation of Bacterial Density", only the version in the 19th and
3519 20th editions. Referenced in Section 611.531.
3520
3521 "SM 9221 C (99)" means Method 9221 C, "Multiple-Tube
3522 Fermentation Technique for Members of the Coliform Group",
3523 "Estimation of Bacterial Density", only the version in the 21st
3524 edition. Referenced in Section 611.531.
3525
3526 "SM 9221 C (06)" means Method 9221 C, "Multiple-Tube
3527 Fermentation Technique for Members of the Coliform Group",
3528 "Estimation of Bacterial Density", only the version in the 22nd
3529 edition. Referenced in Section 611.531.

3530
3531 "SM 9221 C (14)" means Method 9221 C, "Multiple-Tube
3532 Fermentation Technique for Members of the Coliform Group",
3533 "Estimation of Bacterial Density", only the version in the 23rd
3534 edition. Referenced in Section 611.531.
3535
3536 "SM 9221 D (94)" means Method 9221 D, "Multiple-Tube
3537 Fermentation Technique for Members of the Coliform Group",
3538 "Presence-Absence (P-A) Coliform", only the version in the 20th
3539 edition. Referenced in Section 611.1052.
3540
3541 "SM 9221 D (99)" means Method 9221 D, "Multiple-Tube
3542 Fermentation Technique for Members of the Coliform Group",
3543 "Presence-Absence (P-A) Coliform", only the version in the 21st
3544 edition. Referenced in Section 611.1052.
3545
3546 "SM 9221 D (14)" means Method 9221 D, "Multiple-Tube
3547 Fermentation Technique for Members of the Coliform Group",
3548 "Presence-Absence (P-A) Coliform", only the version in the 23rd
3549 edition. Referenced in Section 611.1052.
3550
3551 "SM 9221 E (93)" means Method 9221 E, "Multiple-Tube
3552 Fermentation Technique for Members of the Coliform Group",
3553 "Fecal Coliform Procedure", only the version in the 18th edition.
3554 Referenced in Section 611.531.
3555
3556 "SM 9221 E (94)" means Method 9221 E, "Multiple-Tube
3557 Fermentation Technique for Members of the Coliform Group",
3558 "Fecal Coliform Procedure", only the version in the 19th and 20th
3559 editions. Referenced in Section 611.531.
3560
3561 "SM 9221 E (99)" means Method 9221 E, "Multiple-Tube
3562 Fermentation Technique for Members of the Coliform Group",
3563 "Fecal Coliform Procedure", only the version in the 21st edition.
3564 Referenced in Section 611.531.
3565
3566 "SM 9221 E (06)" means Method 9221 E, "Multiple-Tube
3567 Fermentation Technique for Members of the Coliform Group",
3568 "Fecal Coliform Procedure", only the version in the 22nd edition.
3569 Referenced in Section 611.531.
3570
3571 "SM 9221 E (14)" means Method 9221 E, "Multiple-Tube
3572 Fermentation Technique for Members of the Coliform Group",

3573 "Thermotolerant (Fecal) Coliform Procedure", only the version in
3574 the 23rd edition. Referenced in Section 611.531.

3575
3576 "SM 9221 F (94)" means Method 9221 F, "Multiple-Tube
3577 Fermentation Technique for Members of the Coliform Group",
3578 "Escherichia Coli Procedure (Proposed)", only the version in the
3579 20th edition. Referenced in Sections 611.802 and 611.1052.

3580
3581 "SM 9221 F (06)" means Method 9221 F, "Multiple-Tube
3582 Fermentation Technique for Members of the Coliform Group",
3583 "Escherichia Coli Procedure Using Fluorogenic Substrate", only
3584 the version in the 22nd edition. Referenced in Sections 611.802
3585 and 611.1052.

3586
3587 "SM 9221 F (14)" means Method 9221 F, "Multiple-Tube
3588 Fermentation Technique for Members of the Coliform Group",
3589 "Escherichia Coli Procedure Using Fluorogenic Substrate", only
3590 the version in the 23rd edition. Referenced in Sections 611.802 and
3591 611.1052.

3592
3593 "SM 9222 A (91)" means Method 9222 A, "Membrane Filter
3594 Technique for Members of the Coliform Group", "Introduction",
3595 only the version in the 18th edition. Referenced in Section
3596 611.531.

3597
3598 "SM 9222 A (94)" means Method 9222 A, "Membrane Filter
3599 Technique for Members of the Coliform Group", "Introduction",
3600 only the version in the 19th edition. Referenced in Section
3601 611.531.

3602
3603 "SM 9222 A (97)" means Method 9222 A, "Membrane Filter
3604 Technique for Members of the Coliform Group", "Introduction",
3605 only the version in the 20th and 21st editions. Referenced in
3606 Section 611.531.

3607
3608 "SM 9222 A (06)" means Method 9222 A, "Membrane Filter
3609 Technique for Members of the Coliform Group", "Introduction",
3610 only the version in the 22nd edition. Referenced in Section
3611 611.531.

3612
3613 "SM 9222 A (15)" means Method 9222 A, "Membrane Filter
3614 Technique for Members of the Coliform Group", "Introduction",

3615 only the version in the 23rd edition. Referenced in Section
3616 611.531.
3617
3618 "SM 9222 B (91)" means Method 9222 B, "Membrane Filter
3619 Technique for Members of the Coliform Group", "Standard Total
3620 Coliform Membrane Filter Procedure", only the version in the 18th
3621 edition. Referenced in Section 611.531.
3622
3623 "SM 9222 B (94)" means Method 9222 B, "Membrane Filter
3624 Technique for Members of the Coliform Group", "Standard Total
3625 Coliform Membrane Filter Procedure", only the version in the 19th
3626 edition. Referenced in Section 611.531.
3627
3628 "SM 9222 B (97)" means Method 9222 B, "Membrane Filter
3629 Technique for Members of the Coliform Group", "Standard Total
3630 Coliform Membrane Filter Procedure", only the version in the 20th
3631 and 21st editions. Referenced in Sections 611.531 and 611.1052.
3632
3633 "SM 9222 B (15)" means Method 9222 B, "Membrane Filter
3634 Technique for Members of the Coliform Group", "Standard Total
3635 Coliform Membrane Filter Procedure using Endo Media", only the
3636 version in the 23rd edition. Referenced in Sections 611.531 and
3637 611.1052.
3638
3639 "SM 9222 C (91)" means Method 9222 C, "Membrane Filter
3640 Technique for Members of the Coliform Group", "Delayed-
3641 Incubation Total Coliform Procedure", only the version in the 18th
3642 edition. Referenced in Section 611.531.
3643
3644 "SM 9222 C (94)" means Method 9222 C, "Membrane Filter
3645 Technique for Members of the Coliform Group", "Delayed-
3646 Incubation Total Coliform Procedure", only the version in the 19th
3647 edition. Referenced in Section 611.531.
3648
3649 "SM 9222 C (97)" means Method 9222 C, "Membrane Filter
3650 Technique for Members of the Coliform Group", "Delayed-
3651 Incubation Total Coliform Procedure", only the version in the 20th
3652 and 21st editions. Referenced in Sections 611.531 and 611.1052.
3653
3654 "SM 9222 C (15)" means Method 9222 C, "Membrane Filter
3655 Technique for Members of the Coliform Group", "Delayed-
3656 Incubation Total Coliform Procedure", only the version in the 23rd
3657 edition. Referenced in Sections 611.531 and 611.1052.

3658
3659 "SM 9222 D (91)" means Method 9222 D, "Membrane Filter
3660 Technique for Members of the Coliform Group", "Fecal Coliform
3661 Membrane Filter Procedure", only the version in the 18th edition.
3662 Referenced in Section 611.531.
3663
3664 "SM 9222 D (94)" means Method 9222 D, "Membrane Filter
3665 Technique for Members of the Coliform Group", "Fecal Coliform
3666 Membrane Filter Procedure", only the version in the 19th edition.
3667 Referenced in Section 611.531.
3668
3669 "SM 9222 D (97)" means Method 9222 D, "Membrane Filter
3670 Technique for Members of the Coliform Group", "Fecal Coliform
3671 Membrane Filter Procedure", only the version in the 20th and 21st
3672 editions. Referenced in Sections 611.531 and 611.1004.
3673
3674 "SM 9222 D (06)" means Method 9222 D, "Membrane Filter
3675 Technique for Members of the Coliform Group", "Thermotolerant
3676 (Fecal) Coliform Membrane Filter Procedure", only the version in
3677 the 22nd edition. Referenced in Section 611.531.
3678
3679 "SM 9222 D (15)" means Method 9222 D, "Membrane Filter
3680 Technique for Members of the Coliform Group", "Thermotolerant
3681 (Fecal) Coliform Membrane Filter Procedure", only the version in
3682 the 23rd edition. Referenced in Section 611.531.
3683
3684 "SM 9222 G (97)" means Method 9222 G, "Membrane Filter
3685 Technique for Members of the Coliform Group", "MF Partition
3686 Procedure", only the version in the 20th and 21st editions.
3687 Referenced in Sections 611.802, 611.1004, and 611.1052.
3688
3689 "SM 9222 H (15)" means Method 9222 H, "Membrane Filter
3690 Technique for Members of the Coliform Group", "Partitioning E.
3691 coli from MF Total Coliform and E. coli using EC-MUG Broth",
3692 only the version in the 23rd edition. Referenced in Section
3693 611.1052.
3694
3695 "SM 9222 I (15)" means Method 9222 I, "Membrane Filter
3696 Technique for Members of the Coliform Group", "Partitioning E.
3697 coli from MF Total Coliform and E. coli using NA-MUG Agar",
3698 only the version in the 23rd edition. Referenced in Sections
3699 611.802 and 611.1052.
3700

3701 "SM 9222 J (15)" means Method 9222 J, "Membrane Filter
3702 Technique for Members of the Coliform Group", "Simultaneous
3703 Detection of Total Coliform and E. coli by Dual-Chromogen
3704 Membrane Filter Procedure", only the version in the 23rd edition.
3705 Referenced in Sections 611.802 and 611.1052.
3706

3707 "SM 9223 (92)" means Method 9223, "Chromogenic Substrate
3708 Coliform Test (Proposed)" (also referred to as the variations
3709 "Colilert[®]" and "Colisure[™]" depending on the medium used), only
3710 the version in the 18th edition. Referenced in Section 611.531.
3711

3712 "SM 9223 (94)" means Method 9223, "Chromogenic Substrate
3713 Coliform" (also referred to as the variations "Colilert[®]" and
3714 "Colisure[™]" depending on the medium used), only the version in
3715 the 19th edition. Referenced in Section 611.531.
3716

3717 "SM 9223 (97)" means Method 9223, "Enzyme Substrate
3718 Coliform" (also referred to as the variations "Colilert[®]" and
3719 "Colisure[™]" depending on the medium used), only the version in
3720 the 20th and 21st editions. Referenced in Sections 611.531.
3721

3722 "SM 9223 B (92)" means Method 9223 B, "Chromogenic
3723 Substrate Coliform Test (Proposed)", "Chromogenic Substrate"
3724 (also referred to as the variations "Colilert[®]", "Colisure[™]", and
3725 "Colilert-18[®]" depending on the medium used), only the version in
3726 the 18th edition. Referenced in Section 611.1004.
3727

3728 "SM 9223 B (94)" means Method 9223 B, "Chromogenic
3729 Substrate Coliform", "Chromogenic Substrate" (also referred to as
3730 the variations "Colilert[®]" and "Colisure[™]" depending on the
3731 medium used), only the version in the 19th edition. Referenced in
3732 Section 611.1004.
3733

3734 "SM 9223 B (97)" means Method 9223 B, "Enzyme Substrate
3735 Coliform", "Chromogenic Substrate" (also referred to as the
3736 variations "Colilert[®]" and "Colisure[™]" depending on the medium
3737 used), only the version in the 20th and 21st editions. Referenced in
3738 Sections 611.802 and 611.1004.
3739

3740 "SM 9223 B (04)" means Method 9223 B, "Enzyme Substrate
3741 Coliform", "Enzyme Substrate" (also referred to as the variations
3742 "Colilert[®]" and "Colisure[™]" depending on the medium used), only

3743 the version in the 22nd edition. Referenced in Sections 611.531,
3744 611.802, and 611.1004.
3745
3746 "SM 9223 B (16)" means Method 9223 B, "Enzyme Substrate
3747 Coliform", "Enzyme Substrate" (also referred to as the variations
3748 "Colilert[®]" and "Colisure[™]" depending on the medium used), only
3749 the version in the 23rd edition. Referenced in Sections 611.531,
3750 611.802, and 611.1052.
3751
3752 "SM 9230 B (93)" means Method 9230 B, "Fecal Streptococcus
3753 and Enterococcus Groups", "Multiple-Tube Techniques", only the
3754 version in the 20th and 21st editions. Referenced in Section
3755 611.802.
3756
3757 "SM 9230 B (04)" means Method 9230 B, "Fecal Streptococcus
3758 and Enterococcus Groups", "Multiple-Tube Techniques", only the
3759 version from Standard Methods Online as Method 9230 B-04.
3760 Referenced in Section 611.802.
3761
3762 "SM 9230 C (93)" means Method 9230 C, "Fecal Streptococcus
3763 and Enterococcus Groups", "Membrane Filter Techniques", only
3764 the version in the 20th edition. Referenced in Section 611.802.
3765
3766 "SM 9230 C (13)" means Method 9230 C, "Fecal
3767 Enterococcus/Streptococcus Groups", "Membrane Filter
3768 Techniques", only the version in the 23rd edition. Referenced in
3769 Section 611.802.
3770
3771 "SM 9230 D (13)" means Method 9230 D, "Fecal
3772 Enterococcus/Streptococcus Groups", "Fluorogenic Substrate
3773 Enterococcus", only the version in the 23rd edition. Referenced in
3774 Section 611.802.
3775
3776 BOARD NOTE: The publication dates of the several [editions of](#)
3777 "Standard Methods for the Examination of Water and Wastewater"
3778 [editions containing that contain](#) approved methods are as follows:
3779
3780 13th edition, 1971
3781 17th edition, 1989
3782 18th edition, 1992
3783 Supplement to 18th edition, 1994
3784 19th edition, 1995
3785 Supplement to 19th edition, 1996

3786 20th edition, 1998
3787 21st edition, 2005
3788 22nd edition, 2012
3789 23rd edition, 2017

3790

3791 "Syngenta AG-625 (01)" means "Method AG-625: Atrazine in Drinking
3792 Water by Immunoassay" (February 2001), Syngenta Crop Protection, Inc.
3793 Available from publisher, 410 Swing Road, Post Office Box 18300,
3794 Greensboro, NC 27419 (336-632-6000). Referenced in Section 611.645.

3795

3796 "Systea Easy (1-Reagent) (09)" means "Nitrate by Discrete Analysis:
3797 Systea Easy (1-Reagent) Nitrate Method (Colorimetric, Automated, 1
3798 Reagent)" (February 4, 2009). Available from Systea Scientific LLC, 900
3799 Jorie Blvd., Suite 35, Oak Brook, IL 60523 (630-645-0600); NEMI; and
3800 USEPA, OGWDW (under "Inorganic Contaminants and Other Inorganic
3801 Constituents (PDF)"). Referenced in Section 611.611.

3802

3803 Technicon Methods. Available from Bran + Luebbe, 1025 Busch
3804 Parkway, Buffalo Grove, IL 60089.

3805

3806 "Technicon #129-71W (72)" means "Fluoride in Water and
3807 Wastewater" (December 1972), Industrial Method #129-71W.
3808 Referenced in Section 611.611. See 40 CFR 141.23(k)(1),
3809 footnote 11.

3810

3811 "Technicon #380-75WE (76)" means "Fluoride in Water and
3812 Wastewater" (February 1976), #380-75WE. See 40 CFR
3813 141.23(k)(1), footnote 11, referenced in Section 611.611.

3814

3815 Tecta Methods. Available from Pathogen Detection Systems, Inc., 382
3816 King Street, Kingston, Ontario, Canada K7K 2Y2 (844-215-7122 or
3817 www.tecta-pds.ca) and USEPA, OGWDW (under "Ground Water Rule
3818 (PDF)" and "Revised Total Coliforms Rules (PDF)").

3819

3820 "Tecta (14)" means "TECTA™ EC/TC medium and the TECTA™
3821 Instrument: a Presence/Absence Method for Simultaneous
3822 Detection of Total Coliforms and Escherichia coli (E.coli) in
3823 Drinking Water", Version 1.0 (May 22, 2014). Referenced in
3824 Sections 611.802 and 611.1052.

3825

3826 "Tecta (17)" means "TECTA™ EC/TC medium and the TECTA™
3827 Instrument: a Presence/Absence Method for Simultaneous
3828 Detection of Total Coliforms and Escherichia coli (E.coli) in

3829 Drinking Water", Version 2.0 (March 20, 2017). Referenced in
3830 Sections 611.802 and 611.1052.

3831
3832 "Thermo-Fisher 557.1 (17)" means "Thermofisher Method 557.1:
3833 Determination of Haloacetic Acids in Drinking Water using Two-
3834 Dimensional Ion Chromatography with Suppressed Conductivity
3835 Detection", Version 1.0 (January 2017). Available from Thermo-Fisher
3836 Scientific, 490 Lakeside Dr, Sunnyvale, CA 94085 (800-556-2323;
3837 www.thermofisher.com) and USEPA, OGWDW (under "Disinfection
3838 Byproduct Rules (PDF)"). Referenced in Section 611.611.

3839
3840 "Thermo-Fisher Discrete Analyzer (16)" means "Application Note:
3841 Drinking Water Orthophosphate Method for Thermo Scientific Gallery
3842 Discrete Analyzer", Revision 5 (February 18, 2016). Available from
3843 Thermo-Fisher Scientific, Ratastie 2, 01620 Vantaa, Finland and USEPA,
3844 OGWDW (under "Inorganic Contaminants and Other Inorganic
3845 Constituents (PDF)"). Referenced in Section 611.611.

3846
3847 USEPA Methods

3848
3849 Numbered Methods

3850
3851 "USEPA H-02 (84)" means Method H-02, "Radiochemical
3852 Determination of Tritium in Water – Dioxane Method", in
3853 USEPA Radiochemistry Procedures (84). Referenced in
3854 Section 611.720.

3855 BOARD NOTE: Also available from USEPA, OGWDW
3856 (under "Radionuclides (PDF)").

3857
3858 "USEPA Ra-03 (84)" means Method Ra-03,
3859 "Radiochemical Determination of Radium-226 in Water
3860 Samples", in USEPA Radiochemistry Procedures (84).
3861 Referenced in Section 611.720.

3862 BOARD NOTE: Also available from USEPA, OGWDW
3863 (under "Radionuclides (PDF)").

3864
3865 "USEPA Ra-04 (84)" means Method Ra-04,
3866 "Radiochemical Determination of Radium-226 – De-
3867 emanation Procedure", in USEPA Radiochemistry
3868 Procedures (84). Referenced in Section 611.720.

3869 BOARD NOTE: Also available from USEPA, OGWDW
3870 (under "Radionuclides (PDF)").

3871

3872 "USEPA Ra-05 (84)" means Method Ra-05,
3873 "Radiochemical Determination of Radium-228 in Water
3874 Samples", in USEPA Radiochemistry Procedures (84).
3875 Referenced in Section 611.720.
3876 BOARD NOTE: Also available from USEPA, OGWDW
3877 (under "Radionuclides (PDF)").
3878
3879 "USEPA Sr-04 (84)" means Method Sr-04, "Radiochemical
3880 Determination of Radiostrontium in Water, Sea Water and
3881 Other Aqueous Media", in USEPA Radiochemistry
3882 Procedures (84). Referenced in Section 611.720.
3883 BOARD NOTE: Also available from USEPA, OGWDW
3884 (under "Radionuclides (PDF)").
3885
3886 "USEPA 00-01 (84)" means Method 00-01,
3887 "Radiochemical Determination of Gross Alpha and Gross
3888 Beta Activity in Water", in USEPA Radiochemistry
3889 Procedures (84). Referenced in Section 611.720.
3890 BOARD NOTE: Also available from USEPA, OGWDW
3891 (under "Radionuclides (PDF)").
3892
3893 "USEPA 00-02 (84)" means Method 00-02,
3894 "Radiochemical Determination of Gross Alpha Activity in
3895 Drinking Water by Coprecipitation", in USEPA
3896 Radiochemistry Procedures (84). Referenced in Section
3897 611.720.
3898 BOARD NOTE: Also available from USEPA, OGWDW
3899 (under "Radionuclides (PDF)").
3900
3901 "USEPA 00-07 (84)" means Method 00-07,
3902 "Radiochemical Determination of Thorium and Uranium in
3903 Water", in USEPA Radiochemistry Procedures (84).
3904 Referenced in Section 611.720.
3905 BOARD NOTE: Also available from USEPA, OGWDW
3906 (under "Radionuclides (PDF)").
3907
3908 "USEPA 100.1 (83)" means "Method 100.1: Analytical
3909 Method for Determination of Asbestos in Water"
3910 (September 1983), USEPA, Environmental Research
3911 Laboratory, document number EPA 600/4-83-043.
3912 Available from NEMI; NTRL (document number PB83-
3913 260471) and USEPA, NSCEP (search for "600483043").
3914 Referenced in Section 611.611.

3915
3916 "USEPA 100.2 (94)" means "Method 100.2:
3917 Determination of Asbestos Structures over 10-mm in
3918 Length in Drinking Water" (June 1994), USEPA,
3919 Environmental Monitoring Systems Laboratory, document
3920 number EPA 600/R-94-134. Available from NEMI; NTRL
3921 (document number PB94-201902); USEPA, NSCEP
3922 (search for "600R94134"); and USEPA, OGWDW (under
3923 "Inorganic Contaminants and Other Inorganic Constituents
3924 (PDF)"). Referenced in Section 611.611.

3925
3926 ["USEPA 127 \(21\)" means "Method 127: Determination of](#)
3927 [Monochloramine Concentration in Drinking Water",](#)
3928 [document number EPA 815-B-21-004, Version 1.0](#)
3929 [\(January 2021\). Available from USEPA, NSCEP \(search](#)
3930 [for "815B21004"\). Referenced in Section 611.531.](#)
3931 [BOARD NOTE: Also individually available from NEMI.](#)

3932
3933 "USEPA 150.1 (71)" means "pH: Method 150.1
3934 (Electrometric)" (1971), in USEPA Inorganic Methods
3935 (83). Referenced in Section 611.611.
3936 BOARD NOTE: Also individually available from NEMI.

3937
3938 "USEPA 150.2 (82)" means "pH, Continuous Monitoring
3939 (Electrometric) – Method 150.2" (December 1982), in
3940 USEPA Inorganic Methods (83). Referenced in Section
3941 611.611.
3942 BOARD NOTE: Also individually available from NEMI.

3943
3944 "USEPA 150.3 (17)" means "Method 150.3:
3945 Determination of pH in Drinking Water", Version 1.0
3946 (February 2017), USEPA, Office of Ground Water and
3947 Drinking Water, document number EPA 815/B-17/001.
3948 Available from USEPA, NSCEP (search for "815B17001")
3949 and USEPA, OGWDW (under "Disinfection Byproduct
3950 Rules (PDF)" and "Inorganic Contaminants and Other
3951 Inorganic Constituents (PDF)"). Referenced in Section
3952 611.611.

3953
3954 "USEPA 180.1 (93)" means "Method 180.1:
3955 Determination of Turbidity by Nephelometry", Revision
3956 2.0 (August 1993), in USEPA Environmental Inorganic
3957 Methods (93). Referenced in Section 611.531.

3958 BOARD NOTE: Also individually available from NEMI.
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3960 "USEPA 200.5 (03)" means "Method 200.5:
3961 Determination of Trace Elements in Drinking Water by
3962 Axially Viewed Inductively Coupled Plasma-Atomic
3963 Emission Spectrometry", Revision 4.2 (October 2003),
3964 USEPA, National Exposure Research Laboratory,
3965 document number EPA 600/R-06/115. Available from
3966 NEMI; USEPA, NSCEP (search for "600R06115"); and
3967 USEPA, OGWDW (under "Disinfection Byproduct Rules
3968 (PDF)," "Inorganic Contaminants and Other Inorganic
3969 Constituents (PDF)," and "Secondary Contaminants
3970 (PDF)"). Referenced in Sections 611.611 and 611.612.
3971

3972 "USEPA 200.7 (94)" means "Method 200.7:
3973 Determination of Metals and Trace Elements in Water and
3974 Wastes by Inductively Coupled Plasma-Atomic Emission
3975 Spectrometry", Revision 4.4 (May 1994), in USEPA
3976 Environmental Metals Methods (94). Referenced in
3977 Sections 611.600, 611.611, and 611.612.

3978 BOARD NOTE: Also individually available from NEMI.
3979

3980 "USEPA 200.8 (94)" means "Method 200.8:
3981 Determination of Trace Elements in Water and Wastes by
3982 Inductively Coupled Plasma-Atomic Emission
3983 Spectrometry", Revision 5.3 (May 1994), in USEPA
3984 Environmental Metals Methods (94). Referenced in
3985 Sections 611.600, 611.611, 611.612, and 611.720.

3986 BOARD NOTE: Also individually available from NEMI.
3987

3988 "USEPA 200.9 (94)" means "Method 200.9:
3989 Determination of Metals and Trace Elements in Water by
3990 Ultrasonic Nebulization Inductively Coupled Plasma-
3991 Atomic Emission Spectrometry", Revision 2.2 (May 1994),
3992 in USEPA Environmental Metals Methods (94).
3993 Referenced in Sections 611.600, 611.611, and 611.612.

3994 BOARD NOTE: Also individually available from NEMI.
3995

3996 "USEPA 245.1 (91)" means "Method 245.1:
3997 Determination of Mercury in Water by Cold Vapor Atomic
3998 Absorption Spectrometry", Revision 2.3 (April 1991), in
3999 USEPA Environmental Metals Methods (94). Referenced
4000 in Section 611.611.

4001 BOARD NOTE: Also individually available from NEMI.
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4004 (Automated Cold Vapor Technique)" (1974), in USEPA
4005 Inorganic Methods (83). Referenced in Section 611.611.
4006 BOARD NOTE: Also individually available from NEMI.
4007
4008 "USEPA 300.0 (93)" means "Method 300.0:
4009 Determination of Inorganic Anions by Ion
4010 Chromatography", Revision 2.1 (August 1993), in USEPA
4011 Environmental Inorganic Methods (93). Referenced in
4012 Sections 611.381 and 611.611.
4013 BOARD NOTE: Also individually available from NEMI.
4014
4015 "USEPA 300.1 (97)" means "Method 300.1:
4016 Determination of Inorganic Anions in Drinking Water by
4017 Ion Chromatography", Revision 1.0 (September 1997), in
4018 USEPA Organic and Inorganic Methods (00). Referenced
4019 in Sections 611.381 and 611.611.
4020 BOARD NOTE: Also individually available from NEMI.
4021
4022 "USEPA 302.0 (09)" means "Method 302.0:
4023 Determination of Bromate in Drinking Water Using Two-
4024 Dimensional Ion Chromatography with Suppressed
4025 Conductivity Detection" (September 2009), USEPA, Office
4026 of Water, document number EPA 815/B-09/014. Available
4027 from NEMI; USEPA, NSCEP (search "815B09014"); and
4028 USEPA, OGWDW (under "Disinfection Byproduct Rules
4029 (PDF)"). Referenced in Sections 611.381 and 611.382.
4030
4031 "USEPA 317.0 (01)" means "Method 317.0:
4032 Determination of Inorganic Oxyhalide Disinfection By-
4033 Products in Drinking Water Using Ion Chromatography
4034 with the Addition of a Postcolumn Reagent for Trace
4035 Bromate Analysis", Revision 2.0 (July 2001), USEPA,
4036 Office of Ground Water and Drinking Water, Technical
4037 Support Center, document number EPA 815/B-01/001.
4038 Available from NEMI; USEPA, NSCEP (search
4039 "815B01001"); and USEPA, OGWDW (under
4040 "Disinfection Byproduct Rules (PDF)"). Referenced in
4041 Sections 611.381 and 611.382.
4042

4043 "USEPA 321.8 (97)" means "Method 321.8:
4044 Determination of Bromate in Drinking Waters by Ion
4045 Chromatography Inductively Coupled Plasma/Mass
4046 Spectrometry", Revision 1.0 (December 1997), in USEPA
4047 Organic and Inorganic Methods (00). Referenced in
4048 Sections 611.381 and 611.382.
4049 BOARD NOTE: Also individually available from NEMI.
4050

4051 "USEPA 326.0 (02)" means "Method 326.0:
4052 Determination of Inorganic Oxyhalide Disinfection By-
4053 Products in Drinking Water Using Ion Chromatography
4054 Incorporating the Addition of a Suppressor Acidified
4055 Postcolumn Reagent for Trace Bromate Analysis",
4056 Revision 1.0 (June 2002), USEPA, Office of Ground Water
4057 and Drinking Water, Technical Support Center, document
4058 number EPA 815/R-03/007. Available from NEMI; NTRL
4059 (document number PB2003-107402); USEPA, NSCEP
4060 (search "815R03007"); and USEPA, OGWDW (under
4061 "Disinfection Byproduct Rules (PDF)"). Referenced in
4062 Sections 611.381 and 611.382.
4063

4064 "USEPA 327.0 (05)" means "Method 327.0:
4065 Determination of Chlorine Dioxide and Chlorite Ion in
4066 Drinking Water Using Lissamine Green B and Horseradish
4067 Peroxidase with Detection by Visible Spectrophotometry",
4068 Revision 1.1 (May 2005), USEPA, Office of Ground Water
4069 and Drinking Water, Technical Support Center, document
4070 number EPA 815/R-05/008. Available from NEMI;
4071 USEPA, NSCEP (search "815R05008"); and USEPA,
4072 OGWDW (under "Disinfection Byproduct Rules (PDF)").
4073 Referenced in Sections 611.381 and 611.531.
4074

4075 "USEPA 334.0 (09)" means "Method 334.0:
4076 Determination of Residual in Drinking Water Using an On-
4077 line Chlorine Analyzer", Version 1.0 (September 2009),
4078 USEPA, Office of Ground Water and Drinking Water,
4079 Technical Support Center, document number EPA 815/B-
4080 09/013. Available from NEMI; USEPA, NSCEP (search
4081 "815B09013"); and USEPA, OGWDW (under
4082 "Disinfection Byproduct Rules (PDF)"). Referenced in
4083 Sections 611.381 and 611.531.
4084

4085 "USEPA 335.4 (93)" means "Method 335.4:
4086 Determination of Total Cyanide by Semi-Automated
4087 Colorimetry", Revision 1.0 (August 1993), in USEPA
4088 Environmental Inorganic Methods (93). Referenced in
4089 Section 611.611.
4090 BOARD NOTE: Also individually available from NEMI.

4091
4092 "USEPA 353.2 (93)" means "Method 353.2:
4093 Determination of Inorganic Anions by Ion
4094 Chromatography", Revision 2.0 (August 1993), in USEPA
4095 Environmental Inorganic Methods (93). Referenced in
4096 Section 611.611.
4097 BOARD NOTE: Also individually available from NEMI.

4098
4099 "USEPA 365.1 (93)" means "Method 365.1:
4100 Determination of Phosphorus by Automated Colorimetry",
4101 Revision 2.0 (August 1993), in USEPA Environmental
4102 Inorganic Methods (93). Referenced in Section 611.611.
4103 BOARD NOTE: Also individually available from NEMI
4104 and USEPA, OGWDW (under "Inorganic Contaminants
4105 and Other Inorganic Constituents (PDF)").

4106
4107 "USEPA 415.3 (05)" means "Method 415.3:
4108 Determination of Total Organic Carbon and Specific UV
4109 Absorbance at 254 nm in Source Water and Drinking
4110 Water", Revision 1.1 (February 2005), USEPA, National
4111 Exposure Research Laboratory, document number EPA
4112 600/R05-055. Available from USEPA, NSCEP (search
4113 "600R05055") and USEPA, OGWDW (under "Disinfection
4114 Byproduct Rules (PDF)"). Referenced in Section 611.381.

4115
4116 "USEPA 415.3 (09)" means "Method 415.3,
4117 "Determination of Total Organic Carbon and Specific UV
4118 Absorbance at 254 nm in Source Water and Drinking
4119 Water", Revision 1.2 (September 2009), USEPA, National
4120 Exposure Research Laboratory, document number EPA
4121 600/R09-122. Referenced in Section 611.381. Available
4122 from NEMI; USEPA, NSCEP (search "600R09122"); and
4123 USEPA, OGWDW (under "Disinfection Byproduct Rules
4124 (PDF)").

4125
4126 "USEPA 502.2 (95)" means "Method 502.2: Volatile
4127 Organic Compounds in Water by Purge and Trap Capillary

4128 Column Gas Chromatography with Photoionization and
4129 Electrolytic Conductivity Detectors in Series", Revision 2.1
4130 (1995), in USEPA Organic Methods – Supplement III (95).
4131 Referenced in Sections 611.381 and 611.645.
4132 BOARD NOTE: Also individually available from NEMI.
4133
4134 "USEPA 504.1 (95)" means "Method 504.1: 1,2-
4135 Dibromomethane (EDB), 1,2-Dibromo-3-Chloropropane
4136 (DBCP), and 1,2,3-Trichloropropane (123TCP) in Water
4137 by Microextraction and Gas Chromatography", Revision
4138 1.1 (1995), in USEPA Organic Methods – Supplement III
4139 (95). Referenced in Section 611.645.
4140 BOARD NOTE: Also individually available from NEMI.
4141
4142 "USEPA 505 (95)" means "Method 505: Analysis of
4143 Organohalide Pesticides and Commercial Polychlorinated
4144 Biphenyl (PCB) Products in Water by Microextraction and
4145 Gas Chromatography", Revision 2.1 (1995), in USEPA
4146 Organic Methods – Supplement III (95). Referenced in
4147 Sections 611.645 and 611.648.
4148 BOARD NOTE: Also individually available from NEMI.
4149
4150 "USEPA 506 (95)" means "Method 506: Determination of
4151 Phthalate and Adipate Esters in Drinking Water by Liquid-
4152 Liquid Extraction or Liquid-Solid Extraction and Gas
4153 Chromatography with Photoionization Detection", Revision
4154 1.1 (1995), in USEPA Organic Methods – Supplement III
4155 (95). Referenced in Section 611.645.
4156 BOARD NOTE: Also individually available from NEMI.
4157
4158 "USEPA 507 (95)" means "Method 507: Determination of
4159 Nitrogen- and Phosphorus-Containing Pesticides in Water
4160 by Gas Chromatography with a Nitrogen-Phosphorus
4161 Detector", Revision 2.1 (1995), in USEPA Organic
4162 Methods – Supplement III (95). Referenced in Sections
4163 611.645 and 611.648.
4164 BOARD NOTE: Also individually available from NEMI.
4165
4166 "USEPA 508 (95)" means "Method 508: Determination of
4167 Chlorinated Pesticides in Water by Gas Chromatography
4168 with an Electron Capture Detector", Revision 3.1 (1995), in
4169 USEPA Organic Methods – Supplement III (95).
4170 Referenced in Sections 611.645 and 611.648.

4171 BOARD NOTE: Also individually available from NEMI.

4172
4173 "USEPA 508A (89)" means "Method 508A: Screening for
4174 Polychlorinated Biphenyls by Perchlorination and Gas
4175 Chromatography", Revision 1.0 (1989), in USEPA Organic
4176 Methods (91). Referenced in Sections 611.645 and
4177 611.646.

4178 BOARD NOTE: Also individually available from NEMI.

4179
4180 "USEPA 508.1 (95)" means "Method 508.1:
4181 Determination of Chlorinated Pesticides, Herbicides, and
4182 Organohalides by Liquid-Solid Extraction and Electron
4183 Capture Gas Chromatography", Revision 2.0 (1995), in
4184 USEPA Organic Methods – Supplement III (95).
4185 Referenced in Sections 611.645 and 611.648.

4186 BOARD NOTE: Also individually available from NEMI.

4187
4188 "USEPA 515.1 (89)" means "Method 515.1:
4189 Determination of Chlorinated Acids in Drinking Water by
4190 Gas Chromatography with an Electron Capture Detector",
4191 Revision 4.1 (1989), in USEPA Organic Methods (91).
4192 Referenced in Section 611.645.

4193
4194 "USEPA 515.2 (95)" means "Method 515.2:
4195 Determination of Chlorinated Acids in Water Using
4196 Liquid-Solid Extraction and Gas Chromatography with an
4197 Electron Capture Detector", Revision 1.1 (1995), in
4198 USEPA Organic Methods – Supplement III (95).
4199 Referenced in Section 611.645.

4200 BOARD NOTE: Also individually available from NEMI.

4201
4202 "USEPA 515.3 (96)" means "Method 515.3:
4203 Determination of Chlorinated Acids in Drinking Water by
4204 Liquid-Liquid Extraction, Derivatization and Gas
4205 Chromatography with Electron Capture Detection",
4206 Revision 1.0 (July 1996), in USEPA Organic and Inorganic
4207 Methods (00). Referenced in Section 611.645.

4208 BOARD NOTE: Also individually available from NEMI.

4209
4210 "USEPA 515.4 (00)" means "Method 515.4:
4211 "Determination of Chlorinated Acids in Drinking Water by
4212 Liquid-Liquid Microextraction, Derivatization and Fast Gas
4213 Chromatography with Electron Capture Detection"

4214 Revision 1.0 (April 2000), USEPA, Office of Ground
4215 Water and Drinking Water, Technical Support Center,
4216 document number EPA 815/B-00/001. Available from
4217 NEMI; USEPA, NSCEP (search "815B00001"); and
4218 USEPA, OGWDW (under "Organic Contaminants
4219 (PDF)"). Referenced in Section 611.645.
4220

4221 "USEPA 523 (11)" means "Method 523: Determination of
4222 Triazine Pesticides and Other Degradates in Drinking
4223 Water by Gas Chromatography/Mass Spectrometry
4224 (GC/MS)", Version 1.0 (February 2011), USEPA, Office of
4225 Ground Water and Drinking Water, Standards and Risk
4226 Management Division, Technical Support Center,
4227 document number EPA 815/R-11-002. Available from
4228 USEPA, NSCEP (search "815R11002"); and USEPA,
4229 OGWDW (under "Organic Contaminants (PDF)").
4230 referenced in Section 611.645.
4231

4232 "USEPA 524.2 (95)" means "Method 524.2: Measurement
4233 of Purgeable Organic Compounds in Water by Capillary
4234 Column Gas Chromatography/Mass Spectrometry",
4235 Revision 4.1 (1995), in USEPA Organic Methods –
4236 Supplement III (95). Referenced in Section 611.645.
4237 BOARD NOTE: Also individually available from NEMI.
4238

4239 "USEPA 524.3 (09)" means "Method 524.3: Measurement
4240 of Purgeable Organic Compounds in Water by Capillary
4241 Column Gas Chromatography/Spectrometry", Revision 1.0
4242 (June 2009), USEPA, Office of Ground Water and
4243 Drinking Water, Standards and Risk Management Division,
4244 Technical Support Center, document number EPA 815/B-
4245 09/009. Available from NEMI; USEPA, NSCEP (search
4246 for "815B09009"); and USEPA, OGWDW (under
4247 "Disinfection Byproduct Rules (PDF)" and "Organic
4248 Contaminants (PDF)"). Referenced in Sections 611.381
4249 and 611.645.
4250

4251 "USEPA 524.4 (13)" means "Method 524.4, "Measurement
4252 of Purgeable Organic Compounds in Water by Gas
4253 Chromatography/Spectrometry Using Nitrogen Purge Gas"
4254 (May 2013), USEPA, Office of Ground Water and
4255 Drinking Water, Standards and Risk Management Division,
4256 Technical Support Center, document number EPA 815/R-

4257 13/002. Available from USEPA, NSCEP (search for
4258 "815R13002"); and USEPA, OGWDW (under
4259 "Disinfection Byproduct Rules (PDF)" and "Organic
4260 Contaminants (PDF)"). Referenced in Sections 611.381
4261 and 611.645.

4262 "USEPA 525.2 (95)" means "Method 525.2:
4263 Determination of Organic Compounds in Drinking by
4264 Liquid-Liquid Extraction and Capillary Column Gas
4265 Chromatography/Mass Spectrometry", Revision 2.0 (1995),
4266 in USEPA Organic Methods – Supplement III (95).
4267 Referenced in Section 611.645.
4268 BOARD NOTE: Also individually available from NEMI.
4269

4270 "USEPA 525.3 (12)" means "Method 525.3:
4271 Determination of Total Semivolatile Organic Chemicals in
4272 Drinking Water by Solid Phase Extraction and Capillary
4273 Column Gas Chromatography/Mass Spectrometry
4274 (GC/MS)", Version 1.0 (February 2012), USEPA, National
4275 Exposure Research Laboratory, document number EPA
4276 600/R-12/010. Available from USEPA, NSCEP (search
4277 "600R12010") and USEPA, OGWDW (under "Organic
4278 Contaminants (PDF)"). Referenced in Section 611.645.
4279

4280 "USEPA 531.1 (95)" means "Method 531.1: Measurement
4281 of N-Methylcarbamoyloximes and N-Methylcarbamates in
4282 Water by Direct Aqueous Injection HPLC with Post
4283 Column Derivatization", Revision 3.1 (1995), in USEPA
4284 Organic Methods – Supplement III (95). Referenced in
4285 Section 611.645.
4286 BOARD NOTE: Also individually available from NEMI.
4287

4288 "USEPA 531.2 (01)" means "Method 531.2: Measurement
4289 of N-Methylcarbamoyloximes and N-Methylcarbamates in
4290 Water by Direct Aqueous Injection HPLC with Postcolumn
4291 Derivatization", Revision 1.0 (September 2001), USEPA,
4292 Office of Ground Water and Drinking Water, Standards
4293 and Risk Management Division, Technical Support Center,
4294 document number EPA 815/B-01/002. Available from
4295 NEMI; USEPA, NSCEP (search "815B01002"); and
4296 USEPA, OGWDW (under "Organic Contaminants
4297 (PDF)"). Referenced in Section 611.645. See also and
4298
4299

4300 "USEPA 536 (07)" means "Method 536: Determination of
4301 Triazine Pesticides and Other Degradates in Drinking
4302 Water by Liquid Chromatography Electrospray Ionization
4303 Tandem Mass Spectrometry (LC/ESI-MS/MS)", Version
4304 1.0 (October 2007), USEPA Office of Ground Water and
4305 Drinking Water, Technical Support Center, document
4306 number EPA 815/B-07/002. Available from USEPA,
4307 NSCEP (search "815B07002") and USEPA, OGWDW
4308 (under "Organic Contaminants (PDF)"). Referenced in
4309 Section 611.645.

4310
4311 "USEPA 547 (90)" means "Method 547: Determination of
4312 Glyphosate in Drinking Water by Direct-Aqueous-Injection
4313 HPLC, Post-Column Derivatization, and Fluorescence
4314 Detection" (July 1990), in USEPA Organic Methods –
4315 Supplement I (90). Referenced in Section 611.645.

4316
4317 "USEPA 548.1 (92)" means "Method 548.1:
4318 Determination of Endothall in Drinking Water by Ion-
4319 Exchange Extraction, Acidic Methanol Methylation and
4320 Gas Chromatography/Mass Spectrometry", Revision 1.0
4321 (August 1992), in USEPA Organic Methods – Supplement
4322 II (92). Referenced in Section 611.645.
4323 BOARD NOTE: Also individually available from NEMI.

4324
4325 "USEPA 549.2 (97)" means "Method 549.2:
4326 Determination of Diquat and Paraquat in Drinking Water
4327 by Liquid-Solid Extraction and High Performance Liquid
4328 Chromatography with Ultraviolet Detection", Revision 1.0
4329 (June 1997), USEPA, Office of Research and
4330 Development, National Exposure Research Laboratory.
4331 Available from NEMI. Referenced in Section 611.645.

4332
4333 "USEPA 550 (90)" means "Method 550: Determination of
4334 Polycyclic Aromatic Hydrocarbons in Drinking Water by
4335 Liquid-Liquid Extraction and HPLC with Coupled
4336 Ultraviolet and Fluorescence Detection" (July 1990), in
4337 USEPA Organic Methods – Supplement I (90).
4338 Referenced in Section 611.645.
4339 BOARD NOTE: Also individually available from NEMI.

4340
4341 "USEPA 550.1 (90)" means "Method 550.1:
4342 Determination of Polycyclic Aromatic Hydrocarbons in

4343 Drinking Water by Liquid-Solid Extraction and HPLC with
4344 Coupled Ultraviolet and Fluorescence Detection" (July
4345 1990), in USEPA Organic Methods – Supplement I (90).
4346 Referenced in Section 611.645.

4347 BOARD NOTE: Also individually available from NEMI.

4348
4349 "USEPA 551.1 (95)" means "Method 551.1: Measurement
4350 of N-Methylcarbamoyloximes and N-Methylcarbamates in
4351 Water by Direct Aqueous Injection HPLC with Post
4352 Column Derivatization", Revision 1.0 (1995), in USEPA
4353 Organic Methods – Supplement III (95). Referenced in
4354 Section 611.645.

4355
4356 "USEPA 552.1 (92)" means "Method 552.1:
4357 Determination of Haloacetic Acids and Dalapon in
4358 Drinking Water by Ion-Exchange Liquid-Solid Extraction
4359 and Gas Chromatography with an Electron Capture
4360 Detector", Revision 1.0 (August 1992), in USEPA Organic
4361 Methods – Supplement II (92). Referenced in Sections
4362 611.381 and 611.645.

4363 BOARD NOTE: Also individually available from NEMI.

4364
4365 "USEPA 552.2 (95)" means "Method 552.2:
4366 Determination of Haloacetic Acids and Dalapon in
4367 Drinking Water by Liquid-Liquid Extraction,
4368 Derivatization and Gas Chromatography with Electron
4369 Capture Detection", Revision 1.0 (1995), in USEPA
4370 Organic Methods – Supplement III (95). Referenced in
4371 Sections 611.381 and 611.645.

4372 BOARD NOTE: Also individually available from NEMI.

4373
4374 "USEPA 552.3 (03)" means "Method 552.3:
4375 Determination of Haloacetic Acids and Dalapon in
4376 Drinking Water by Liquid-Liquid Microextraction,
4377 Derivatization, and Gas Chromatography with Electron
4378 Capture Detection", Revision 1.0 (July 2003), USEPA,
4379 Office of Ground Water and Drinking Water, Technical
4380 Support Center, document number EPA 815/B-03/002.
4381 Available from NEMI; USEPA, NSCEP (search
4382 "815B03002"); and USEPA, OGWDW (under
4383 "Disinfection Byproduct Rules (PDF)"). Referenced in
4384 Sections 611.381 and 611.645.

4385

4386 "USEPA 555 (92)" means "Method 555: Determination of
4387 Chlorinated Acids in Water by High Performance Liquid
4388 Chromatography with a Photodiode Array Ultraviolet
4389 Detector", Revision 1.0 (August 1992), in USEPA Organic
4390 Methods – Supplement II (92). Referenced in Section
4391 611.645.

4392 BOARD NOTE: Also individually available from NEMI.
4393

4394 "USEPA 557 (09)" means "Method 557: Determination of
4395 Haloacetic Acids, Bromate, and Dalapon in Drinking Water
4396 by Ion Chromatography Electrospray Ionization Tandem
4397 Mass Spectrometry (IC-ESI-MS/MS)", Version 1.0
4398 (September 2009), USEPA, Office of Ground Water and
4399 Drinking Water, Technical Support Center, document
4400 number EPA 815/B-09/012. Available from NEMI;
4401 USEPA, NSCEP (search "815B09012"); and USEPA,
4402 OGWDW (under "Disinfection Byproduct Rules (PDF)").
4403 Referenced in Sections 611.381, 611.382, and 611.645.
4404

4405 "USEPA 900.0 (80)" means "Gross Alpha and Gross Beta
4406 Radioactivity in Drinking Water – Method 900.0" (1980),
4407 in USEPA Radioactivity Methods (80). Referenced in
4408 Section 611.720.

4409 BOARD NOTE: Also individually available from NEMI
4410 and USEPA, OGWDW (under "Radionuclides (PDF)").
4411

4412 "USEPA 900.0 (18)" means Method 900.0, Revision 1.0
4413 "Gross Alpha and Gross Beta Radioactivity in Drinking
4414 Water" (February 2018), USEPA, Office of Water,
4415 document number EPA 815/B-18/002. Also available from
4416 USEPA, NSCEP (search "815B18002") and USEPA,
4417 OGWDW (under "Radionuclides (PDF)").
4418

4419 "USEPA 901.0 (80)" means "Radioactive Cesium in
4420 Drinking Water – Method 901.0" (1980), in USEPA
4421 Radioactivity Methods (80). Referenced in Section
4422 611.720.

4423 BOARD NOTE: Also individually available from NEMI
4424 and USEPA, OGWDW (under "Radionuclides (PDF)").
4425

4426 "USEPA 901.1 (80)" means "Gamma Emitting
4427 Radionuclides in Drinking Water – Method 901.1" (1980),

4428 in USEPA Radioactivity Methods (80). Referenced in
4429 Section 611.720.

4430 BOARD NOTE: Also individually available from NEMI
4431 and USEPA, OGWDW (under "Radionuclides (PDF)").

4432
4433 "USEPA 902.0 (80)" means "Radioactive Iodine in
4434 Drinking Water – Method 902.0" (1980), in USEPA
4435 Radioactivity Methods (80). Referenced in Section
4436 611.720.

4437
4438 "USEPA 903.0 (80)" means "Alpha-Emitting Radium
4439 Isotopes in Drinking Water – Method 903.0" (1980), in
4440 USEPA Radioactivity Methods (80). Referenced in
4441 Section 611.720.

4442 BOARD NOTE: Also individually available from NEMI
4443 and USEPA, OGWDW (under "Radionuclides (PDF)").

4444
4445 "USEPA 903.1 (80)" means "Radium-226 in Drinking
4446 Water Radon Emanation Technique – Method 903.1"
4447 (1980), in USEPA Radioactivity Methods (80). Referenced
4448 in Section 611.720.

4449 BOARD NOTE: Also individually available from NEMI
4450 and USEPA, OGWDW (under "Radionuclides (PDF)").

4451
4452 "USEPA 903.1 (21)" means "Method 903.1, Revision 1.0:
4453 Radium-226 in Drinking Water Radon Emanation
4454 Technique", doc. no. EPA 815-B-21-003 (January 2021).
4455 Available from USEPA, NSCEP (nepis.epa.gov; search:
4456 "815B21003"). Referenced in Section 611.720.

4457
4458 "USEPA 904.0 (80)" means "Radium-228 in Drinking
4459 Water – Method 904.0" (1980), in USEPA Radioactivity
4460 Methods (80). Referenced in Section 611.720.

4461 BOARD NOTE: Also individually available from NEMI
4462 and USEPA, OGWDW (under "Radionuclides (PDF)").

4463
4464 "USEPA 905.0 (80)" means "Radioactive Strontium in
4465 Drinking Water – Method 905.0" (1980), in USEPA
4466 Radioactivity Methods (80). Referenced in Section
4467 611.720.

4468 BOARD NOTE: Also individually available from NEMI
4469 and USEPA, OGWDW (under "Radionuclides (PDF)").

4470

4471 "USEPA 906.0 (80)" means "Tritium in Drinking Water –
4472 Method 906.0" (1980), in USEPA Radioactivity Methods
4473 (80). Referenced in Section 611.720.

4474 BOARD NOTE: Also individually available from NEMI
4475 and USEPA, OGWDW (under "Radionuclides (PDF)").

4476
4477 "USEPA 908.0 (80)" means "Uranium in Drinking Water –
4478 Radiochemical Method – Method 908.0" (1980), in
4479 USEPA Radioactivity Methods (80). Referenced in
4480 Section 611.720.

4481 BOARD NOTE: Also individually available from NEMI.

4482
4483 "USEPA 908.1 (80)" means "Uranium in Drinking Water –
4484 Fluorometric Method – Method 908.1" (1980), in USEPA
4485 Radioactivity Methods (80). Referenced in Section
4486 611.720.

4487 BOARD NOTE: Also individually available from NEMI
4488 and USEPA, OGWDW (under "Radionuclides (PDF)").

4489
4490 "USEPA 1600 (02)" means "Method 1600: Enterococci in
4491 Water by Membrane Filtration Using membrane-
4492 Enterococcus Indoxyl- β -D-Glucoside Agar (mEI)"
4493 (September 2002), USEPA, Office of Water, document
4494 number EPA 821/R-02/022. Available from NEMI;
4495 USEPA, NSCEP (search "821R02022"); and USEPA,
4496 OGWDW (under "Ground Water Rule (PDF)").
4497 Referenced in Section 611.802.

4498 BOARD NOTE: SM 9230 C (93) and SM 9230 (13),
4499 "Fecal Streptococcus and Enterococcus Groups, Membrane
4500 Filter Techniques", are USEPA-approved variations of this
4501 method.

4502
4503 "USEPA 1601 (01)" means "Method 1601: Male-specific
4504 (F+) and Somatic Coliphage in Water by Two-step
4505 Enrichment Procedure" (April 2001), USEPA, Office of
4506 Water, document number EPA 821/R-01/030. Available
4507 from NEMI and USEPA, NSCEP (search "821R01030");
4508 and USEPA, OGWDW (under "Ground Water Rule
4509 (PDF)"). Referenced in Section 611.802.

4510
4511 "USEPA 1602 (01)" means "Method 1602: Male-specific
4512 (F+) and Somatic Coliphage in Water by Single Agar Layer
4513 (SAL) Procedure" (April 2001), USEPA, Office of Water,

4514 document number EPA 821/R-01/029. Available from
4515 NEMI and USEPA, NSCEP (search "821R01029"); and
4516 USEPA, OGWDW (under "Ground Water Rule (PDF)").
4517 Referenced in Section 611.802.

4518
4519 "USEPA 1604 (02)" means "Method 1604: Total
4520 Coliforms and Escherichia coli in Water by Membrane
4521 Filtration Using a Simultaneous Detection Technique (MI
4522 Medium)" (September 2002), USEPA, Office of Water,
4523 document number EPA 821/R-02/024. Available from
4524 NEMI and USEPA, NSCEP (search "821R02024"); and
4525 USEPA, OGWDW (under "Ground Water Rule (PDF)",
4526 "Revised Total Coliforms Rule (PDF)", and "Surface Water
4527 Treatment Rule (PDF)"). Referenced in Sections 611.802
4528 and 611.1052.

4529
4530 "USEPA 1613 (94)" means "Method 1613: Tetra- through
4531 Octa-Chlorinated Dioxins and Furans by Isotope Dilution
4532 HRGC/HRMS", Revision B (October 1994), USEPA,
4533 Office of Water, Engineering and Analysis Division,
4534 document number EPA 821/B-94/005. Available from
4535 NEMI; NTRL (document number PB95-104774); USEPA,
4536 NSCEP (search "821B94005"); and USEPA, OGWDW
4537 (under "Organic Contaminants (PDF)"). Referenced in
4538 Section 611.645.

4539
4540 "USEPA 1622 (01)" means "Method 1622:
4541 Cryptosporidium in Water by Filtration/IMS/FA" (April
4542 2001), USEPA, Office of Water, document number EPA
4543 821/R-01/026. Available from NEMI; and USEPA,
4544 NSCEP (search "821R01026"). Referenced in Section
4545 611.1007.

4546
4547 "USEPA 1622 (05)" means "Method 1622:
4548 Cryptosporidium in Water by Filtration/IMS/FA"
4549 (December 2005), USEPA, Office of Ground Water and
4550 Drinking Water, document number EPA 815/R-05/001.
4551 Available from USEPA, NSCEP (search "815R05001")
4552 and USEPA, OGWDW (under "Long Term 2 Enhanced
4553 Surface Water Treatment Rule (PDF)"). Referenced in
4554 Sections 611.1004 and 611.1007.

4555

4556 "USEPA 1623 (99)" means "Method 1623:
4557 Cryptosporidium and Giardia in Water by
4558 Filtration/IMS/FA" (April 1999), USEPA, Office of
4559 Ground Water and Drinking Water, document number EPA
4560 821/R-99/006. Available from USEPA, NSCEP (search
4561 "821R99006"). Referenced in Section 611.1007.

4562
4563 "USEPA 1623 (01)" means "Method 1623:
4564 Cryptosporidium and Giardia in Water by
4565 Filtration/IMS/FA" (April 2001), USEPA, Office of
4566 Ground Water and Drinking Water, document number EPA
4567 821/R-01/025. Available from NEMI and USEPA, NSCEP
4568 (search "821R01025"). Referenced in Section 611.1007.

4569
4570 "USEPA 1623 (05)" means "Method 1623:
4571 Cryptosporidium and Giardia in Water by
4572 Filtration/IMS/FA" (December 2005), USEPA, Office of
4573 Ground Water and Drinking Water, document number EPA
4574 815/R-05/002. Available from USEPA, NSCEP (search
4575 "815R05002") and USEPA, OGWDW (under "Long Term
4576 2 Enhanced Surface Water Treatment Rule (PDF)").
4577 Referenced in Sections 611.1004 and 611.1007.

4578
4579 "USEPA 1623.1 (12)" means "Method 1623.1, "Method
4580 1623.1: Cryptosporidium and Giardia in Water by
4581 Filtration/IMS/FA" (January 2012), USEPA, Office of
4582 Ground Water and Drinking Water, document number EPA
4583 816/R-12/001. Available from USEPA, NSCEP (search
4584 "816R12001") and USEPA, OGWDW (under "Long Term
4585 2 Enhanced Surface Water Treatment Rule (PDF)").
4586 Referenced in Section 611.1004.

4587
4588 USEPA Documents Containing Multiple Numbered Methods

4589
4590 "USEPA Environmental Inorganic Methods (93)" means
4591 "Methods for the Determination of Inorganic Substances in
4592 Environmental Samples" (August 1993), USEPA,
4593 Environmental Monitoring Systems Laboratory, document
4594 number EPA 600/R-93-100 (for USEPA 180.1 (93),
4595 USEPA 300.0 (93), USEPA 335.4 (93), USEPA 353.2
4596 (93), and USEPA 365.1 (93) only). Available from NTRL
4597 (document number PB94-121811) and USEPA, NSCEP
4598 (search "600R93100").

4599
 4600 "USEPA Environmental Metals Methods (94)" means
 4601 "Methods for the Determination of Metals in
 4602 Environmental Samples – Supplement I", May 1994,
 4603 USEPA, Environmental Monitoring Systems Laboratory,
 4604 document number EPA 600/R-94-111 (for USEPA 200.7
 4605 (94), USEPA 200.8 (94), USEPA 200.9 (94), and USEPA
 4606 245.1 (94) only). Referenced in Sections 611.600, 611.611,
 4607 611.612, and 611.720. Available from NTRL (document
 4608 number PB84-125472) and USEPA, NSCEP (search
 4609 "600R94111").
 4610
 4611 "USEPA Inorganic Methods (83)" means "Methods for
 4612 Chemical Analysis of Water and Wastes"(March 1983),
 4613 USEPA, Office of Research and Development, document
 4614 number EPA 600/4-79-020 (USEPA 150.1 (71), USEPA
 4615 150.2 (82), and USEPA 245.2 (74) only). Available from
 4616 NTRL (document number PB84-128677) and USEPA,
 4617 NSCEP (search "600479020"). Referenced in Section
 4618 611.611.
 4619
 4620 "USEPA Organic and Inorganic Methods (00)" means
 4621 "Methods for the Determination of Organic and Inorganic
 4622 Compounds in Drinking Water, Volume 1" (August 2000),
 4623 USEPA, Office of Water and Office of Research and
 4624 Development, document number EPA 815/R-00/014
 4625 (Methods 300.1 (97), USEPA 321.8 (97), and USEPA
 4626 515.3 (96) only). Available from NTRL (document
 4627 number PB2000-106981) and USEPA, NSCEP (search
 4628 "815R00014").
 4629
 4630 "USEPA Organic Methods (91)" means "Methods for the
 4631 Determination of Organic Compounds in Drinking Water",
 4632 (December 1988 (revised July 1991)), USEPA, Office of
 4633 Research and Development, document number EPA 600/4-
 4634 88/039 (USEPA 508A (89) and USEPA 515.1 (89) only).
 4635 Available from NTRL (document number PB91-231480)
 4636 and USEPA, NSCEP (search "600488039") and USEPA,
 4637 OGWDW.
 4638
 4639 "USEPA Organic Methods – Supplement I (90)" means
 4640 "Methods for the Determination of Organic Compounds in
 4641 Drinking Water – Supplement I" (July 1990), USEPA,

4642 Environmental Monitoring Systems Laboratory, document
 4643 number EPA 600/4-90/020 (USEPA 547 (90), USEPA 550
 4644 (90) and USEPA 550.1 (90) only). Available from NTRL
 4645 (document number PB91-146027) and USEPA, NSCEP
 4646 (search "600490020").

4647
 4648 "USEPA Organic Methods – Supplement II (92)" means
 4649 "Methods for the Determination of Organic Compounds in
 4650 Drinking Water – Supplement II" (August 1992), USEPA,
 4651 Office of Research and Development, document number
 4652 EPA 600/R-92/129 (USEPA 548.1 (92), USEPA 552.1
 4653 (92), and USEPA 555 (92) only). Available from NTRL
 4654 (document number PB92-207703) and USEPA, NSCEP
 4655 (search "600R92129").

4656
 4657 "USEPA Organic Methods – Supplement III (95)" means
 4658 "Methods for the Determination of Organic Compounds in
 4659 Drinking Water – Supplement III" (August 1995), USEPA,
 4660 Office of Research and Development, document number
 4661 EPA 600/R-95/131 (USEPA 502.2 (95), USEPA 504.1
 4662 (95), USEPA 505 (95), USEPA 506 (95), USEPA 507 (95),
 4663 USEPA 508 (95), USEPA 508.1 (95), USEPA 515.2 (95),
 4664 USEPA 524.2 (95), USEPA 525.2 (95), USEPA 531.1
 4665 (95), USEPA 551.1 (95), and USEPA 552.2 (95) only).
 4666 Available from NTRL (document number PB95-261616)
 4667 and USEPA, NSCEP (search "600R95131").

4668
 4669 "USEPA Radioactivity Methods (80)" means "Prescribed
 4670 Procedures for Measurement of Radioactivity in Drinking
 4671 Water" (August 1980), USEPA, Office of Research and
 4672 Development, Environmental Monitoring and Support
 4673 Laboratory, document number EPA 600/4-80/032 (USEPA
 4674 900.0 (80), USEPA 901.0 (80), USEPA 901.1 (80),
 4675 USEPA 902.0 (80), USEPA 903.0 (80), USEPA 903.1
 4676 (80), USEPA 904.0 (80), USEPA 905.0 (80), USEPA
 4677 906.0 (80), USEPA 908.0 (80), and USEPA 908.1 (80)
 4678 only.). Available from NTRL (document number PB80-
 4679 224744); USEPA, NSCEP (search "821480032"); and
 4680 USEPA, OGWDW (under "Radionuclides (PDF))".

4681
 4682 "USEPA Radiochemistry Procedures (84)" means
 4683 "Radiochemistry Procedures Manual" (June 1984),
 4684 USEPA, Eastern Environmental Radiation Facility,

4685 document number EPA 520/5-84-006 (USEPA 00-01 (84),
4686 USEPA 00-02 (84), USEPA 00-07 (84), USEPA H-02 (84),
4687 USEPA Ra-03 (84), USEPA Ra-04 (84), USEPA Ra-05
4688 (84), USEPA Sr-04 (84) only). Available from NTRL
4689 (document number PB84215581); USEPA, NSCEP (search
4690 "520584006"); and USEPA, OGWDW.
4691

4692 Unnumbered Methods

4693
4694 "USEPA ARP (73)" means "Procedures for Radiochemical
4695 Analysis of Nuclear Reactor Aqueous Solutions" (May
4696 1973), USEPA, Office of Research and Monitoring,
4697 National Environmental Research Center, document
4698 number EPA-R4-73-014. Available from NTRL
4699 (document number PB222154) and USEPA, NSCEP
4700 (search "R473014"). Referenced in Section 611.720.
4701

4702 "USEPA IRM (76)" means "Interim Radiochemical
4703 Methodology for Drinking Water" (March 1976), USEPA,
4704 Office of Research and Development, Environmental
4705 Monitoring and Support Laboratory, document number
4706 EPA 600/4-75-008 (revised) (pages 1 through 37 only).
4707 Available from NTRL (document number PB253258);
4708 USEPA, NSCEP (search "600475008A"); and USEPA,
4709 OGWDW (under "Radionuclides (PDF)"). Referenced in
4710 Section 611.720.
4711

4712 "USEPA IRM (76), pages 1-3" means pages 1
4713 through 3, "Gross Alpha and Beta Radioactivity in
4714 Drinking Water", in USEPA IRM (76). Referenced
4715 in Section 611.720.
4716

4717 "USEPA IRM (76), pages 4-5" means pages 4
4718 through 5, "Radioactive Cesium in Drinking
4719 Water", in USEPA IRM (76). Referenced in
4720 Section 611.720.
4721

4722 "USEPA IRM (76), pages 6-8" means pages 6
4723 through 8, "Radioactive Iodine in Drinking Water:
4724 Precipitation Method", in USEPA IRM (76).
4725 Referenced in Section 611.720.
4726

4727 "USEPA IRM (76), pages 9-12" means pages 9
4728 through 12, "Radioactive Iodine in Drinking Water:
4729 Distillation Method", in USEPA IRM (76).
4730 Referenced in Section 611.720.
4731
4732 "USEPA IRM (76), pages 13-15" means pages 13
4733 through 15, "Alpha-Emitting Radium Isotopes in
4734 Drinking Water: Precipitation Method", in USEPA
4735 IRM (76). Referenced in Section 611.720.
4736
4737 "USEPA IRM (76), pages 16-23" means pages 16
4738 through 23, "Radium-226 in Drinking Water:
4739 Radon Emanation Technique", in USEPA IRM
4740 (76). Referenced in Section 611.720.
4741
4742 "USEPA IRM (76), pages 24-28" means pages 24
4743 through 28, "Radium-228 in Drinking Water:
4744 Sequential Method Radium-228/Radium-226", in
4745 USEPA IRM (76). Referenced in Section 611.720.
4746
4747 "USEPA IRM (76), pages 29-33" means pages 29
4748 through 33, "Radioactive Strontium in Drinking
4749 Water", in USEPA IRM (76). Referenced in
4750 Section 611.720.
4751
4752 "USEPA IRM (76), pages 34-37" means pages 34
4753 through 37, "Tritium in Drinking Water", in
4754 USEPA IRM (76). Referenced in Section 611.720.
4755
4756 "USEPA RCA (79)" means "Radiochemical Analytical
4757 Procedures for Analysis of Environmental Samples"
4758 (March 1979), USEPA, Environmental Monitoring and
4759 Support Laboratory, document number EMSL-LV-0539-17
4760 (pages 1 through 5, 19 through 48, 65 through 73, and 87
4761 through 95 only). Available from NTRL (document
4762 number EMSLLV053917); USEPA, NSCEP (search
4763 "EMSLLV053917") and USEPA, OGWDW (under
4764 "Radionuclides (PDF)"). Referenced in Section 611.720.
4765
4766 "USEPA RCA (79), pages 1-5" means pages 1
4767 through 5, "Determination of Gross Alpha and Beta
4768 in Water", in USEPA RCA (79). Referenced in
4769 Section 611.720.

4770
4771 "USEPA RCA (79), pages 19-32" means pages 19
4772 through 32, "Determination of Radium-226 and
4773 Radium-228 in Water, Soil, Air, and Biological
4774 Tissue", in USEPA RCA (79). Referenced in
4775 Section 611.720.
4776
4777 "USEPA RCA (79), pages 33-48" means pages 33
4778 through 48, "Isotopic Determination of Plutonium,
4779 Uranium, and Thorium in Water, Soil, Air, and
4780 Biological Tissue", in USEPA RCA (79).
4781 Referenced in Section 611.720.
4782
4783 "USEPA RCA (79), pages 65-73" means pages 65
4784 through 73, "Determination of Strontium-89 and
4785 Strontium-90 in Water, Soil, Air, and Biological
4786 Tissue", in USEPA RCA (79). Referenced in
4787 Section 611.720.
4788
4789 "USEPA RCA (79), pages 87-91" means pages 87
4790 through 91, "Determination of Tritium in Water,
4791 Soil, Air, and Biological Tissue (Direct Method)",
4792 in USEPA RCA (79). Referenced in Section
4793 611.720.
4794
4795 "USEPA RCA (79), pages 92-95" means pages 92
4796 through 95, "Isotopic Analysis by Gamma Ray
4797 Spectra Using Lithium-Drifted Germanium
4798 Detectors", in USEPA RCA (79). Referenced in
4799 Section 611.720.
4800
4801 "USEPA Technical Notes (94)" means "Technical Notes on
4802 Drinking Water Methods" (October 1994), document
4803 number EPA 600/R-94-173, USEPA, Office of Research
4804 and Development. Available from NTRL (document
4805 number PB95-104766); and USEPA, NSCEP (search
4806 "600R94173"). Referenced in Sections 611.531, 611.611,
4807 and 611.645.
4808
4809 Sources of USEPA Methods
4810
4811 NEMI. National Environmental Method Index (on-line at
4812 www.nemi.gov/home/).

4813
4814 NTRL. National Technical Reports Library, U.S.
4815 Department of Commerce, 5301 Shawnee Road,
4816 Alexandria, VA 22312 (703-605-6000 or 800-553-6847,
4817 ntrl.ntis.gov).
4818
4819 USEPA, NSCEP. United States Environmental Protection
4820 Agency, National Service Center for Environmental
4821 Publications, P.O. Box 42419, Cincinnati, OH 45242-0419,
4822 accessible on-line and available by download from
4823 <http://www.epa.gov/nscep/> using the search term indicated
4824 for the individual method).
4825
4826 USEPA, OGWDW. United States Environmental
4827 Protection Agency, Office of Ground Water and Drinking
4828 Water (methods cited as available are directly available
4829 through a link in the indicated list on
4830 [www.epa.gov/dwanalyticalmethods/approved-drinking-](http://www.epa.gov/dwanalyticalmethods/approved-drinking-water-analytical-methods)
4831 [water-analytical-methods](http://www.epa.gov/dwanalyticalmethods/approved-drinking-water-analytical-methods)).
4832
4833 USGS Methods. All documents available from United States Geological
4834 Survey, Federal Center, Box 25286, Denver, CO 80225-0425.
4835
4836 "USGS I-1030-85" means "Alkalinity, electrometric titration, I-
4837 1030-85", in "Techniques of Water-Resource Investigation of the
4838 United States Geological Survey", 3rd ed. (1989), Book 5, Chapter
4839 A1, "Methods for Determination of Inorganic Substances in Water
4840 and Fluvial Sediments". Available at [pubs.usgs.gov/twri/twri5-](http://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf)
4841 [a1/pdf/TWRI_5-A1.pdf](http://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf). Referenced in Section 611.611.
4842
4843 "USGS I-1601-85" means "Phosphorus, orthophosphate,
4844 colorimetric, phosphomolybdate, I-1601-85", in "Techniques of
4845 Water-Resource Investigation of the United States Geological
4846 Survey", 3rd ed. (1989), Book 5, Chapter A1, "Methods for
4847 Determination of Inorganic Substances in Water and Fluvial
4848 Sediments". Available at [pubs.usgs.gov/twri/twri5-](http://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf)
4849 [a1/pdf/TWRI_5-A1.pdf](http://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf). Referenced in Section 611.611.
4850
4851 "USGS I-1700-85" means "Silica, colorimetric, molybdate blue, I-
4852 1700-85", in "Techniques of Water-Resource Investigation of the
4853 United States Geological Survey", 3rd ed. (1989), Book 5, Chapter
4854 A1, "Methods for Determination of Inorganic Substances in Water

4855 and Fluvial Sediments". Available at [pubs.usgs.gov/twri/twri5-](https://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf)
 4856 a1/pdf/TWRI_5-A1.pdf. Referenced in Section 611.611.

4857
 4858 "USGS I-2598-85" means "Phosphorus, orthophosphate,
 4859 colorimetric, phosphomolybdate, automated-discrete, I-2598-85",
 4860 in "Techniques of Water-Resource Investigation of the United
 4861 States Geological Survey", 3rd ed. (1989), Book 5, Chapter A1,
 4862 "Methods for Determination of Inorganic Substances in Water and
 4863 Fluvial Sediments". Available at [pubs.usgs.gov/twri/twri5-](https://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf)
 4864 a1/pdf/TWRI_5-A1.pdf. Referenced in Section 611.611.

4865
 4866 "USGS I-2601-90" means "Phosphorus, orthophosphate,
 4867 colorimetry, phosphomolybdate, automated segment-flow, I-2601-
 4868 90", in "Methods for Analysis by the U.S. Geological Survey
 4869 National Water Quality Laboratory – Determination of Inorganic
 4870 and Organic Constituents in Water and Fluvial Sediments", U.S.
 4871 Geological Survey, Open File Report 93-125 (1993). Available at
 4872 pubs.usgs.gov/publication/ofr93125. Referenced in Section
 4873 611.611.

4874
 4875 "USGS I-2700-85" means "Silica, colorimetric, molybdate blue,
 4876 automated-segmented flow, I-2700-85", in "Techniques of Water-
 4877 Resource Investigation of the United States Geological Survey",
 4878 3rd ed. (1989), Book 5, Chapter A1, "Methods for Determination of
 4879 Inorganic Substances in Water and Fluvial Sediments". Available
 4880 at pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf. Referenced
 4881 in Section 611.611.

4882
 4883 "USGS I-3300-85" means "Cyanide, colorimetric, pyridine-
 4884 pyrazolone, I-3300-85", in "Techniques of Water-Resource
 4885 Investigation of the United States Geological Survey", 3rd ed.
 4886 (1989), Book 5, Chapter A1, "Methods for Determination of
 4887 Inorganic Substances in Water and Fluvial Sediments". Available
 4888 at pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf. Referenced
 4889 in Section 611.611.

4890
 4891 "USGS R-1110-76" means "Cesium-137 and cesium-134,
 4892 dissolved. Inorganic ion-exchange method – gamma counting, R-
 4893 1110-76", in "Techniques of Water-Resource Investigation of the
 4894 Water Resources Investigations of the United States Geological
 4895 Survey", Book 5, Chapter A-5, "Methods for Determination of
 4896 Radioactive Substances in Water and Fluvial Sediments" (1977).

4897 Available at pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf.
 4898 Referenced in Section 611.720.
 4899

4900 "USGS R-1111-76" means "Radiocesium, dissolved, as cesium-
 4901 137. Inorganic ion-exchange method – beta counting, R-1111-76",
 4902 in "Techniques of Water-Resource Investigation of the Water
 4903 Resources Investigations of the United States Geological Survey",
 4904 Book 5, Chapter A-5, "Methods for Determination of Radioactive
 4905 Substances in Water and Fluvial Sediments" (1977). Available at
 4906 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4907 Section 611.720.
 4908

4909 "USGS R-1120-76" means "Gross alpha and beta radioactivity,
 4910 dissolved and suspended, R-1120-76", in "Techniques of Water-
 4911 Resource Investigation of the Water Resources Investigations of
 4912 the United States Geological Survey", Book 5, Chapter A-5,
 4913 "Methods for Determination of Radioactive Substances in Water
 4914 and Fluvial Sediments" (1977). Available at [pubs.usgs.gov](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf)
 4915 [/twri/twri5a5/pdf/TWRI_5-A5.pdf](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf). Referenced in Section
 4916 611.720.
 4917

4918 "USGS R-1140-76" means "Radium, dissolved, as radium-226.
 4919 Precipitation method, R-1140-76", in "Techniques of Water-
 4920 Resource Investigation of the Water Resources Investigations of
 4921 the United States Geological Survey", Book 5, Chapter A-5,
 4922 "Methods for Determination of Radioactive Substances in Water
 4923 and Fluvial Sediments" (1977). Available at
 4924 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4925 Section 611.720.
 4926

4927 "USGS R-1141-76" means "Radium-226, dissolved. Radon
 4928 emanation method, R-1141-76", in "Techniques of Water-
 4929 Resource Investigation of the Water Resources Investigations of
 4930 the United States Geological Survey", Book 5, Chapter A-5,
 4931 "Methods for Determination of Radioactive Substances in Water
 4932 and Fluvial Sediments" (1977). Available at [pubs.usgs.gov](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf)
 4933 [/twri/twri5a5/pdf/TWRI_5-A5.pdf](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf). Referenced in Section
 4934 611.720.
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4936 "USGS R-1142-76" means "Radium-228, dissolved.
 4937 Determination by separation and counting of actinium-228, R-
 4938 1142-76", in "Techniques of Water-Resource Investigation of the
 4939 Water Resources Investigations of the United States Geological

4940 Survey", Book 5, Chapter A-5, "Methods for Determination of
 4941 Radioactive Substances in Water and Fluvial Sediments" (1977).
 4942 Available at pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf.
 4943 Referenced in Section 611.720.
 4944
 4945 "USGS R-1160-76" means "Strontium-90, dissolved. Chemical
 4946 separation and precipitation method, R-1160-76", in "Techniques
 4947 of Water-Resource Investigation of the Water Resources
 4948 Investigations of the United States Geological Survey", Book 5,
 4949 Chapter A-5, "Methods for Determination of Radioactive
 4950 Substances in Water and Fluvial Sediments" (1977). Available at
 4951 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4952 Section 611.720.
 4953
 4954 "USGS R-1171-76" means "Tritium. Liquid scintillation, Denver
 4955 lab method – gamma counting, R-1171-76", in "Techniques of
 4956 Water-Resource Investigation of the Water Resources
 4957 Investigations of the United States Geological Survey", Book 5,
 4958 Chapter A-5, "Methods for Determination of Radioactive
 4959 Substances in Water and Fluvial Sediments" (1977). Available at
 4960 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4961 Section 611.720.
 4962
 4963 "USGS R-1180-76" means "Uranium, dissolved. Fluorometric
 4964 method – direct, R-1180-76", in "Techniques of Water-Resource
 4965 Investigation of the Water Resources Investigations of the United
 4966 States Geological Survey", Book 5, Chapter A-5, "Methods for
 4967 Determination of Radioactive Substances in Water and Fluvial
 4968 Sediments" (1977). Available at [pubs.usgs.gov/twri/twri5a5/
 4969 pdf/TWRI_5-A5.pdf](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf). Referenced in Section 611.720.
 4970
 4971 "USGS R-1181-76" means "Uranium, dissolved. Fluorometric
 4972 method – extraction procedure, R-1181-76", in "Techniques of
 4973 Water-Resource Investigation of the Water Resources
 4974 Investigations of the United States Geological Survey", Book 5,
 4975 Chapter A-5, "Methods for Determination of Radioactive
 4976 Substances in Water and Fluvial Sediments" (1977). Available at
 4977 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4978 Section 611.720.
 4979
 4980 "USGS R-1182-76" means "Uranium, dissolved, isotopic ratios.
 4981 Alpha spectrometry – chemical separation, R-1182-76", in
 4982 "Techniques of Water-Resource Investigation of the Water

4983 Resources Investigations of the United States Geological Survey",
4984 Book 5, Chapter A-5, "Methods for Determination of Radioactive
4985 Substances in Water and Fluvial Sediments" (1977). Available at
4986 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
4987 Section 611.720.

4988
4989 "Waters B-1011 (87)" means "Waters Test Method for Determination of
4990 Nitrite/Nitrate in Water Using Single Column Ion Chromatography",
4991 Method B-1011 (August 1987). Available from Waters Corporation,
4992 Technical Services Division, 34 Maple St., Milford, MA 01757 (800-252-
4993 4752 or 508-478-2000, www.waters.com) and USEPA, OGWDW (under
4994 "Inorganic Contaminants and Other Inorganic Constituents (PDF)").
4995 Referenced in Section 611.611.

4996
4997 b) The Board incorporates the following federal regulations by reference:

4998
4999 [19 CFR 101.1 \(2022\) \(Definitions\), referenced in Section 611.126.](#)

5000
5001 40 CFR 3.3 (~~2021~~2019) (What Definitions Are Applicable to This Part?),
5002 referenced in Section 611.105.

5003
5004 40 CFR 3.10 (~~2021~~2019) (What Are the Requirements for Electronic
5005 Reporting to EPA?), referenced in Section 611.105.

5006
5007 40 CFR 3.2000 (~~2021~~2019) (What Are the Requirements Authorized
5008 State, Tribe, and Local Programs' Reporting Systems Must Meet?),
5009 referenced in Section 611.105.

5010
5011 40 CFR 136.3(a) (~~2021~~2019), referenced in Section 611.1004.

5012
5013 Appendix B to 40 CFR 136 (~~2021~~2019), referenced in Sections 611.359,
5014 611.609, and 611.646.

5015
5016 40 CFR 141.21(f)(6)(i) and (f)(6)(ii) (~~2021~~2019), referenced in Section
5017 611.802.

5018
5019 40 CFR 142.20(b)(1) (~~2021~~2019), referenced in Section 611.112.

5020
5021 Subpart G of 40 CFR 142 (~~2021~~2019), referenced in Section 611.113.

5022
5023 e) ~~The Board incorporates the following federal statutory provision by reference:~~

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5025 ~~42 USC 300g-6(d) and (e) (2017).~~

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~~cd~~) This Part incorporates no later amendments or editions.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.103 Severability

If a court of competent jurisdiction adjudges any provision of this Part ~~is adjudged~~ invalid, or determines applying it if its application to any person or in any circumstance ~~is adjudged~~ invalid, ~~the such~~ invalidity of the provision does not affect the validity of this Part as a whole, or any ~~other~~ Subpart, Section, subsection, sentence, or clause the court's order does not ~~adjudged~~ adjudged invalid.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.105 Electronic Reporting

~~Submitting~~The submission of any document to comply with under any provision of this Part as an electronic document in lieu of a paper document must comply with~~is subject to~~ this Section.

a) Scope and Applicability

- 1) The USEPA, the Board, or the Agency may provide~~allow~~ for submitting~~the submission of~~ electronic documents in lieu of paper documents. This Section does not require the submission of electronic documents in lieu of paper documents. This Section provides~~sets forth the requirements~~ for submitting~~an the optional~~ electronic version of submission of any document the supplier must submit to USEPA or the Agency under certain rules~~that must be submitted to the appropriate of the following~~:
 - A) To USEPA directly under Title 40 of the Code of Federal Regulations; or
 - B) To the Board or the Agency under any provision of 35 Ill. Adm. Code 611702 through 705, 720 through 728, 730, 733, 738, or 739.
- 2) A supplier may only submit an electronic~~Electronic~~ document submission under specific circumstance~~this Section can occur only as follows~~:
 - A) For submitting~~submissions of~~ documents to USEPA, a supplier~~submissions~~ may submit an electronic document~~to occur~~ only after USEPA publishes~~has published~~ a notice in the Federal

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Register ~~notice announcing~~ that USEPA ~~willis prepared to~~ receive ~~the specific document or type of document,~~ in an electronic format, ~~documents required or permitted by the identified part or subpart of Title 40 of the Code of Federal Regulations;~~ or

- B) For ~~submitting submissions of~~ documents to the State, ~~a suppliers submissions~~ may ~~submit an electronic document~~ ~~only after under the following circumstances:~~ the Board or the Agency ~~begins using an~~ ~~may use any~~ electronic document receiving system ~~that for which~~ USEPA ~~approves has granted approval~~ under 40 CFR 3.1000, so long as the system complies with 40 CFR 3.2000, incorporated by reference in Section 611.102(c), and USEPA ~~does has~~ not ~~withdraw withdrawn~~ its approval ~~of the system~~ in writing.
- 3) This Section does not apply to ~~specific any of the following~~ documents, whether or not ~~the supplier submits~~ the document ~~is a document submitted~~ to satisfy the requirements cited in subsection (a)(1):
 - A) Any document ~~the supplier submits~~ ~~submitted~~ via facsimile;
 - B) Any document ~~the supplier submits~~ ~~submitted~~ via magnetic or optical media, such as a diskette, compact disc, digital video disc, or tape; or
 - C) Any data transfer between USEPA, any state, or any local government and ~~either~~ the Board or the Agency as part of administrative arrangements ~~between the parties to the transfer~~ to share data.
- 4) Upon USEPA conferring written approval for ~~submitting the submission of~~ any types of documents as electronic documents in lieu of paper documents, as described in subsection (a)(2)(B), the Agency or the Board, as appropriate, must publish a Notice of Public Information in the Illinois Register that describes the documents approved for submission as electronic documents, the ~~USEPA-approved~~ electronic document receiving system ~~for receiving approved to receive~~ them, the acceptable formats and procedures for their submission, and, as applicable, the date on which the Board or the Agency will begin to receive those submissions. In the event of ~~written cessation of~~ USEPA ~~withdrawing~~ approval for receiving any type of document as an electronic document in lieu of a paper document, the Board or the Agency must similarly cause publication of a Notice of Public Information in the Illinois Register.

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BOARD NOTE: Subsection (a) ~~derivesis derived~~ from 40 CFR 3.1, 3.2, 3.10, 3.20, and 3.1000.

b) Definitions. For the purposes of this Section, terms have the ~~meaningsmeaning~~ ~~attributed to them in~~ 40 CFR 3.3, incorporated by reference in 35 Ill. Adm. Code 611.102(c), ~~attributes them~~.

c) Procedures for Submitting Electronic Documents to USEPA in Lieu of Paper Documents. Except as provided in subsection (a)(3), any person ~~who is required under~~ Title 40 of the Code of Federal Regulations ~~requires~~ to create and submit or otherwise provide a document to USEPA may satisfy this requirement with an electronic document, in lieu of a paper document ~~upon meeting certain, if the following~~ conditions ~~are met~~:

- 1) The person satisfies the requirements of 40 CFR 3.10, incorporated by reference in Section 611.102(c); and
- 2) USEPA ~~has first publishespublished~~ a notice in the Federal Register, ~~as described in~~ subsection (a)(2)(A) ~~describes~~.

BOARD NOTE: Subsection (c) ~~derivesis derived~~ from 40 CFR 3.2(a) and subpart B of 40 CFR 3.

d) Procedures for Submitting Electronic Documents to the Board or the Agency in Lieu of Paper Documents

- 1) The Board or the Agency may, ~~but is not required to,~~ establish procedural rules for ~~electronically submittingthe electronic submission of~~ documents. The Board or the Agency must establish any ~~such procedural~~ rules under the Administrative Procedure Act [5 ILCS 100/5].
- 2) The Board or the Agency may accept electronic documents under this Section only as ~~provided in~~ subsection (a)(2)(B) ~~provides~~.

BOARD NOTE: Subsection (d) ~~derivesis derived~~ from 40 CFR 3.2(b) and subpart D of 40 CFR 3.

e) Effects of Submitting an Electronic Document in Lieu of a Paper Document

- 1) ~~Alf a person failing to comply with this Section when electronically submittingwho submits~~ a document ~~as an electronic document fails to comply with the requirements of this Section, that person~~ is subject to the

penalties prescribed for ~~failing~~failure to comply with the requirement to file that ~~the electronic document was intended to satisfy~~.

- 2) ~~The electronic signature on a document a person files electronically~~If a document submitted as an electronic document to satisfy a reporting requirement ~~bears an electronic signature, the electronic signature~~ legally binds, obligates, and makes the signer responsible to the same extent as ~~would the filer's filing a paper document bearing~~ the signer's handwritten signature ~~would on a paper document submitted to satisfy the same reporting requirement~~.
- 3) Proof that ~~the signer used~~ a particular signature device ~~was used~~ to create an electronic signature ~~establishes~~will suffice to establish that the individual uniquely entitled to use the device did so ~~intending with the intent~~ to sign the electronic document and give it effect.
- 4) Nothing in this Section limits ~~using the use of~~ electronic documents or information derived from electronic documents as evidence in enforcement or other proceedings.

BOARD NOTE: Subsection (e) ~~derives~~is derived from 40 CFR 3.4 and 3.2000(c).

- f) Public Document Subject to State Laws. Any electronic document ~~a person files~~filed with the Board is a public document. The document, its submission, its retention by the Board, and its availability for public inspection and copying are subject to various State laws, ~~including the following~~:
 - 1) The Administrative Procedure Act [5 ILCS 100];
 - 2) The Freedom of Information Act [5 ILCS 140];
 - 3) The State Records Act [5 ILCS 160];
 - 4) The Electronic Commerce Security Act [5 ILCS 175];
 - 5) The Environmental Protection Act;
 - 6) Regulations relating to public access to Board records (2 Ill. Adm. Code 2175); and
 - 7) Board procedural rules relating to protection of trade secrets and confidential information (35 Ill. Adm. Code 130).

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- g) Nothing in this Section or ~~in any rule provisions~~ adopted under subsection (d)(1) ~~creates will create~~ any right or privilege to electronically submit any document ~~as an electronic document~~.

BOARD NOTE: Subsection (g) ~~derives is derived~~ from 40 CFR 3.2(c).

BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 3 and 142.10(g).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.108 Delegation to Local Government

The Agency may delegate portions of its inspection, investigating, and enforcement functions to units of local government ~~under pursuant to~~ Section 4(r) of the Act.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.109 Enforcement

- a) Any person may file an enforcement action ~~under pursuant to~~ Title VIII of the Act.
- b) A complainant may use the~~The~~ results of monitoring ~~required under~~ this Part ~~requires may be used~~ in an enforcement action.

BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.22(e) and 141.23(a)(4) ~~(2016)~~.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.110 Special Exception Permits

- a) The Agency must evaluate a request for a SEP granting relief from ~~the~~ monitoring requirements of ~~Section 611.601, 611.602, or 611.603 (IOCs, excluding the Section 611.603 monitoring frequency requirements for cyanide);~~ Section 611.646~~(e) and~~ (f) (a GWS supplier for Phase I, Phase II, and Phase V VOCs); Section 611.646(d); (only as to initial monitoring for 1,2,4-trichlorobenzene); or Section 611.648(d) (~~for~~ Phase II, Phase IIB, and Phase V SOCs) under this Section. The Agency must evaluate on the basis of ~~known knowledge of~~ previous use (including transport, storage, or disposal) of the contaminant in the watershed or zone of influence of the system, ~~as determined~~ under 35 Ill. Adm. Code 671.

BOARD NOTE: The Agency may only issue~~must grant~~ a SEP from the Section

611.603 monitoring frequency ~~requirements~~ for cyanide ~~based only~~ on ~~the basis of~~ subsection (c), not ~~based~~ on ~~the basis of~~ this subsection (a).

- 1) If the Agency determines that there was no prior use of the contaminant ~~in the water system's watershed or zone of influence~~, ~~the Agency#~~ must ~~issue grant~~ the SEP; or
- 2) If ~~anyone previously used~~ the contaminant ~~was previously used~~ or the previous use ~~is was~~ unknown, the Agency must consider ~~certain the following~~ factors:
 - A) Previous analytical results;
 - B) The ~~system's~~ proximity ~~of the system~~ to any possible point source of contamination (including spills or leaks at or near a water treatment facility; at manufacturing, distribution, or storage facilities; from hazardous and municipal waste land fills; or from waste handling or treatment facilities) or non-point source of contamination (including the use of pesticides and other land application uses of the contaminant);
 - C) The environmental persistence and transport of the contaminant;
 - D) How well ~~local conditions protect~~ the water source ~~is protected~~ against contamination, including: ~~whether it is a SWS or a GWS.~~
 - i) ~~For a~~ GWS, ~~must consider~~ well depth, soil type, well casing integrity, and wellhead protection; and
 - ii) ~~For an~~ SWS, ~~must consider~~ watershed protection;
 - E) For Phase II, Phase IIB, and Phase V SOCs, ~~as follows~~:
 - i) Elevated nitrate levels at the water source; and
 - ii) The use of PCBs in equipment ~~the supplier uses to produce, store, and distribute used in the production, storage, or distribution of~~ water (including pumps, transformers, etc.); and
 - F) For Phase I, Phase II, and Phase V VOCs (under Section 611.646), ~~the number of persons served by the PWS serves,~~ and the proximity of a smaller system to a larger one.

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- b) If a supplier refuses to provide any necessary additional information ~~requested by~~ the Agency requests, or if a supplier delivers any necessary information late in the Agency's deliberations on a request, the Agency may deny the ~~requested~~-SEP or issuegrant the SEP with conditions within the time allowed by law.
- c) The Agency must ~~issuegrant a supplier~~ a SEP allowing a supplier that allows it to discontinue monitoring for cyanide upon determining if it determines that the supplier's water is not vulnerable ~~due to a lack of~~ any industrial source of cyanide.

BOARD NOTE: Subsection (a) ~~derivesis derived~~ from 40 CFR 141.24(f)(8) and (h)(6) ~~(2016)~~. Subsection (b) ~~derivesis derived~~ from 40 CFR 141.82(d)(2), and 141.83(b)(2) ~~(2016)~~. Subsection (c) ~~derivesis derived~~ from 40 CFR 141.23(c)(2) ~~(2016)~~. At 40 CFR 142.18, USEPA ~~reserveshas reserved the~~ discretion, ~~at 40 CFR 142.18 (2016)~~, to review and nullify Agency determinations of the kindstypes made under Sections ~~611.602, 611.603, 611.646, and 611.648. Atand the discretion, at~~ 40 CFR 141.82(i), 141.83(b)(7), and 142.19 ~~(2016)~~, USEPA maintains authority to establish federal standards for any supplier, superseding any Agency determination ~~made~~ under Sections 611.352(d), 611.352(f), 611.353(b)(2), and 611.353(b)(4).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.111 Relief Equivalent to SDWA Section 1415(a) Variances

This Section ~~describesis intended to describe~~ how the Board grants State-relief equivalent to that available from USEPA under section 1415(a)(1)(A) and (a)(1)(B) of ~~the~~-SDWA (42 U.S.C. 300g-4(a)(1)(A) and (a)(1)(B)). Every variance under Sections 35 through 38 of the Act must require that the supplier comply within five years. SDWA section 1415 variances ~~needdo not do~~ sorequire ultimate compliance within five years in every situation. A supplier-Variances under Sections 35 through 38 of the Act do require compliance within five years in every case. ~~Consequently, a PWS~~ may ~~seekhave the option of seeking~~ State regulatory relief equivalent to a SDWA section 1415 variance usingthrough one of three procedural mechanisms: a variance under Sections 35 through 38 of the Act and Subpart B of 35 Ill. Adm. Code 104; a site-specific rule under Sections 27 and 28 of the Act and 35 Ill. Adm. Code 102; or an adjusted standard under Section 28.1 of the Act and Subpart D of 35 Ill. Adm. Code 104.

- a) The Board will grant ~~a PWS~~ a variance, a site-specific rule, or an adjusted standard from an MCL or a treatment technique under this Section.
 - 1) The ~~supplier~~PWS must file a petition under the applicable of 35 Ill. Adm. Code 102 or 104, ~~as applicable~~.
 - 2) If a State requirement does not have a federal counterpart, the Board needs

not follow this Section when granting~~may grant~~ relief from the State requirements ~~without following this Section~~.

b) Relief from an MCL

1) To justify~~As part of the justification for~~ relief from an MCL under this Section, the supplier~~PWS~~ must demonstrate specific facts~~the following~~:

A) Due to~~Because of~~ the characteristics of the raw water sources and alternative sources that are reasonably available to the system, the supplier~~PWS~~ cannot meet the MCL;

B) The supplier installs or~~PWS~~ will install or has installed the best available technology (BAT) (as identified in Subpart F), treatment technique, or other means that the Agency finds available. BAT may vary depending on specific considerations~~the following~~:

i) The number of persons served by~~the system~~ serves;

ii) Physical conditions related to engineering feasibility; and

iii) Compliance costs~~Costs of compliance~~; and

C) The variance will not result in an unreasonable risk to human health.

2) In any order granting relief under this subsection (b), the Board will prescribe schedules~~a schedule for the following~~:

A) A schedule for complying~~Compliance, including increments of progress, by the PWS,~~ with each MCL from which the Board granted~~for which the relief, including increments of progress was granted~~; and

B) A schedule for the supplier implementing~~Implementation by the PWS of~~ each additional control measure for each MCL from which the Board granted~~for which the relief is granted~~, during the period ending when the order requires that the supplier comply with the MCL~~on the date compliance with such requirement is required~~.

3) Schedule of Compliance for Relief from an MCL

A) A schedule of compliance will require the supplier to comply as

5370 ~~expeditiously as practicable~~ compliance with each MCL from
5371 which the Board granted ~~for which the relief was granted as~~
5372 expeditiously as practicable.

5373
5374 B) If the Board prescribes a schedule requiring the supplier to
5375 comply ~~compliance~~ with an MCL that is more ~~for which the relief is~~
5376 granted later than five years after when the Board grants ~~from the~~
5377 date of issuance of the relief, the Board will take certain actions ~~do~~
5378 the following:

5379
5380 i) The Board will document ~~Document~~ its rationale for the
5381 extended compliance schedule;

5382
5383 ii) The Board will discuss its ~~Discuss the~~ rationale for the
5384 extended compliance schedule in the required public notice
5385 and opportunity for public hearing; and

5386
5387 iii) The Board will provide ~~Provide~~ the shortest practicable
5388 schedule feasible for the supplier to comply with the MCL
5389 under the circumstances.

5390
5391 c) Relief from a Treatment Technique Requirement

5392
5393 1) As part of the justification for relief from a treatment technique
5394 requirement under this Section, the supplier ~~PWS~~ must demonstrate that
5395 the treatment technique is not necessary to protect the health of the
5396 persons served due to ~~because of~~ the nature of the raw water source.

5397
5398 2) The Board may prescribe monitoring and other requirements as a
5399 condition for relief from a treatment technique requirement.

5400
5401 d) The Board will hold at least one public hearing. In addition, the Board will accept
5402 comments as appropriate under 35 Ill. Adm. Code 102 or 104.

5403
5404 e) The Board will not grant relief from certain standards ~~any of the following:~~

5405
5406 1) From the MCLs for total coliforms and E. coli. The Board can no longer
5407 grant relief from the total coliform MCL.

5408
5409 BOARD NOTE: As provided in Section 611.131(c)(1) and 40 CFR
5410 142.304(a), a small system variance is not available for rules that address
5411 microbial contaminants, which include Subparts B, R, S, X, Z, and AA.

5412

- 5413 2) From any ~~of the~~ treatment technique requirement in requirements of
5414 Subpart B.
- 5415
- 5416 3) From the ~~residual disinfectant concentration (RDC)~~ requirements in
5417 Sections 611.241(c) and 611.242(b).
- 5418
- 5419 f) The Agency must promptly send USEPA the Board's opinion and order ~~of the~~
5420 Board granting relief under this Section. The Board may reconsider and modify
5421 its order granting a grant of relief and any conditions, or relief conditions, if
5422 USEPA notifies the Board of a finding under section 1415 of the SDWA (42
5423 U.S.C. 300g-4).
- 5424
- 5425 g) In addition to ~~the requirements of~~ this Section, ~~the provisions of~~ Section 611.130
5426 or 611.131 may apply to relief the Board grants granted under this Section.
- 5427

5428 BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.4, from section 1415(a)(1)(A)
5429 and (a)(1)(B) of the SDWA (42 U.S.C. 300g-4(a)(1)(A) and (a)(1)(B)) and from the Guidance
5430 Manual for Filtration and Disinfection (91), incorporated by reference in Section 611.102 ~~and~~
5431 available from USEPA, NSCEP. USEPA has ~~established~~ a procedure at 40 CFR 142.23 to
5432 review and potentially modify or nullify state determinations granting relief from NPDWRs if
5433 USEPA finds that the state ~~abuses has abused~~ its discretion or ~~fails failed~~ to prescribe required
5434 schedules for compliance in a substantial number of instances.

5435 (Source: Amended at 47 Ill. Reg. _____, effective _____)

5436
5437
5438 **Section 611.112 Relief Equivalent to SDWA Section 1416 Exemptions**

5439
5440 This Section ~~describes intended to describe~~ how the Board grants ~~State~~ relief equivalent to that
5441 available from USEPA under section 1416 of the SDWA (42 USC 300g-5). Every variance
5442 under Sections 35 through 37 of the Act must require the supplier to comply within five years. A
5443 SDWA section 1416 ~~exemption need exemptions do~~ not ~~do so require ultimate compliance~~
5444 within five years in every situation. A supplier ~~Variances under Sections 35 through 37 of the~~
5445 Act do require compliance within five years in every case. Consequently, a PWS may seek have
5446 the option of seeking State regulatory relief equivalent to a SDWA section 1416 exemption
5447 through one of three procedural mechanisms: a variance under Sections 35 through 37 of the Act
5448 and Subpart B of 35 Ill. Adm. Code 104; a site-specific rule under Sections 27 and 28 of the Act
5449 and 35 Ill. Adm. Code 102; or an adjusted standard under Section 28.1 of the Act and Subpart D
5450 of 35 Ill. Adm. Code 104.

- 5451
- 5452 a) The Board will grant ~~a PWS~~ a variance, a site-specific rule, or an adjusted
5453 standard from an MCL or treatment technique requirement, or from both, under
5454 this Section.
- 5455

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- 1) The supplierPWS must file a petition under the applicable of 35 Ill. Adm. Code 102 or 104, ~~as applicable~~.
 - 2) If a State requirement does not have a federal counterpart, the Board needs not follow this Section when granting~~may grant~~ relief from the State requirements ~~without following this Section~~.
- b) As part of the justification for relief under this Section, the supplierPWS must demonstrate specific facts~~the following~~:
- 1) Due to compelling factors (which may include economic factors), the supplierPWS is unable to comply with the MCL or treatment technique requirement and cannot, or to implement measures to develop an alternative source of water supply;
 - 2) Either of two situations are true of the supplier~~The PWS was either of the following~~:
 - A) The supplier operated~~In operation~~ on the effective date of the MCL or treatment technique requirement from which the supplier seeks relief; or
 - B) The supplier did not operate~~Not in operation~~ on the effective date of the MCL or treatment technique requirement from which the supplier seeks relief, and no reasonable alternative source of drinking water is available to the supplierPWS;
 - 3) The relief will not result in an unreasonable risk to human health; and
 - 4) The supplier cannot reasonably make management~~Management~~ or restructuring changes ~~cannot reasonably be made~~ that will result in the supplier complying~~compliance~~ with the NPDWR or improved water, ~~if compliance cannot be achieved, improve the~~ quality if the supplier cannot comply~~of the drinking water~~.
- BOARD NOTE: In determining that the supplier cannot reasonably make management or restructuring changes ~~cannot reasonably be made~~ that will result in the supplier complying~~compliance~~ with the NPDWR, the Board will consider the factors ~~required by~~ USEPA requires under 40 CFR 142.20(b)(1), incorporated by reference in Section 611.102(c).
- c) In any order granting relief under this Section, the Board will prescribe schedules~~a schedule for the following~~:

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- 1) ~~A schedule for complying~~ Compliance, including increments of progress, by the PWS, with each MCL from which the Board granted ~~and treatment technique requirement with respect to which the~~ relief, including increments of progress ~~was granted~~; and
 - 2) ~~A schedule for the supplier implementing~~ Implementation by the PWS, of each additional control measure for each ~~contaminant subject to the~~ MCL or treatment technique requirement from which the Board granted, ~~with respect to which~~ relief is granted.
- d) Schedule of Compliance. A schedule of compliance ~~must will~~ require the supplier to comply as expeditiously as practicable ~~compliance~~ with each MCL or treatment technique requirement from which the Board granted ~~with respect to which~~ relief ~~was granted as expeditiously as practicable,~~ but not later than three years after the otherwise applicable compliance date USEPA established ~~under~~ in section 1412(b)(10) of ~~the~~ SDWA (42 USC 300g-1(b)(10)), except under limited circumstances as follows:
- 1) ~~The Board may not grant~~ No relief ~~may be granted~~ unless the PWS establishes that the supplier ~~it~~ is taking all practicable steps to meet the NPDWR; and
 - A) The supplier ~~PWS~~ cannot meet the NPDWR without capital improvements that the supplier cannot ~~complete~~ be completed within 12 months;
 - B) In the case of a supplier ~~PWS~~ that needs financial assistance for the necessary improvements, the supplier enters ~~PWS has entered~~ into an agreement to obtain ~~the~~ such financial assistance; or
 - C) The supplier enters ~~PWS has entered~~ into an enforceable agreement to become a part of a regional PWS.
 - 2) In the case of a supplier serving ~~PWS that serves~~ 3,300 or fewer persons that needs financial assistance for the necessary improvements, the Board may renew the relief ~~may be renewed~~ for one or more additional two-year ~~two-year~~ periods up, ~~not to exceed~~ a total of six years; if the supplier ~~PWS establishes that it~~ is taking all practicable steps to meet the final date for compliance.
 - 3) A supplier ~~PWS~~ may not receive relief under this Section if the Board granted the supplier ~~PWS was granted~~ relief under Section 611.111 or

611.131.

- e) The Board will hold at least one public hearing. In addition the Board will accept comments ~~under theas~~ appropriate ~~ofunder~~ 35 Ill. Adm. Code 102 or 104.
- f) The Agency must promptly send USEPA the ~~Board's opinion and order~~~~Opinion and Order of the Board~~ granting relief under this Section. The Board may reconsider and modify ~~its order granting a grant of relief and any conditions, or relief conditions,~~ if USEPA notifies the Board of a finding under section 1416 of the SDWA (42 USC 300g-5).

BOARD NOTE: ~~This subsection (f) derives~~~~Derived~~ from section 1416 of the SDWA (42 USC 300g-5).

- g) The Board will not grant relief from ~~certain standards~~~~any of the following~~:
 - 1) From the MCLs for total coliforms and E. coli. The Board can no longer grant relief from the total coliform MCL.

BOARD NOTE: As ~~provided in~~ Section 611.131(c)(1) and 40 CFR 142.304(a) ~~provide~~, a small system variance is not available for rules that address microbial contaminants, which include Subparts B, R, S, X, Z, and AA.

- 2) From any ~~of the~~ treatment technique ~~in~~~~requirements of~~ Subpart B.
- 3) From the ~~residual disinfectant concentration (RDC) requirements of~~ Sections 611.241(c) and 611.242(b) ~~require~~.
- h) In addition to ~~the requirements of~~ this Section, ~~the provisions of~~ Section 611.130 or 611.131 may apply to relief granted under this Section.

BOARD NOTE: ~~This Section derives~~~~Derived~~ from 40 CFR 141.4. USEPA has ~~established~~ a procedure at 40 CFR 142.23 to review and potentially modify or nullify state determinations granting relief from NPDWRs ~~ifwhere~~ USEPA finds that the state ~~abuses~~~~has abused~~ its discretion or ~~fails~~~~failed~~ to prescribe required schedules for compliance in a substantial number of instances.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.113 Alternative Treatment Techniques

This Section is ~~intended to be~~ equivalent to section 1415(a)(3) of ~~the~~ SDWA (42 USC 300g-

5585 4(a)(3).

5586

5587

a) ~~The Under this Section, the~~ Board ~~will~~may grant ~~any~~an adjusted standard from a treatment technique requirement ~~under this Section~~.

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b) The supplier seeking an adjusted standard must file a petition under Subpart D of 35 Ill. Adm. Code 104.

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c) As justification the supplier must demonstrate that an alternative treatment technique is at least as effective in lowering the level of the contaminant ~~for~~with respect to which ~~a rule prescribes~~ the treatment technique requirement ~~was prescribed~~.

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d) As a condition of any adjusted standard, the Board will require the use of the alternative treatment technique.

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5601

e) The Board will grant ~~an~~adjusted ~~standard~~standards for ~~an~~alternative treatment ~~technique~~techniques subject to ~~standard~~the following conditions:

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5604

1) ~~The All~~ adjusted ~~standard~~standards must ~~include the applicable~~be subject to the limitations ~~in~~of 40 CFR 142, Subpart G, incorporated by reference in Section 611.102; and

5605

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5608

2) ~~The All~~ adjusted ~~standard~~standards must be subject to review and approval by USEPA under 40 CFR 142.46 before ~~it becomes~~they become effective.

5609

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5611

BOARD NOTE: ~~Subsections (a) through (f) derive~~Derived from section 1415(a)(3) of ~~the~~SDWA (42 USC 300g-4(a)(3)).

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5614

f) ~~The provisions of~~Section 611.130 ~~applies~~apply to ~~a determination~~determinations made under this Section.

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(Source: Amended at 47 Ill. Reg. _____, effective _____)

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Section 611.114 Siting Requirements

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Before ~~entering a person enters~~ into a financial commitment for or ~~beginning to construct~~initiates construction of a new PWS or ~~increasing~~increases the capacity of an existing PWS, ~~a supplier~~the person must obtain a construction permit under 35 Ill. Adm. Code 602.101 and, to the extent practicable, avoid locating part or all of the new or expanded facility at a site ~~having certain characteristics of which the following is true~~:

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a) ~~The site must not be~~s subject to a significant risk from earthquakes, floods, fires,

5628 or other disasters that could cause a breakdown of the PWS or a portion of the
5629 PWS. As used in this subsection, "significant risk" means a greater risk to the
5630 new or expanded facility than would exist at other locations within the area ~~erved~~
5631 ~~by the supplier serves~~PWS; or

5632
5633 b) Except for intake structures, ~~the site must not be~~ within a ~~100-year~~ floodplain
5634 ~~of a 100-year flood.~~

5635
5636 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.5.

5637
5638 (Source: Amended at 47 Ill. Reg. _____, effective _____)

5639
5640 **Section 611.120 Effective Dates (Repealed)**

5641
5642 ~~Except as otherwise provided, this Part becomes effective when filed.~~

5643
5644 ~~BOARD NOTE: Derived from 40 CFR 141.60 (2002).~~

5645
5646 (Source: Repealed at 47 Ill. Reg. _____, effective _____)

5647
5648 **Section 611.121 Maximum Contaminant Levels**

5649
5650 a) Maximum Contaminant Levels. No person may cause or allow ~~delivering water~~
5651 ~~that is delivered~~ to any user ~~water that exceeds to exceed~~ the MCL for any
5652 contaminant.

5653
5654 b) ~~The An~~ MCL for ~~anya~~ particular contaminant applies in lieu of any ~~finished water~~
5655 ~~quality~~ narrative ~~finished water quality~~ standard.

5656
5657 BOARD NOTE: ~~This Section derives~~Derived from the definition of "MCL" in 40 CFR
5658 141.2.

5659
5660 (Source: Amended at 47 Ill. Reg. _____, effective _____)

5661
5662 **Section 611.125 Fluoridation Requirement**

5663
5664 ~~A CWS adding~~All CWSs that are required to add fluoride to the water must maintain a fluoride
5665 ion concentration, ~~reported as F₂~~, of 0.7 mg/l ~~as fluorine~~ in its distribution system.

5666
5667 BOARD NOTE: This is an additional State requirement.

5668
5669 (Source: Amended at 47 Ill. Reg. _____, effective _____)

5670

5671 **Section 611.126 Using Lead-Free Pipes, Fittings, Fixtures, Solder, and Flux for Drinking**
5672 **Water Prohibition on Use of Lead**

5673
5674 a) Applicability and Scope

5675
5676 1) This Section incorporates federal standards for pipes; pipe or plumbing
5677 fittings; or fixtures, solder, and flux, as sections 1417 and 1461 of SDWA
5678 (42 U.S.C. 300g-6 and 300j-21) require. This Section applies to any
5679 person introducing these products into commerce, like a manufacturer,
5680 importer, wholesaler, distributor, reseller, or retailer. This Section also
5681 applies to any person using these products when installing or repairing
5682 specific facilities:

5683
5684 A) A PWS; or

5685
5686 B) A residential or nonresidential facility providing water for human
5687 consumption.

5688
5689 2) This subsection (a)(2) corresponds with 40 CFR 143.10(b), which USEPA
5690 marked "reserved". This statement maintains structural consistency with
5691 the corresponding USEPA rules.

5692
5693 BOARD NOTE: Subsection (a) derives from 40 CFR 143.10.

5694
5695 b) Definitions. The following definitions apply to this Section:

5696
5697 "Accredited third-party certification body" means a body the American National
5698 Standards Institute (ANSI) accredits to provide product certification for meeting
5699 the lead-free requirements of not more than a weighted average of 0.25 percent
5700 lead content for the wetted surfaces, consistent with section 1417 of SDWA and
5701 subsection (c), like certification to the NSF/ANSI 372 standard.

5702
5703 "Administrator" means the Administrator of USEPA or an authorized
5704 representative.

5705
5706 "Affiliated" means a person or entity directly controlling, indirectly controlling
5707 (through one or more intermediaries), under control of, or under common control
5708 with a specific person or entity. Affiliated persons or entities include any of the
5709 following: a parent company and all wholly or partially owned subsidiaries of the
5710 parent company, or two or more corporations or family partnerships having
5711 overlap in ownership or control.

5712

5713 "Alloy" means a substance composed of two or more metals or of a metal and a
5714 nonmetal.

5715
5716 "Coating" means a thin layer of material, like paint, epoxy, zinc galvanization, or
5717 other material, usually applied by spraying or in liquid form to coat internal
5718 surfaces of pipes, fittings, or fixtures.

5719
5720 "Custom fabricated product" means a product:
5721
5722 A manufacturer makes on a case-by-case basis to accommodate the unique
5723 needs of a single customer;
5724
5725 Not having an assigned Universal Product Code (UPC);
5726
5727 That no manufacturer, importer, wholesaler, distributor, retailer, or other
5728 source stocks or makes available through inventory for distribution; and
5729
5730 That no person catalogs in print or on the internet with a specific item
5731 number or code.

5732
5733 "Drinking water cooler" means any mechanical device, affixed to drinking water
5734 supply plumbing, actively cooling water for human consumption.

5735
5736 "Fitting" means a pipe fitting or plumbing fitting.

5737
5738 "Fixture" means a receptacle or device connected to a water supply system or
5739 discharging to a drainage system or both. Fixtures used for potable uses,
5740 including:

5741
5742 Drinking water coolers, drinking water fountains, drinking water bottle
5743 fillers, and dishwashers;

5744
5745 Plumbed-in devices, like point-of-use treatment devices, coffee makers,
5746 and refrigerator ice and water dispensers; and

5747
5748 Water heaters, water meters, water pumps, and water tanks, unless nobody
5749 uses them for potable uses.

5750
5751 "Flux" means a substance someone uses to help melt or join metals, like by
5752 removing oxides and other coatings or residues from the metals before joining by
5753 using solder or other means.

5754

5755 "Importer" means any person introducing any pipe, any pipe or plumbing fitting
5756 or fixture, or any solder or flux entering the United States into commerce; any
5757 "importer", as 19 CFR 101.1, incorporated by reference in Section 611.102,
5758 defines; or both.

5759
5760 "Introduce into commerce" or "introduction into commerce" means selling or
5761 distributing products or offering products for sale or distribution in the United
5762 States.

5763
5764 "Liner" means a rigid lining, like a plastic or copper sleeve meeting certain
5765 conditions:

5766
5767 The lining is sealed with a permanent barrier to exclude lead-bearing
5768 surfaces from water contact; and

5769
5770 The lining is of sufficient thickness and otherwise having physical
5771 properties necessary to prevent erosion and cracking for the expected
5772 useful life of the product.

5773
5774 "Manufacturer" means a person or entity conducting either of certain activities:

5775
5776 Processing or making a product; or

5777
5778 Having a second person process or make products under a contractual
5779 arrangement for distribution, using the first person's or entity's brand name
5780 or trademark.

5781
5782 "Non-potable services" means all product uses and applications that are not
5783 potable uses.

5784
5785 "Person" means an individual; corporation, company, association, partnership,
5786 municipality, or State or federal agency, including an officer, employee, or agent
5787 of a corporation, company, association, municipality, or State or federal agency.

5788
5789 "Pipe" means a conduit, conductor, tubing, or hose and may also include
5790 permanently attached end fittings.

5791
5792 "Pipe fitting" means any piece, like a coupling, elbow, or gasket, a person uses for
5793 connecting pipe lengths or other plumbing pieces together or for changing
5794 direction.

5795

5796 "Plumbing fitting" means a plumbing component controlling the volume or
5797 directional flow of water, like a kitchen faucet, bathroom lavatory faucet,
5798 manifold, or valve.
5799

5800 "Point-of-use treatment device" means point-of-use treatment device, as Section
5801 611.102 defines.
5802

5803 "Potable uses", for purposes only of this subsection (b), means services or
5804 applications providing water for human ingestion, like drinking, cooking,
5805 preparing food, dishwashing, brushing teeth, or maintaining oral hygiene.
5806

5807 "Product" means a pipe, fitting, or fixture.
5808

5809 "Public water system" is as Section 611.102 defines.
5810

5811 "Solder" means a type of metal persons use to join metal parts, like sections of
5812 pipe, without melting the existing metal in the joined parts. Solder usually
5813 appears on the market in the form of wire rolls or bars.
5814

5815 "State" means the State of Illinois and its authorized agencies.
5816

5817 "United States" includes its commonwealths, districts, states, tribes, and
5818 territories.
5819

5820 "Water distribution main" means a pipe, typically found under or adjacent to a
5821 roadway, supplying water to buildings via service lines.
5822

5823 BOARD NOTE: Subsection (b) derives from 40 CFR 143.11.
5824

5825 c) Definition of Lead-Free and Calculation Methodology
5826

5827 1) "Lead-free" for the purposes of this Section means an article meeting two
5828 conditions:
5829

5830 A) Not containing more than 0.2 percent lead if solder and flux; and
5831

5832 B) Not more than a weighted average of 0.25 percent lead if the
5833 wetted surfaces of pipes, pipe fittings, plumbing fittings, and
5834 fixtures.
5835

5836 2) Calculate the weighted average lead content of a pipe, pipe fitting,
5837 plumbing fitting, or fixture using the following formula:
5838

- 5839 A) For each wetted component, multiply the percentage of lead in the
5840 component by the ratio of the wetted surface area of that
5841 component to the total wetted surface area of the entire product to
5842 derive the weighted percentage of lead of the component.
5843
5844 B) The sum of the weighted percentage of lead of all wetted
5845 components gives the weighted average lead content of the
5846 product.
5847
5848 C) Use the lead content of the material used to produce wetted
5849 components to determine compliance with subsection (c)(1)(B).
5850
5851 D) For lead content of materials given as a range, use the maximum
5852 content of the range.
5853
5854 3) If the manufacturer applies a coating to the internal surfaces of a pipe,
5855 fitting, or fixture component, use the maximum lead content of both the
5856 coating and the alloy to calculate the lead content of the component.
5857
5858 4) If the manufacturer installs a liner into a pipe, fitting or fixture, use the
5859 maximum lead content of the liner to calculate the lead content of the
5860 component.
5861
5862 5) If a fixture contains any media (e.g., activated carbon, ion exchange resin,
5863 etc.) contained in filters, do not use the media in determining the "total
5864 wetted surface area of the entire product" in subsection (c)(2).
5865
5866 6) In addition to the definitions of "lead-free" in subsections (c)(1) through
5867 (c)(5), no drinking water cooler containing any solder, flux, or storage
5868 tank interior surface that may come into contact with drinking water is
5869 lead-free if the solder, flux, or storage tank interior surface contains more
5870 than 0.2 percent lead. The manufacturer must make its drinking water
5871 coolers so that each individual part or component that may come in
5872 contact with drinking water does not contain more than eight percent lead
5873 while still meeting the maximum 0.25 percent weighted average lead
5874 content of the wetted surfaces of the entire product.

5875
5876 BOARD NOTE: Subsection (c) derives from 40 CFR 143.12.

5877
5878 d) Use Prohibitions

- 5879
5880 1) No person may use any pipe, pipe or plumbing fitting or fixture, solder, or
5881 flux that is not lead-free in the installation or repair of specific facilities:

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- A) Any PWS; or
 - B) Any plumbing in a residential or nonresidential facility providing water for human consumption.
- 2) Subsection (d)(1) does not apply to leaded joints necessary for the repair of cast iron pipes.

BOARD NOTE: Subsection (d) derives from 40 CFR 143.13.

e) This subsection (e) corresponds with 40 CFR 143.14, requiring authorized states to implement the requirements of section 1417(a)(1) of SDWA (42 USC 300g-6(a)(1)) and 40 CFR 143.13. This statement maintains structural consistency with the corresponding USEPA rule.

f) Introduction into Commerce Prohibitions

- 1) No person may introduce into commerce any pipe, pipe or plumbing fitting or fixture, solder, or flux that is not lead-free, except for a pipe for use in manufacturing or industrial processing;
- 2) No person engaged in the business of selling plumbing supplies in the United States, except a manufacturer, may sell solder or flux that is not lead-free; and
- 3) No person may introduce into commerce any solder or flux that is not lead-free, unless the solder or flux bears a prominent label stating that it is illegal to use the solder or flux in the installation or repair of any plumbing providing water for human consumption.

BOARD NOTE: Subsection (f) derives from 40 CFR 143.15.

g) Exemptions. Subsections (d), (f), and (j) do not apply to certain products:

- 1) Pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, exclusively for use in non-potable services, like manufacturing, industrial processing, irrigation, outdoor watering, or any other uses in which no person would reasonably anticipate anyone would use the water for human consumption. Additional products that could be "used exclusively for non-potable services" include certain items:

- 5924 A) Products clearly labeled, on the product, package, or tag with a
5925 phrase like, "Not for use with water for human consumption", or
5926 another phrase conveying the same meaning in plain language;
5927
- 5928 B) Products incapable of use in potable services (e.g., physically
5929 incompatible) with other products needed to convey water for
5930 potable uses; and
5931
- 5932 C) Products plainly identifiable and marketed as solely for a use other
5933 than for conveying water (these other uses include for conveying
5934 air, chemicals other than water, hydraulic fluids, refrigerants,
5935 gasses, or other non-water fluids).
5936

5937 2) Toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower
5938 valves, fire hydrants, service saddles, and water distribution main gate
5939 valves (provided the valves are at least two inches (5.1 cm) in diameter or
5940 larger).
5941

5942 3) Clothes washing machines, emergency drench showers, emergency face
5943 wash equipment, eyewash devices, fire suppression sprinklers, steam
5944 capable clothes dryers, and sump pumps.
5945

5946 BOARD NOTE: Subsection (g) derives from 40 CFR 143.16.
5947

5948 h) This subsection (h) corresponds with 40 CFR 143.17, which USEPA marked
5949 "Reserved". This statement maintains structural consistency with the
5950 corresponding USEPA rule.
5951

5952 i) Required Labeling of Solder and Flux That Is Not Lead-Free. Solder and flux
5953 that is not "lead-free", as defined in subsection (c)(1)(A), must bear a prominent
5954 label stating that using the solder or flux in the installation or repair of any
5955 plumbing providing water for human consumption is illegal.
5956

5957 BOARD NOTE: Subsection (i) derives from 40 CFR 143.18.
5958

5959 j) Required Certification of Products
5960

5961 1) A manufacturer or importer introducing into commerce products that must
5962 meet the lead-free requirements of section 1417 of the Safe Drinking
5963 Water Act and subsection (c) must ensure, except as provided in
5964 subsections (j)(1)(A) through (j)(1)(C), that the products are certified
5965 compliant, as specified in subsections (j)(2) and (j)(3), before the later of
5966 September 1, 2023 or introducing the product into commerce, whichever

5967 occurs later. The manufacturer or importer must maintain documents to
5968 substantiate the certification for at least five years after the date the
5969 manufacturer or importer last sold the product.
5970

5971 A) The manufacturer or importer needs not individually certify
5972 product components of assembled pipes, fittings, or fixtures if the
5973 entire product in its final assembled form is lead-free certified.
5974

5975 B) The manufacturer or importer needs not individually certify direct
5976 replacement parts for previously installed lead-free certified
5977 products if the weighted average lead content of wetted surface
5978 area for the part does not exceed the lead content of the original
5979 part.
5980

5981 C) The manufacturer or importer needs not certify dishwashers.
5982

5983 2) The manufacturer or importer must obtain certification of its products
5984 from an accredited third party certification body, except as subsection
5985 (j)(3) provides otherwise. The manufacturer or importer must keep
5986 records for all products an accredited third-party certification body
5987 certifies, minimally including documents substantiating certification,
5988 certification dates, and expiration dates. The manufacturer or importer
5989 must provide these documents to the Agency or USEPA upon request, as
5990 subsection (k)(2) requires.
5991

5992 3) A manufacturer or importer may self-certify its products may be self-
5993 certified by manufacturers or importers under subsection (j)(3)(A) or
5994 (j)(3)(B). A manufacturer or importer electing to self-certify its products
5995 must comply with subsections (j)(4) through (j)(7).
5996

5997 A) Manufacturers having fewer than ten employees, or importers
5998 entering products purchased from or manufactured by
5999 manufacturers having fewer than ten employees, may elect to self-
6000 certify products in lieu of obtaining certification from an
6001 accredited third-party certification body. The number of
6002 employees includes any persons employed by the manufacturer
6003 and its affiliated entities. The manufacturer must calculate its
6004 number of employees by averaging the number of persons that it
6005 and its affiliated entities employ, regardless of part-time, fulltime,
6006 or temporary status, for each pay period over the manufacturer's
6007 and affiliated entities' latest 12 calendar months or averaged over
6008 the number of months in existence if less than 12 months. Any
6009 firm that subsequently expands employment to ten or more

- 6010 employees, based on the most recent 12-month average number of
6011 persons employed, is no longer eligible to self-certify products and
6012 must obtain third-party certification within 12 months of having
6013 ten or more employees.
- 6014
- 6015 B) A manufacturer or importer may elect to self-certify any custom-
6016 fabricated product in lieu of obtaining certification from an ANSI-
6017 accredited third-party certification body, regardless of the number
6018 of persons the manufacturer or importer employs.
- 6019
- 6020 4) To self-certify products, the eligible manufacturer or importer must attest
6021 that products comply with the definition of "lead-free" in subsection (c) by
6022 developing and maintaining a "certificate of conformity". The certificate
6023 of conformity must fulfill certain conditions:
- 6024
- 6025 A) A responsible corporate officer; general partner; proprietor; or an
6026 authorized representative of a responsible corporate officer,
6027 general partner, or proprietor must sign the certificate; and
- 6028
- 6029 B) The manufacturer or importer must post the certificate to a website
6030 with continuing public access in the United States, unless
6031 distributing the certificate by other means (e.g., electronically or in
6032 hard copy) with the product through the distribution channel for
6033 final delivery to the end-use installer of the product.
- 6034
- 6035 5) The certificate of conformity must be in English and include specific
6036 information:
- 6037
- 6038 A) Contact information for the manufacturer or importer:
- 6039
- 6040 i) The entity's or proprietor's name;
- 6041
- 6042 ii) Street and mailing addresses;
- 6043
- 6044 iii) Phone number; and
- 6045
- 6046 iv) Email address;
- 6047
- 6048 B) For products imported into the United States, the certificate must
6049 also include contact information for the manufacturer;
- 6050
- 6051 C) A brief listing of the products, including any applicable unique
6052 identifying information like model names and numbers;

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- D) A statement attesting that the products meet the lead-free requirements of section 1417 of the Safe Drinking Water Act (42 USC 300g-6) and subpart B of 40 CFR 143 and that the manufacturer or importer is eligible to self-certify the product under that rule;
 - E) A statement indicating how the manufacturer or importer verified conformance with section 1417 of the Safe Drinking Water Act (42 USC 300g-6) and subpart B of 40 CFR 143; and
 - F) The signature, date, name, and position of the signatory and the name and position of the officer, partner, or proprietor who is principal if the signatory certifies as agent on behalf of a responsible corporate officer.
- 6) A manufacturer or importer self-certifying products must maintain at a primary place of business within the United States certificates of conformity and documents sufficient to confirm that products meet the lead-free requirements of this Section. Sufficient documents may include detailed schematic drawings of the products indicating dimensions, records of calculations of the weighted average lead content of the products, documents giving the lead content of materials used in manufacture, and other documents the manufacturer or importer used in verifying the lead content of a plumbing device. The manufacturer or importer must provide these documents and certificates of conformity upon request to the Administrator, as specified in subsection (k)(2) provides, and maintain the documents for at least five years after the manufacturer or importer last sold the product.
- 7) The manufacturer or importer must complete the certificate of conformity and documents before introducing a product into commerce.

BOARD NOTE: Subsection (j) derives from 40 CFR 143.19.

k) Compliance Provisions

- 1) Not complying with the Act or this Section may subject a person to enforcement action. Enforcement action may include injunctive or declaratory relief, a Board order to cease and desist, civil penalties, or criminal penalties.

6095 2) USEPA or the Agency may, on a case-by-case basis, request any
6096 information, like records it deems necessary to determine whether a
6097 person complies with section 1417 of the Safe Drinking Water Act (42
6098 USC 300g-6); subpart B of 40 CFR 143, incorporated by reference in
6099 Section 611.102; and this Section. The manufacturer or importer must
6100 provide requested information to USEPA or the Agency at a time and in a
6101 format as reasonably requested by USEPA or the Agency.
6102

6103 BOARD NOTE: Subsection (k) derives from 40 CFR 143.20.
6104

6105 a) ~~In General. Prohibition. Any pipe, any pipe or plumbing fitting or fixture, any~~
6106 ~~solder or any flux must be lead free, as defined by subsection (b), if it is used in~~
6107 ~~the installation or repair of either of the following:~~
6108

6109 1) ~~Any PWS; or~~

6110 2) ~~Any plumbing in a residential or nonresidential facility providing water~~
6111 ~~for human consumption that is connected to a PWS. This subsection (a)~~
6112 ~~does not apply to leaded joints necessary for the repair of cast iron pipes.~~
6113

6114 b) ~~Definition of Lead Free~~
6115

6116 1) ~~For purposes of this Section, the term "lead free" means as follows:~~
6117

6118 A) ~~When used with respect to solders and flux, refers to solders and~~
6119 ~~flux containing not more than 0.2 percent lead; and~~
6120

6121 B) ~~When used with respect to pipes, pipe fittings, plumbing fittings,~~
6122 ~~and fixtures, refers to pipes and pipe, pipe fittings, plumbing~~
6123 ~~fittings, and fixtures containing not more than 0.25 percent lead.~~
6124

6125 2) ~~The weighted average lead content of a pipe, pipe fitting, plumbing fitting,~~
6126 ~~or fixture must be calculated by using the following formula: For each~~
6127 ~~wetted component, the percentage of lead in the component must be~~
6128 ~~multiplied by the ratio of the wetted surface area of that component to the~~
6129 ~~total wetted surface area of the entire product to arrive at the weighted~~
6130 ~~percentage of lead of the component. The weighted percentage of lead of~~
6131 ~~each wetted component must be added together, and the sum of these~~
6132 ~~weighted percentages will constitute the weighted average lead content of~~
6133 ~~the product. The lead content of the material used to produce wetted~~
6134 ~~components is used to determine compliance with subsection (b)(1)(B).~~
6135 ~~For lead content of materials that is provided as a range, the maximum~~
6136 ~~content of the range must be used.~~
6137

6138
 6139 BOARD NOTE: ~~Derived from 40 CFR 141.43(a) and (d), and section 1417 of SDWA, 42 USC~~
 6140 ~~300g-6(a)(1), (d), and (e). Congress changed the lead standards for fittings and fixtures in for the~~
 6141 ~~Reduction of Lead in Drinking Water Act, Pub. L. 111-380, section 2(a)(2) and (b), 124 Stat.~~
 6142 ~~4131 (Jan. 4, 2011). The Board incorporated the statutory changes into this Section. USEPA~~
 6143 ~~proposed rules in 2017 that would incorporate the revised statutory requirements into its rules for~~
 6144 ~~lead-free plumbing materials. 82 Fed. Reg. 4805 (Jan. 17, 2017). Recognizing the importance~~
 6145 ~~of certification in USEPA's proposed rule and the requirements of 35 Ill. Adm. Code 604.105(f),~~
 6146 ~~the Board notes that certification under ANSI/NSF 61 using the methods of ANSI/NSF 372 is a~~
 6147 ~~generally accepted method for demonstrating that plumbing materials are lead free as required by~~
 6148 ~~this Section.~~

6149 (Source: Amended at 47 Ill. Reg. _____, effective _____)

6150
 6151
 6152 **Section 611.130 Special Requirements for Certain Variances and Adjusted Standards**

6153
 6154 a) Relief from the Fluoride MCL

6155
 6156 1) ~~When~~ granting any variance or adjusted standard to a CWS supplier ~~that~~
 6157 ~~is a CWS~~ from the maximum contaminant level for fluoride ~~listed in~~
 6158 Section 611.301(b), the Board will require ~~the supplier to apply~~
 6159 ~~application of the best available technology (BAT) identified in~~
 6160 subsection (a)(4) ~~for that constituent~~ as a condition to the relief, unless the
 6161 supplier ~~demonstrates has demonstrated~~ through comprehensive
 6162 engineering assessments that ~~applying application of~~ BAT is not
 6163 technically appropriate and technically feasible for that supplier.

6164
 6165 2) ~~If the Board does not require the supplier to apply BAT, the~~ The Board will
 6166 require ~~specific conditions the following as a condition~~ for relief from the
 6167 fluoride MCL ~~where it does not require the application of BAT:~~

6168
 6169 A) ~~The That the~~ supplier ~~must~~ continue ~~investigating certain to~~
 6170 ~~investigate the following~~ methods as ~~an~~ alternative means of
 6171 significantly reducing the ~~level of~~ fluoride ~~level on, according to~~ a
 6172 definite schedule:

- 6173
 6174 i) ~~Modifying A modification of~~ lime softening;
- 6175
 6176 ii) Alum coagulation;
- 6177
 6178 iii) Electrodialysis;
- 6179
 6180 iv) Anion exchange resins;

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- v) ~~Well-field~~ Well-field management;
- vi) ~~Using~~ The use of alternative sources of raw water; and
- vii) Regionalization; and

B) ~~The~~ That the supplier must report results of its investigations that investigation to the Agency.

3) The Agency must petition the Board to reconsider or modify a variance or adjusted standard, under Subpart I of 35 Ill. Adm. Code 101, if the Agency ~~it~~ determines that an alternative method the supplier identified ~~by the supplier~~ under subsection (a)(2) is technically feasible and would result in a significant reduction in fluoride.

4) Two processes are BAT ~~Best available technology~~ for fluoride ~~reduction is as follows:~~

- A) Activated alumina absorption centrally applied; and
- B) Reverse osmosis centrally applied.

BOARD NOTE: This subsection derives ~~Subsection (a) derived~~ from 40 CFR 142.61.

b) Relief from an IOC, VOC, or SOC MCL

1) ~~A~~ In granting to a supplier that is a CWS or NTNCWS must first apply the appropriate BAT for the contaminant before the Board may grant any variance or adjusted standard from the maximum contaminant levels for any VOC or SOC, ~~listed~~ in Section 611.311(a) or (c), or ~~for any IOC, listed~~ in Section 611.301, the supplier must have first applied the best available technology (BAT) identified at Section 611.311(b) (VOCs and SOCs) or Section 611.301(e) (IOCs) for that constituent, unless the supplier demonstrates ~~has demonstrated~~ through comprehensive engineering assessments that applying ~~application of~~ BAT would achieve only a minimal and insignificant reduction in the contaminant ~~level of contaminant~~.

BOARD NOTE: USEPA lists BAT for each SOC and VOC at 40 CFR 142.62(a), for the purposes of variances and exemptions (adjusted standards). That list is identical to the list at 40 CFR 141.61(b), which

corresponds with Section 611.311(b).

2) The Board may require any of certain conditions in any~~the following as a condition for~~ relief from an MCL ~~listed~~ in Section 611.301 or 611.311:

A) ~~The That the~~ supplier must continue ~~investigating to investigate~~ alternative means for complying on of compliance according to a definite schedule; and

B) ~~The That the~~ supplier must report results of ~~its that~~ investigation to the Agency.

3) The Agency must petition the Board to reconsider or modify a variance or adjusted standard, under Subpart I of 35 Ill. Adm. Code 101; if the Agency ~~it~~ determines that an alternative method the supplier identified ~~by the supplier~~ under subsection (b)(2) is technically feasible.

BOARD NOTE: This subsection~~Subsection~~ (b) derives~~derived~~ from 40 CFR 142.62(a) through (e).

c) Conditions Requiring Use of Bottled Water, a Point-of-Use Treatment Device, or a Point-of-Entry Treatment Device. When~~in~~ granting any variance or adjusted standard from the MCLs~~maximum contaminant levels~~ for organic and inorganic chemicals or an adjusted standard from the treatment technique for lead and copper, the Board may impose certain conditions requiring the use of bottled water, a point-of-entry treatment device, or a point-of-use treatment device to avoid an unreasonable risk to human health, limited as ~~provided in~~ subsections (d) and (e) provide.

1) Relief from an MCL. When granting a variance or adjusted standard from an MCL in Section 611.301 or 611.311, ~~the~~ The Board may, ~~when granting any variance or adjusted standard from the MCL requirements of Sections 611.301 and 611.311,~~ impose a condition requiring that requires a supplier to use bottled water, a point-of-entry treatment device, a point-of-use treatment device, or other means to avoid an unreasonable risk to human health.

2) Relief from Corrosion Control Treatment. When granting an adjusted standard from the corrosion control treatment requirements for lead and copper under Sections 611.351 and 611.352, ~~the~~ The Board may, ~~when granting an adjusted standard from the corrosion control treatment requirements for lead and copper of Sections 611.351 and 611.352,~~ impose a condition requiring that requires a supplier to use bottled water, a

point-of-use treatment device, or other means, but not a point-of-entry treatment device, to avoid an unreasonable risk to human health.

- 3) Relief from Source Water Treatment or Replacing Service Lines Line Replacement. When granting an exemption from the source water treatment and lead service line replacement requirements under Section 611.353 or 611.354, the Board may, ~~when granting an exemption from the source water treatment and lead service line replacement requirements for lead and copper under Sections 611.353 or 611.354,~~ impose a condition requiring that requires a supplier to use a point-of-entry treatment device to avoid an unreasonable risk to human health.

BOARD NOTE: This subsection Subsection (c) derives derived from 40 CFR 142.62(f).

- d) Using ~~Use of~~ Bottled Water. A supplier proposing ~~Suppliers that propose~~ to use or using ~~use~~ bottled water as a condition for receiving a variance or an adjusted standard from ~~the~~ requirements in ~~of~~ Section 611.301 or ~~Section~~ 611.311 or an adjusted standard from ~~the~~ requirements in ~~of~~ Sections 611.351 through 611.354 must comply with ~~meet the requirements of~~ either subsections (d)(1), (d)(2), (d)(3), and (d)(6) or (d)(4), (d)(5), and (d)(6).

- 1) The supplier must develop a monitoring program for Board approval providing that provides reasonable assurances that the bottled water meets all MCLs in ~~of~~ Sections 611.301 and 611.311, and the supplier must describe ~~submit a description of~~ this program in ~~as part of~~ its petition. The description ~~proposed program~~ must demonstrate ~~describe~~ how the supplier will comply with each requirement of this subsection (d).
- 2) The supplier must monitor representative samples of the bottled water for all contaminants regulated ~~under~~ Sections 611.301 and 611.311 during the first three-month period that it supplies the bottled water to the public, then ~~and~~ annually after that ~~thereafter~~.
- 3) The supplier must annually provide the results of its ~~the~~ monitoring program ~~to~~ the Agency.
- 4) The supplier must receive a certification from the bottled water company as to each of the following:
- A) That the supplier provides bottled water supplied has been taken from an approved source of bottled water, as such is defined in Section 611.101 defines;

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- B) That the approved source of bottled water ~~monitors as has~~ conducted monitoring in accordance with 21 CFR 129.80(g)(1) through (g)(3) require; and
 - C) That the bottled water does not exceed any MCLs or quality limits ~~as set out~~ in 21 CFR 110, 129, and 165.110, ~~110, and 129~~.
- 5) The supplier must provide the certification ~~required by~~ subsection (d)(4) requires to the Agency during the first quarter after it begins supplying bottled water ~~then and~~ annually after that thereafter.
 - 6) The supplier must ~~provide assurance the provision of~~ sufficient quantities of bottled water to every affected person ~~supplied by~~ the supplier serves via door-to-door bottled water delivery.

BOARD NOTE: ~~This subsection~~ Subsection (d) ~~derives derived~~ from 40 CFR 142.62(g).

- e) Using Use of a Point-of-Entry Treatment Device. Before the Board grants any PWS a variance or adjusted standard from ~~an any~~ NPDWR, including that includes a condition requiring ~~the~~ use of a point-of-entry treatment device, the supplier must demonstrate certain facts to the Board ~~each of the following~~:
 - 1) That the supplier will operate and maintain the device;
 - 2) That the device protects human provides health ~~protection~~ equivalent to ~~that provided by~~ central treatment;
 - 3) That the supplier will maintain the microbiological safety of the water at all times;
 - 4) That the supplier has ~~established~~ standards for performance, conducted a rigorous engineering design review, and field tested the device;
 - 5) That ~~operating the operation~~ and maintaining maintenance of the device will account for any potential for increased concentrations of heterotrophic bacteria resulting ~~from using through the use of~~ activated carbon, by backwashing, post-contactor disinfection, and heterotrophic plate count monitoring;
 - 6) That buildings connected to the supplier's distribution system have sufficient devices properly installed, maintained, and monitored to ensure

~~protecting~~ assure that all consumers ~~are protected~~; and

- 7) That ~~using the use of~~ the device will not cause increased corrosion of ~~lead- and copper-bearing~~ ~~lead and copper bearing~~ materials ~~located~~ between the device and ~~the~~ tap that could increase contaminant levels at the tap.

BOARD NOTE: ~~This subsection~~ Subsection (e) ~~derives~~ ~~derived~~ from 40 CFR 142.62(h).

f) Relief from the Maximum Contaminant Levels for Radionuclides

- 1) Relief from the Maximum Contaminant Levels for Combined Radium-226 and Radium-228, Uranium, Gross Alpha Particle Activity (Excluding Radon and Uranium), and Beta Particle and Photon Radioactivity

A) ~~For relief equivalent to a federal section 1415 variance or section 1416 exemption,~~ Section 611.330(g) ~~lists sets forth~~ what USEPA ~~identifies~~ ~~has identified~~ as ~~the best available technology (BAT),~~ treatment techniques, or other means ~~available~~ for ~~complying~~ ~~achieving compliance~~ with the ~~MCLs~~ ~~maximum contaminant levels~~ for the radionuclides ~~listed~~ in Section 611.330(b), (c), (d), and (e), ~~for the purposes of issuing relief equivalent to a federal section 1415 variance or a section 1416 exemption.~~

B) ~~For relief equivalent to a federal section 1415 variance or section 1416 exemption for a small system, defined here as one serving 10,000 persons or fewer,~~ ~~In addition to the technologies listed in Section 611.330(g),~~ Section 611.330(h) ~~lists sets forth~~ what USEPA ~~identifies~~ ~~has identified~~ as ~~the~~ BAT, treatment techniques, or other means available for ~~complying~~ ~~achieving compliance~~ with the ~~MCLs~~ ~~maximum contaminant levels~~ for the radionuclides listed in Section 611.330(b), (c), (d), and (e), ~~in addition to the technologies in Section 611.330(g) for the purposes of issuing relief equivalent to a federal section 1415 small system variance or a section 1416 exemption to small drinking water systems, defined here as those serving 10,000 persons or fewer, as shown in the second table set forth at Section 611.330(h).~~

- 2) ~~As a condition for relief equivalent to a federal 1415 variance or section 1416 exemption, the~~ The Board will require a CWS supplier to install and use any treatment technology ~~identified~~ in Section 611.330(g); or ~~611.330(h) for a~~ ~~in the case of~~ small ~~system~~ ~~water systems~~ (those serving

6396 10,000 persons or fewer), ~~listed in Section 611.330(h), as a condition for~~
 6397 ~~granting relief equivalent to a federal section 1415 variance or a section~~
 6398 ~~1416 exemption~~, except as ~~provided in~~ subsection (f)(3) ~~provides~~
 6399 ~~otherwise~~. If ~~the supplier cannot meet the MCL~~, after ~~installing~~ the
 6400 ~~system's installation of the~~ treatment technology, the ~~supplier issystem~~
 6401 ~~cannot meet the MCL, that system will be~~ eligible for relief.

6402
 6403 3) If a CWS supplier ~~demonstrates by~~~~can demonstrate through~~
 6404 comprehensive engineering assessments, which may include pilot plant
 6405 studies, that the treatment technologies identified in this Section would
 6406 only achieve a de ~~minimis~~~~minimum~~ reduction in the contaminant level, the
 6407 Board may issue a schedule of compliance ~~requiring that requires~~ the
 6408 system ~~being granted relief equivalent to a federal section 1415 variance~~
 6409 ~~or a section 1416 exemption~~ to examine other treatment technologies as a
 6410 condition of obtaining ~~the relief equivalent to a federal section 1415~~
 6411 ~~variance or section 1416 exemption~~.

6412
 6413 4) If the Agency determines that a treatment technology identified under
 6414 subsection (f)(3) is technically feasible, ~~the Agency#~~ may request that the
 6415 Board require the supplier to install and use that treatment technology ~~on#~~
 6416 ~~connection with~~ a compliance schedule ~~issued~~ under Section 36 of the Act.
 6417 The ~~Agency must base its~~ Agency's determination ~~on the supplier's~~ ~~must be~~
 6418 ~~based upon~~ studies ~~by the system~~ and other relevant information.

6419
 6420 5) ~~To avoid unreasonable risk to human health, the~~ The Board may require a
 6421 CWS ~~supplier~~ to use bottled water, point-of-use devices, point-of-entry
 6422 devices, or other means as a condition of ~~granting~~ relief equivalent to a
 6423 federal section 1415 variance or a section 1416 exemption from ~~the~~
 6424 requirements ~~in~~ of Section 611.330, ~~to avoid an unreasonable risk to~~
 6425 ~~health~~.

6426
 6427 6) A CWS supplier ~~using that uses~~ bottled water as a condition ~~to for receiving~~
 6428 relief equivalent to a federal section 1415 variance or a section 1416
 6429 exemption from the requirements of Section 611.330 must ~~comply~~
 6430 ~~with meet the requirements specified in~~ subsection (d)(6) and either
 6431 subsections (d)(1) through (d)(3) or (d)(4) and (d)(5).

6432
 6433 7) A CWS supplier ~~using that uses~~ point-of-use or point-of-entry devices as a
 6434 condition ~~to for obtaining~~ relief equivalent to a federal section 1415
 6435 variance or a section 1416 exemption from the radionuclides NPDWRs
 6436 must meet the conditions in subsections (e)(1) through (e)(6).

6437
 6438 BOARD NOTE: ~~This subsection~~ Subsection (f) ~~derives~~ derived from 40 CFR

6439 142.65.

6440

6441 (Source: Amended at 47 Ill. Reg. _____, effective _____)

6442

6443 **Section 611.131 Relief Equivalent to SDWA Section 1415(e) Small System Variance**

6444

6445 This Section is ~~the intended as a~~ State equivalent of SDWA section 1415(e) ~~of the federal SDWA~~
 6446 (42 USC 300g-4(e)).

6447

6448 a) ~~A PWS serving fewer than 10,000 persons may obtain a variance~~ Variations may
 6449 ~~be obtained~~ from ~~the requirement to comply with~~ an MCL or treatment technique
 6450 ~~under to a PWS serving fewer than 10,000 persons in~~ this Section. The PWS
 6451 supplier must file a variance petition under Subpart B of 35 Ill. Adm. Code 104,
 6452 except as ~~modified or supplemented by~~ this Section provides otherwise.

6453

6454 b) The Board ~~may will~~ grant a small system variance to a PWS supplier serving
 6455 fewer than 3,300 or fewer persons. The Board ~~may will~~ grant a small system
 6456 variance to a PWS serving more than 3,300 persons but fewer than 10,000
 6457 persons subject to USEPA's with the approval ~~of the USEPA~~. In determining the
 6458 number of persons ~~served by~~ the PWS serves, the Board will include persons
 6459 ~~served by~~ consecutive systems serve. A small system variance ~~for granted to~~ a
 6460 PWS also applies to any consecutive system ~~served by it~~ serves.

6461

6462 c) Availability of a Variance

6463

6464 1) A small system variance is not available under this Section ~~from for~~ an
 6465 NPDWR for a microbial contaminant (including a bacterium, virus, or
 6466 other organism) or an indicator or treatment technique for a microbial
 6467 contaminant.

6468

6469 2) A small system variance under this Section is available from certain
 6470 ~~MCLs for compliance with a requirement specifying an MCL~~ or treatment
 6471 ~~technique~~ technique for a contaminant with respect to which the following
 6472 is true:

6473

6474 A) NPDWRs that USEPA adopted ~~An NPDWR was promulgated~~ on
 6475 or after January 1, 1986; and

6476

6477 B) NPDWRs for which The USEPA ~~publishes~~ has published a small
 6478 system variance technology under section 1412(b)(15) of ~~the~~
 6479 federal SDWA (42 USC 300g-1(b)(15)).

6480

6481 BOARD NOTE: Small system variances are not available ~~for PWSs~~ above at the

pre-1986 MCL even if USEPA subsequently revised the MCL. If the USEPA revises a pre-1986 MCL and makes it more stringent, ~~then~~ a variance ~~is~~would be available for that contaminant, but only up to the pre-1986 maximum contaminant level. See subpart B of 40 CFR 141 (1985) for the pre-1986 MCLs and treatment techniques. See "Variance Technology Findings for Contaminants Regulated Before 1996", USEPA, Office of Water, doc. no. EPA 815-R-98-003 (available online at nepis.epa.gov search "815R98003").

d) No small system variance ~~is effective~~will be in effect until after the last applicable event~~later of the following~~:

- 1) 90 days after the Board ~~grants~~proposes to grant the small system variance;
- 2) If USEPA objects to the Board is proposing to grant a small system variance ~~for~~ a PWS serving fewer than 3,300 persons ~~and the USEPA objects to the small system variance, after the date on which~~ the Board modifies~~makes~~ the variance as USEPA recommended ~~modifications~~ or responds in writing to each USEPA objection; or
- 3) If the Board ~~grants~~is proposing to grant a small system variance to a PWS serving a population of more than 3,300 ~~but~~and fewer than 10,000 persons, ~~after the date the~~ USEPA approves the small system variance.

e) As part of ~~its~~the showing of arbitrary or unreasonable hardship, the PWS must prove and document certain information~~the following~~ to the Board:

- 1) That the PWS is eligible for a small system variance under subsection (c);
- 2) That the PWS cannot afford pursue specific alternatives to comply with the NPDWR for which it seeks a small system variance ~~is sought, including by the following~~:
 - A) Treatment;
 - B) Alternative sources of water supply;
 - C) Restructuring or consolidation changes, including ownership change or physical consolidation with another PWS; or
 - D) Obtaining financial assistance under section 1452 of the federal SDWA or any other federal or State program;
- 3) That the PWS meets the source water quality requirements for installing

6525 the small system variance technology developed under guidance [that](#)
6526 [USEPA](#) published under section 1412(b)(15) of ~~the federal~~-SDWA (42
6527 USC 300g-1(b)(15));

6528
6529 [BOARD NOTE: See 71 Fed. Reg. 10671 \(Mar. 2, 2006\) \("Small](#)
6530 [Drinking Water Systems Variances – Revision of Existing National-Level](#)
6531 [Affordability Methodology and Methodology to Identify Variance](#)
6532 [Technologies That Are Protective of Public Health"\)](#).

- 6533
- 6534 4) That the PWS is financially and technically [able to install,](#)
6535 ~~operated, capable of installing, operating,~~ and [maintain](#)~~maintaining~~ the
6536 applicable small system variance technology; and
- 6537
- 6538 5) That the terms and conditions of the small system variance ensure
6539 adequate protection of human health, considering ~~two factors~~[the](#)
6540 ~~following~~:
- 6541
- 6542 A) The quality of the source water for the PWS; and
- 6543
- 6544 B) Removal efficiencies and expected useful life of the small system
6545 variance technology.
- 6546
- 6547 f) Terms and Conditions
- 6548
- 6549 1) The Board will set the terms and conditions ~~for~~[of](#) a small system variance
6550 ~~issued~~ under this Section and ~~will~~ include [specific minimum,](#) ~~at a~~
6551 ~~minimum, the following~~ requirements:
- 6552
- 6553 A) [The supplier must properly and effectively install, operate,](#) ~~Proper~~
6554 ~~and effective installation, operation,~~ and [maintain](#)~~maintenance of~~
6555 the applicable small system variance technology [that USEPA](#)
6556 [indicated](#) in ~~published~~[accordance with](#) guidance ~~published by the~~
6557 ~~USEPA,~~ taking into consideration any relevant source water
6558 characteristics and any other site-specific conditions that may
6559 affect proper and effective operation and maintenance of the
6560 technology;
- 6561
- 6562 B) [The supplier must monitor](#)~~Monitoring requirements~~ for the
6563 contaminant ~~from~~[for](#) which [the Board grants the](#) small system
6564 variance ~~is sought~~; and
- 6565
- 6566 C) Any other terms or conditions [the Board determines](#)~~that~~ are
6567 necessary to [adequately protect human](#)~~ensure adequate protection~~

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~~of public~~ health, which may include certain requirements~~the following:~~

- i) Public education requirements; and
- ii) Source water protection requirements.

2) The Board will establish a schedule for the PWS to comply with the terms and conditions of the small system variance including certain minimum~~that will include, at a minimum, the following~~ requirements:

- A) Increments of progress, such as milestone dates for the PWS to apply for financial assistance and begin capital improvements;
- B) Quarterly reporting to the Agency ~~how~~of the PWS complies~~PWSs compliance~~ with the terms and conditions of the small system variance;
- C) A schedule~~Schedule~~ for the Agency~~Board~~ to review the small system variance; and

BOARD NOTE: Corresponding 40 CFR 142.307(d) provides that the states must review small system variances no less frequently than every five years. ~~Section 36 of the Act provides that five years is the maximum term of a variance.~~

D) Compliance with the terms and conditions of the small system variance as soon as practicable, but not later than three years after the date the Board granted~~on which the small system variance is granted~~. The Board may allow up to two additional years upon determining~~if the Board determines~~ that additional time is necessary for the PWS to accomplish a specific objective~~to the following:~~

- i) To complete~~Complete~~ necessary capital improvements to comply with the small system variance technology, secure an alternative source of water, or restructure or consolidate; or
- ii) To obtain~~Obtain~~ financial assistance ~~provided~~ under section 1452 of ~~the~~-SDWA (42 USC 300j-12) or any other federal or State program.

- 6611 g) The Board will provide notice and opportunity for a public hearing, as ~~provided in~~
6612 Subpart B of 35 Ill. Adm. Code 104 provides, except as ~~modified or supplemented~~
6613 ~~by~~ this Section provides otherwise.
6614
- 6615 1) At least 30 days before the public hearing ~~onto discuss~~ the proposed small
6616 system variance, the PWS must provide notice to all persons ~~served by~~ the
6617 PWS serves. For billed customers, this notice must include the information
6618 listed in subsection (g)(2). For other persons ~~regularly served by~~ the PWS
6619 regularly serves, the notice must provide sufficient information to alert
6620 readers to the proposed variance and direct them to where to ~~obtain~~receive
6621 additional information, ~~and must be as provided in subsection (g)(1)(B)~~.
6622 The PWS must provide the notice ~~Notice must be~~ by specific ~~the following~~
6623 means:
6624
- 6625 A) Direct mail or other home delivery to billed customers or other
6626 service connections; and
6627
- 6628 B) Any other method reasonably calculated to notify, ~~in a brief and~~
6629 ~~concise manner~~, other persons regularly served by the PWS in a
6630 brief and concise manner. ~~The other method~~ Such methods may
6631 include publication in a local newspaper, posting in public places,
6632 or delivery to community organizations.
6633
- 6634 2) The notice in subsection (g)(1)(A) must include ~~certain, at a~~ minimum
6635 information, the following:
6636
- 6637 A) Identification of the contaminants for which the PWS seeks a small
6638 system variance ~~is sought~~;
6639
- 6640 B) A brief statement of the health effects associated with the
6641 contaminants for which the PWS seeks a small system variance ~~is~~
6642 sought, using language in Appendix H;
6643
- 6644 C) The address and telephone number ~~at which~~ interested persons
6645 may use to obtain further information concerning the contaminant
6646 and the small system variance;
6647
- 6648 D) A brief summary, ~~in easily understandable terms~~, of the terms and
6649 conditions of the small system variance in easily understandable
6650 terms;
6651
- 6652 E) A description of the consumer petition process under subsection
6653 (h) and information on contacting the Agency and USEPA Region

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5Regional Office;

- F) A brief statement announcing the public meeting ~~required under~~ subsection (g)(3) requires, including a statement of the purpose of the meeting, information regarding the time and location for the meeting, and the address and telephone number ~~at which~~ interested persons may use to obtain further information concerning the meeting; and
 - G) In communities with a large proportion of non-English-speaking residents, as determined by the Agency Board, information in the appropriate language regarding the content and importance of the notice.
- 3) The Board will provide for at least one public hearing on the small system variance. The PWS must provide notice in the manner required under subsection (g)(1) at least 30 days prior to the public hearing.
 - 4) When granting a small system~~Prior to promulgating the final~~ variance, the Board will issue a written opinion and order responding~~respond in writing~~ to all significant public comments received on relating to the small system variance and stating the Board's reasons for granting the variance. The Board will make the variance petition, hearings transcripts, public comments received, and all~~Response to public comment and any~~ other documents of record concerning the~~documentation supporting the issuance of a~~ variance will be made available to the public throughout the variance proceeding and after adopting the variance~~final promulgation~~.
 - h) Any person ~~served by the~~ PWS serves may petition ~~the~~ USEPA to object to ~~the granting of a small system variance within 30 days after the Board grants the proposes to grant a small system~~ variance ~~for the PWS~~.
 - i) The Agency must promptly send ~~to the~~ USEPA the Board's opinion and order~~Opinion and Order of the Board~~ granting the proposed small system variance. The Board will make ~~the~~ recommended modifications, respond in writing to each objection, or reconsider~~withdraw the proposal to grant~~ the small system variance if USEPA notifies the Board of a finding under section 1415(e)(8), (e)(9), or (e)(10) of ~~the~~ SDWA (42 USC 300g-4(e)(8), (e)(9), or (e)(10)).
 - j) ~~In addition to the requirements of this Section, the provisions of~~ Section 611.111, 611.112, or 611.130 may apply to relief granted under this Section.

6697 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 142, Subpart K.

6698
6699 (Source: Amended at 47 Ill. Reg. _____, effective _____)
6700

6701 **Section 611.160 Composite Correction Program**
6702

6703 a) The Agency may ~~issue a SEP requiring~~require in writing that a PWS to conduct a
6704 Composite Correction Program (CCP). The CCP must consist of two elements: a
6705 Comprehensive Performance Evaluation (CPE) and a Comprehensive Technical
6706 Assistance (CTA).
6707

6708 1) A CPE is a thorough review and analysis of a plant's performance-based
6709 capabilities and associated administrative, operation, and maintenance
6710 practices. ~~The CPE#~~ must identify factors that may ~~be~~ adversely affect
6711 ~~the~~impacting a plant's ~~ability~~capability to ~~comply~~achieve compliance and
6712 emphasize approaches ~~the PWS~~that can ~~implement~~be implemented
6713 without significant capital improvements.
6714

6715 2) For purposes of compliance with Subparts R and X, the
6716 ~~CPE~~comprehensive performance evaluation must ~~minimally include~~
6717 ~~specific~~consist of at least the following components: ~~the CPE must~~
6718 ~~assess~~Assessment of plant performance; ~~evaluate~~evaluation of major unit
6719 processes; ~~identify~~identification and ~~prioritize~~performance-
6720 ~~limiting~~prioritization of performance limiting factors; ~~assess~~assessment of
6721 the applicability of comprehensive technical assistance; and ~~how the PWS~~
6722 ~~prepared~~preparation of the CPE report.
6723

6724 BOARD NOTE: ~~This subsection~~Subsection (a)(2) ~~derives~~is derived from
6725 the third sentence of the definition of "comprehensive performance
6726 evaluation" in 40 CFR 141.2-(2006).
6727

6728 3) A CTA is the ~~performance-improvement~~performance improvement phase
6729 ~~the PWS implements~~that is implemented if the CPE results indicate
6730 ~~potential for~~improved performance ~~potential~~. During the CTA phase, the
6731 PWS must identify and systematically address plant-specific factors. The
6732 CTA is a combination of utilizing CPE results as a basis for followup,
6733 implementing process control priority-setting techniques, and maintaining
6734 long-term involvement to systematically train staff and administrators.
6735

6736 b) A PWS must implement any followup recommendations ~~the Agency makes~~made
6737 in writing ~~as by the Agency that~~ result ~~as part~~of the CCP.
6738

6739 c) A PWS may appeal to the Board, ~~under~~pursuant to Section 40 of the Act, any

6740 Agency requirement that it conduct a CCP or any followup recommendations the
6741 Agency makes made in writing as by the Agency that result as part of the CCP,
6742 except when a CPE is required under Section 611.745(b)(4).
6743

6744 BOARD NOTE: This Section derives Derived from 40 CFR 142.16(g) ~~(2016)~~.
6745

6746 (Source: Amended at 47 Ill. Reg. _____, effective _____)
6747

6748 **Section 611.161 Case-by-Case Reduced Subpart Y Monitoring for Wholesale and**
6749 **Consecutive Systems**

6750 The Agency may issue, by a SEP reducing, reduce the monitoring under requirements of Subpart
6751 Y as they apply to a wholesale system or a consecutive system, otherwise than as by use of the
6752 provisions of Section 611.500 provides, subject to the following limitations:
6753

- 6754
- 6755 a) The Agency must consider the certain following system-specific factors knowledge
6756 in making its determination:
- 6757
- 6758 1) The amount and percentage of finished water the PWS provides ~~provided~~;
- 6759
- 6760 2) Whether finished the PWS provides water ~~is provided~~ seasonally,
6761 intermittently, or full-time;
- 6762
- 6763 3) Improved DBP occurrence information based on IDSE results;
- 6764
- 6765 4) Significant changes in the supplier's raw water quality, treatment, or
6766 distribution system after completing completion of the IDSE; and
6767
- 6768 5) Other Such other considerations bearing as would bear on DBP the
6769 occurrence ~~of DBP~~ in the supplier's distribution system and the ability of
6770 the reduced monitoring to detect DBP in that the supplier's distribution
6771 system.
6772
- 6773 b) Any reduced monitoring the Agency allows ~~allowed~~ under this Section must
6774 require that the PWS maintain a minimum of one compliance monitoring location
6775 for each supplier.
6776
- 6777 c) The supplier must report any changes in its raw water quality, treatment, or
6778 distribution system or any other factors arising that come to its attention after the
6779 Agency issues the issuance of a SEP that allows reduced monitoring under this
6780 Section that would bear on ~~the~~ occurrence of DBP in the supplier's distribution
6781 system and the supplier's ability ~~of the reduced monitoring~~ to detect DBP in its the
6782 supplier's distribution system under the reduced monitoring.

- d) ~~The Agency may allow the reduced monitoring provided by this Section only after USEPA has approved the State program revisions involving Subparts W and Y.~~

BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 142.16(m) and the preamble discussion at 71 Fed. Reg. 388, 430-31 (Jan. 4, 2006). USEPA stated that ~~it will allow~~ the State ~~may to elect to~~ authorize reduced monitoring ~~under according to~~ a ~~State-devised~~ procedure ~~devised by the State~~. The Board borrowed from ~~USEPA's~~the special primacy requirements ~~for its subpart V: State 2 Disinfection Byproducts Requirements~~applicable to the ~~Subpart Y provisions~~ and the accompanying preamble discussion to derive the procedure ~~set forth~~ in this Section.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART B: FILTRATION AND DISINFECTION

Section 611.201 Requiring a Demonstration

The Agency must ~~issue a SEP notifying and notify each~~ supplier ~~when the Agency requires the supplier to make in writing of the date on which any~~ demonstrations ~~under this Subpart B pursuant to the Section are required~~. The Agency must require demonstrations ~~when at times that meet the~~ USEPA ~~requires the requirements for that~~ type of demonstration, allowing sufficient time for the supplier to collect the necessary information.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.202 Procedures for Agency Determinations (Repealed)

~~The determinations in this Subpart B are by a SEP.~~

(Source: Repealed at 47 Ill. Reg. _____, effective _____)

Section 611.211 Filtration Required

The Agency must ~~require a supplier using a surface water source or groundwater under the direct influence of surface water to filter the water it provides to the public. determine that filtration is required unless the PWS meets the following criteria:~~

- a) ~~Source Water Quality Criteria~~
 - 1) ~~Coliforms, see Section 611.231(a)~~

- 6826 2) ~~Turbidity, see Section 611.231(b)~~
- 6827
- 6828 b) ~~Site-Specific Criteria~~
- 6829
- 6830 1) ~~Disinfection, see Section 611.241(b)~~
- 6831
- 6832 2) ~~Watershed control, see Section 611.232(b)~~
- 6833
- 6834 3) ~~On-site inspection, see Section 611.232(e)~~
- 6835
- 6836 4) ~~Absence of waterborne disease outbreaks, see Section 611.232(d)~~
- 6837
- 6838 5) ~~Total coliform MCL, see Sections 611.232(e) and 611.325~~
- 6839

6840 BOARD NOTE: ~~This Section originally derived~~Derived from 40 CFR 141.71 and ~~from~~the
 6841 preamble discussion at 54 Fed. Reg. 27505 (June 29, 1989). The Board replaced the original rule
 6842 with the present requirement that a supplier apply filtration treatment because no supplier using a
 6843 surface water source or groundwater under the direct influence of surface water operates in
 6844 Illinois. This rule avoids a gap in the Illinois rules.

6845 (Source: Amended at 47 Ill. Reg. _____, effective _____)

6846

6847

6848 **Section 611.212 Groundwater under Direct Influence of Surface Water**

6849

6850 The Agency ~~must~~shall, ~~under Section 611.201,~~ require ~~a CWS supplier~~all CWSs to demonstrate
 6851 under Section 611.201 whether ~~it uses~~they are using "groundwater under the direct influence of
 6852 surface water". Based on the information the supplier provides, theThe Agency must determine
 6853 with information provided by the supplier whether a PWS uses "groundwater under the direct
 6854 influence of surface water"~~on an individual basis~~. The Agency must base this determination on
 6855 specific factors~~determine that a groundwater source is under the direct influence of surface water~~
 6856 based upon the following:

- 6857
- 6858 a) Physical Characteristics of the Source. Whether the source is obviously a surface
- 6859 water source, such as a lake or stream. Other sources ~~possibly~~that may be subject
- 6860 to influence from surface waters include: springs, infiltration galleries, wells, or
- 6861 other collectors in subsurface aquifers.
- 6862
- 6863 b) Well Construction Characteristics and Geology with Field Evaluation
- 6864
- 6865 1) The Agency may use the wellhead protection program's requirements,
- 6866 which include delineation of wellhead protection areas, assessment of
- 6867 sources of contamination, and implementation of management control
- 6868 systems, to determine if the wellhead is under the direct influence of

- 6869 surface water.
 6870
 6871 2) ~~A well~~Wells less than or equal to 50 feet ~~deep is in depth are~~ likely ~~to be~~
 6872 under the direct influence of surface water.
 6873
 6874 3) ~~A well more~~Wells ~~greater~~ than 50 feet ~~deep is in depth are~~ likely ~~to be~~
 6875 under the direct influence of surface water, unless it includes specific
 6876 features they include the following:
 6877
 6878 A) A surface sanitary seal using bentonite clay, concrete, or similar
 6879 material;
 6880
 6881 B) A well casing ~~penetrating that penetrates~~ consolidated (slowly
 6882 permeable) material; and
 6883
 6884 C) A well casing that is only perforated or screened below
 6885 consolidated (slowly permeable) material.
 6886
 6887 4) A source ~~that is~~ less than 200 feet from any surface water is likely ~~to be~~
 6888 under the direct influence of surface water.
 6889
 6890 c) Any structural modifications to prevent the direct influence of surface water and
 6891 eliminate the potential for Giardia lamblia cyst contamination.
 6892
 6893 d) Source Water Quality Records. Specific factors indicate~~The following are~~
 6894 indicative that a source is under the direct influence of surface water:
 6895
 6896 1) A record of total coliform or fecal coliform contamination in untreated
 6897 samples collected over the past three years;
 6898
 6899 2) A history of turbidity problems associated with the source; or
 6900
 6901 3) A history of known or suspected outbreaks of Giardia lamblia,
 6902 Cryptosporidium, or other pathogenic organisms associated with surface
 6903 water ~~attributable that has been attributed to~~ the~~that~~ source.
 6904
 6905 e) Significant and relatively rapid shifts in water characteristics, such as turbidity,
 6906 temperature, conductivity, or pH.
 6907
 6908 1) A variation in turbidity of 0.5 NTU or more over one year is indicative of
 6909 surface influence.
 6910
 6911 2) A variation in temperature of nine Fahrenheit degrees or more over one

year is indicative of surface influence.

- f) Significant and relatively rapid shifts in water characteristics, such as turbidity, temperature, conductivity, or pH, ~~that closely correlating with~~ correlate to climatological or surface water conditions ~~indicate~~ are indicative of surface water influence.
 - 1) Evidence of particulate matter associated with the surface water; or
 - 2) Turbidity or temperature data that correlates ~~with~~ to that of a nearby surface water source.
- g) Particulate Analysis. Significant occurrence of insects or other macroorganisms, algae, or ~~large-diameter~~ large diameter pathogens, such as Giardia lamblia, ~~indicates~~ is indicative of surface influence.
 - 1) ~~"Large-diameter pathogens~~ Large diameter " ~~particulates~~ are those over seven micrometers.
 - 2) ~~The supplier must measure particulates~~ Particulates must be measured as ~~specified in~~ the Guidance Manual for Filtration and Disinfection (91), incorporated by reference in Section 611.102, specifies.
- h) The potential for contamination by small-diameter pathogens, such as bacteria or viruses, does not alone render the source "under the direct influence of surface water".

BOARD NOTE: ~~This Section derives~~ Derived from the definition of "groundwater under the direct influence of surface water" in 40 CFR 141.2; from the Preamble at 54 Fed. Reg. 27489 (June 29, 1989); and from the USEPA Guidance Manual for Filtration and Disinfection (91).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.213 No Method of HPC Analysis

~~This Section is used in~~ Sections 611.241(d)(2), 611.242(c)(2), 611.261(b)(8)(G), 611.262(b)(3)(G), 611.532(f)(2), and 611.533(c)(2) rely on this Section. The Agency must determine that a system has no means for having a sample analyzed for HPC ~~if the Agency determines that such action is warranted~~, based on specific ~~the following~~ site-specific conditions:

- a) There is no certified laboratory that can analyze the sample within the time and temperatures ~~specified in~~ the Board Note appended to Section 611.531(a)(2)(A) specifies;

- 6955
 6956 b) The supplier ~~provides~~~~is providing~~ adequate disinfection in the distribution system,
 6957 considering ~~certain factors~~~~the following~~:
 6958
 6959 1) Other measurements ~~showing that~~~~show~~ the presence of RDC in the
 6960 distribution system;
 6961
 6962 2) The distribution system size ~~of the distribution system~~; and
 6963
 6964 3) The adequacy of the supplier's cross connection control program; and
 6965
 6966 c) The PWS cannot maintain an RDC in ~~its~~~~the~~ distribution system.
 6967

6968 BOARD NOTE: ~~This Section derives~~~~Derived~~ from 40 CFR 141.72(a)(4)(ii) ~~(2016)~~.
 6969

6970 (Source: Amended at 47 Ill. Reg. _____, effective _____)
 6971

6972 **Section 611.220 General Requirements**
 6973

- 6974 a) ~~This~~~~The requirements of this~~ Subpart B ~~constitutes~~~~constitute~~ NPDWRs. This
 6975 Subpart B establishes criteria ~~for under which~~ filtration ~~is required~~ as a treatment
 6976 technique for PWSs ~~using~~~~supplied by~~ a surface water source and PWSs
 6977 supplied by a groundwater source under the direct influence of surface water.
 6978 ~~This Subpart B also establishes~~~~In addition, these regulations establish~~ treatment
 6979 ~~technique~~~~technique requirements~~ in lieu of MCLs for ~~specific~~~~the following~~
 6980 contaminants: Giardia lamblia, viruses, HPC bacteria, Legionella, and turbidity.
 6981 ~~Each~~ supplier ~~using~~~~with~~ a surface water source or a groundwater source under
 6982 the direct influence of surface water must ~~treat~~~~provide treatment of~~ that source
 6983 water ~~and comply that complies~~ with these treatment ~~technique~~~~technique~~
 6984 ~~requirements~~. The treatment ~~techniques~~ ~~comprise~~~~technique requirements consist~~
 6985 ~~of~~ installing and properly operating water treatment processes that reliably
 6986 achieve ~~specific objectives~~~~the following~~:
 6987
 6988 1) At least 99.9 percent (3-log) removal or inactivation of Giardia lamblia
 6989 cysts between a point where the raw water is not subject to
 6990 recontamination by surface water runoff and a ~~point~~ downstream point
 6991 before or at the first customer; and
 6992
 6993 2) At least 99.99 percent (4-log) removal or inactivation of viruses between a
 6994 point where the raw water is not subject to recontamination by surface
 6995 water runoff and a ~~point~~ downstream point before or at the first customer.
 6996
 6997 b) A supplier using a surface water source or a groundwater source under the direct

influence of surface water complying with Section 611.250 (filtration) and Section 611.241 (disinfection) complies~~is considered to be in compliance~~ with the requirements of subsection (a), if either of the following is true:

1) ~~The supplier meets the requirements for avoiding filtration in Sections 611.230 through 611.232 and the disinfection requirements in Section 611.241; or~~

2) ~~The supplier meets the filtration requirements in Section 611.250 and the disinfection requirements in Section 611.242.~~

c) ~~Each~~ supplier using a surface water source or ~~a~~ groundwater source under the direct influence of surface water must have a certified operator under 35 Ill. Adm. Code 603.103 and the Public Water Supply Operations Act [415 ILCS 45].

d) Additional Requirements for PWSs Serving 10,000 or More Persons. In addition to ~~complying with requirements in~~ this Subpart B, a PWSPWSs serving 10,000 or more persons must also comply with ~~the requirements in~~ Subpart R.

e) Additional Requirements for Systems Serving Fewer Than 10,000 People. In addition to ~~complying with requirements in~~ this Subpart B, a suppliersystems serving fewer than 10,000 people must also comply with ~~the requirements in~~ Subpart X.

BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.70. The Public Water Supply Operations Act applies only to CWSs, which ~~are regulated by~~ the Agency regulates. It does not apply to non-CWSs, which ~~are regulated by~~ Public Health regulates. Public Health has its own requirements for personnel operating water supplies that it regulates, e.g., 77 Ill. Adm. Code 900.40(e). The Board removed provisions for unfiltered system suppliers. A supplier in Illinois using a surface water source or groundwater under the direct influence of surface water must apply filtration treatment and disinfection to water it provides to the public.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.230 Filtration Effective Dates (Repealed)

a) ~~A supplier that uses a surface water source must meet all of the conditions of Section 611.231 and 611.232, unless the Agency has determined that filtration is required.~~

b) ~~A supplier that uses a groundwater source under the direct influence of surface water must meet all of the conditions of Section 611.231 and 611.232, and is~~

7041 subject to Section 611.233, beginning 18 months after the Agency determines that
7042 it is under the direct influence of surface water, unless the Agency has determined
7043 that filtration is required.
7044

7045 e) This subsection (e) corresponds with the third sentence in the preamble to 40 CFR
7046 141.71, which pertains exclusively to implementation of the Surface Water
7047 Treatment rule. This statement maintains structural consistency with the federal
7048 rules.
7049

7050 d) Within 18 months after the failure of a system using surface water or a
7051 groundwater source under the direct influence of surface water to meet any one of
7052 the requirements of Sections 611.231 and 611.232, the system must have
7053 installed filtration and meet the criteria for filtered systems specified in Sections
7054 611.242 and 611.250.
7055

7056 BOARD NOTE: Derived from 40 CFR 141.71 preamble (2016).
7057

7058 (Source: Repealed at 47 Ill. Reg. _____, effective _____)
7059

7060 **Section 611.231 Source Water LimitationQuality Conditions**
7061

7062 No CWS may use recycled sewage treatment plant effluent on a routine basis. The Agency must
7063 consider the following source water quality conditions in determining whether to require
7064 filtration under Section 611.211:
7065

7066 a) The fecal coliform concentration must be equal to or less than 20/100 ml, or the
7067 total coliform concentration must be equal to or less than 100/100 ml (measured
7068 as specified in Section 611.531(a) or (b) and 611.532(a)) in representative
7069 samples of the source water immediately prior to the first or only point of
7070 disinfectant application in at least 90 percent of the measurements made for the 6
7071 previous months that the system served water to the public on an ongoing basis.
7072 If a system measures both fecal and total coliforms, the fecal coliform criterion,
7073 but not the total coliform criterion, in this subsection, must be met.
7074

7075 b) The turbidity level cannot exceed 5 NTU (measured as specified in Section
7076 611.531(a) and 611.532(b) in representative samples of the source water
7077 immediately prior to the first or only point of disinfectant application unless the
7078 following are true:
7079

7080 1) The Agency determines that any such event was caused by circumstances
7081 that were unusual and unpredictable; and
7082

7083 2) As a result of any such event there have not been more than two events in

7084 ~~the past 12 months the system served water to the public, or more than~~
7085 ~~five events in the past 120 months the system served water to the public,~~
7086 ~~in which the turbidity level exceeded 5 NTU. An "event" is a series of~~
7087 ~~consecutive days during which at least one turbidity measurement each~~
7088 ~~day exceeds 5 NTU.~~

7089
7090 BOARD NOTE: ~~Derived from 40 CFR 141.71(a) (2003).~~

- 7091
7092 e) ~~Use of recycled sewage treatment plant effluent by a CWS on a routine basis must~~
7093 ~~not be permitted.~~

7094
7095 BOARD NOTE: This is an additional State requirement.

7096
7097 (Source: Amended at 47 Ill. Reg. _____, effective _____)

7098
7099 **Section 611.232 Site-Specific Conditions (Repealed)**

7100
7101 ~~The Agency must consider the following site specific criteria in determining whether to require~~
7102 ~~filtration under Section 611.211:~~

7103
7104 a) **Disinfection**

- 7105
7106 1) ~~The supplier must meet the requirements of Section 611.241(a) at least 11~~
7107 ~~of the 12 previous months that the system served water to the public, on an~~
7108 ~~ongoing basis, unless the system fails to meet the requirements during two~~
7109 ~~of the 12 previous months that the system served water to the public, and~~
7110 ~~the Agency determines that at least one of these failures was caused by~~
7111 ~~circumstances that were unusual and unpredictable.~~

- 7112
7113 2) ~~The supplier must meet the following requirements at the times specified~~
7114 ~~for each:~~

7115
7116 A) ~~The requirements of Section 611.241(b)(1) at all times the system~~
7117 ~~serves water to the public; and~~

7118
7119 B) ~~The requirements of Section 611.241(b)(2) at all times the system~~
7120 ~~serves water to the public, unless the Agency determines that any~~
7121 ~~such failure was caused by circumstances that were unusual and~~
7122 ~~unpredictable.~~

- 7123
7124 3) ~~The supplier must meet the requirements of Section 611.241(c) at all times~~
7125 ~~the system serves water to the public, unless the Agency determines that~~
7126 ~~any such failure was caused by circumstances that were unusual and~~

7127 ~~unpredictable.~~

7128
7129 4) ~~The supplier must meet the requirements of Section 611.241(d) on an~~
7130 ~~ongoing basis, unless the Agency determines that failure to meet these~~
7131 ~~requirements was not caused by a deficiency in treatment of the source~~
7132 ~~water.~~

7133
7134 b) ~~Watershed Control Program. The supplier must maintain a watershed control~~
7135 ~~program that minimizes the potential for contamination by Giardia lamblia cysts~~
7136 ~~and viruses in the source water.~~

7137
7138 1) ~~The Agency must determine whether the watershed control program is~~
7139 ~~adequate to meet this goal. The Agency must determine the adequacy of a~~
7140 ~~watershed control program based on the following:~~

7141
7142 A) ~~The comprehensiveness of the watershed review;~~

7143
7144 B) ~~The effectiveness of the supplier's program to monitor and control~~
7145 ~~detrimental activities occurring in the watershed; and~~

7146
7147 C) ~~The extent to which the water supplier has maximized land~~
7148 ~~ownership or controlled the land use within the watershed. At a~~
7149 ~~minimum, the watershed control program must do the following:~~

7150
7151 i) ~~Characterize the watershed hydrology and land ownership;~~

7152
7153 ii) ~~Identify watershed characteristics and activities that may~~
7154 ~~have an adverse effect on source water quality; and~~

7155
7156 iii) ~~Monitor the occurrence of activities that may have an~~
7157 ~~adverse effect on source water quality.~~

7158
7159 2) ~~The supplier must demonstrate through ownership or written agreements~~
7160 ~~with landowners within the watershed that it can control all human~~
7161 ~~activities that may have an adverse impact on the microbiological quality~~
7162 ~~of the source water. The supplier must submit an annual report to the~~
7163 ~~Agency that identifies any special concerns about the watershed and how~~
7164 ~~they are being handled; describes activities in the watershed that affect~~
7165 ~~water quality; and projects what adverse activities are expected to occur in~~
7166 ~~the future and describes how the supplier expects to address them. For~~
7167 ~~systems using a groundwater source under the direct influence of surface~~
7168 ~~water, an approved wellhead protection program may be used, if~~
7169 ~~appropriate, to meet these requirements.~~

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- e) ~~On-Site Inspection. The supplier must be subject to an annual on-site inspection to assess the watershed control program and disinfection treatment process. The Agency must conduct the inspection. A report of the on-site inspection summarizing all findings must be prepared every year. The on-site inspection must demonstrate that the watershed control program and disinfection treatment process are adequately designed and maintained. The on-site inspection must include the following:~~
 - 1) ~~A review of the effectiveness of the watershed control program;~~
 - 2) ~~A review of the physical condition of the source intake and how well it is protected;~~
 - 3) ~~A review of the supplier's equipment maintenance program to ensure there is low probability for failure of the disinfection process;~~
 - 4) ~~An inspection of the disinfection equipment for physical deterioration;~~
 - 5) ~~A review of operating procedures;~~
 - 6) ~~A review of data records to ensure that all required tests are being conducted and recorded and disinfection is effectively practiced; and~~
 - 7) ~~Identification of any improvements that are needed in the equipment, system maintenance, and operation or data collection.~~

- d) ~~Absence of Waterborne Disease Outbreaks. The PWS must not have been identified as a source of a waterborne disease outbreak, or if it has been so identified, the system must have been modified sufficiently to prevent another such occurrence.~~

- e) ~~Total Coliform MCL. The supplier must comply with the MCL for total coliforms in Section 611.325(a) and (b) and the MCL for E. coli in Section 611.325(c) at least 11 months of the 12 previous months that the system served water to the public, on an ongoing basis, unless the Agency determines that failure to meet this requirement was not caused by a deficiency in treatment of the source water.~~

- f) ~~TTHM. The supplier must comply with the requirements for total trihalomethanes, haloacetic acids (five), bromate, chlorite, chlorine, chloramines, and chlorine dioxide in Subpart I.~~

7213 ~~BOARD NOTE: Derived from 40 CFR 141.71(b).~~

7214
7215 (Source: Repealed at 47 Ill. Reg. _____, effective _____)

7216
7217 **Section 611.233 Treatment Technique Violations**

7218
7219 A supplier violates a treatment technique requirement if not applying required filtration when the
7220 Agency requires in a SEP.

7221
7222 a) ~~A supplier is in violation of a treatment technique requirement if the following is~~
7223 ~~true:~~

7224
7225 1) ~~Filtration is required because either of the following:~~

7226
7227 A) ~~The supplier fails to meet any one of the criteria in Section~~
7228 ~~611.231 and 611.232; or~~

7229
7230 B) ~~The Agency has determined, pursuant to Section 611.211, that~~
7231 ~~filtration is required; and~~

7232
7233 2) ~~The supplier fails to install filtration by the date specified in Section~~
7234 ~~611.230.~~

7235
7236 b) ~~A supplier that has not installed filtration is in violation of a treatment technique~~
7237 ~~requirement if either of the following is true:~~

7238
7239 1) ~~The turbidity level (measured as specified in Section 611.531(a) and~~
7240 ~~611.532(b)) in a representative sample of the source water immediately~~
7241 ~~prior to the first or only point of disinfection application exceeds 5 NTU;~~
7242 ~~or~~

7243
7244 2) ~~The system is identified as a source of a waterborne disease outbreak.~~

7245
7246 ~~BOARD NOTE: Derived from 40 CFR 141.71(e) (2003).~~

7247
7248 (Source: Amended at 47 Ill. Reg. _____, effective _____)

7249
7250 **Section 611.240 Disinfection**

7251
7252 a) This subsection (a) corresponds with the first sentence of 40 CFR 141.72,
7253 pertaining to unfiltered system suppliers using~~A supplier that uses~~ a surface water
7254 source ~~and does not providing provide~~ filtration treatment ~~must provide the~~
7255 disinfection treatment specified in Section 611.241. These no longer exist in

Illinois. This statement maintains structural consistency with USEPA regulations.

- b) This subsection (a) corresponds with the second sentence of 40 CFR 141.72, pertaining to unfiltered system suppliers using a supplier that uses a groundwater source under the direct influence of surface water and does not providing provide filtration treatment must provide disinfection treatment specified in Section 611.241 beginning 18 months after the Agency determines that the groundwater source is under the influence of surface water, unless the Agency has determined that filtration is required. These no longer exist in Illinois. This statement maintains structural consistency with USEPA regulations.
- c) Upon determiningIf the Agency determines that a supplier must apply filtration is required, the Agency may issue, by a SEP requiring, require the supplier to comply with interim disinfection requirements before installing filtration is installed.
- d) A supplier using system that uses a surface water source and providing that provides filtration treatment must provide the disinfection treatment specified in Section 611.242 specifies when filtration is installed.
- e) A supplier using system that uses a groundwater source under the direct influence of surface water and providing provides filtration treatment must provide the have provided disinfection treatment as specified in Section 611.242 specifies beginning when the supplier installs filtration is installed.
- f) Failing Failure to comply with Section 611.242 before the Agency requires in a SEP meet any requirement of the following Sections after the applicable date specified in this Section is a treatment technique violation.

BOARD NOTE: This Section derives Derived from 40 CFR 141.72 preamble (2016).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.241 Unfiltered PWSs (Repealed)

Each supplier that does not provide filtration treatment must provide disinfection treatment as follows:

- a) The disinfection treatment must be sufficient to ensure at least 99.9 percent (3-log) inactivation of Giardia lamblia cysts and 99.99 percent (4 log) inactivation of viruses, every day the system serves water to the public, except any one day each month. Each day a system serves water to the public, the supplier must calculate

the $CT_{99.9}$ value from the system's treatment parameters using the procedure specified in Section 611.532(c) and determine whether this value is sufficient to achieve the specified inactivation rates for *Giardia lamblia* cysts and viruses.

1) If a system uses a disinfectant other than chlorine, the system may demonstrate to the Agency, through the use of an Agency-approved protocol for on-site disinfection challenge studies or other information, that $CT_{99.9}$ values other than those specified in Appendix B, Tables 2.1 and 3.1 or other operational parameters are adequate to demonstrate that the system is achieving minimum inactivation rates required by this subsection (a).

2) The demonstration must be made by way of a SEP application.

b) The disinfection system must have either of the following:

1) Redundant components, including an auxiliary power supply with automatic start-up and alarm to ensure that disinfectant application is maintained continuously while water is being delivered to the distribution system; or

2) Automatic shut-off of delivery of water to the distribution system whenever there is less than 0.2 mg/l of RDC in the water. If the Agency determines, by a SEP, that automatic shut-off would cause unreasonable risk to health or interfere with fire protection, the system must comply with subsection (b)(1).

e) The RDC in the water entering the distribution system, measured as specified in Sections 611.531(b) and 611.532(e), cannot be less than 0.2 mg/l for more than four hours.

d) RDC in the Distribution System

1) The RDC in the distribution system, measured as total chlorine, combined chlorine or chlorine dioxide, as specified in Sections 611.531(b) and 611.532(f), cannot be undetectable in more than 5 percent of the samples each month for any two consecutive months that the system serves water to the public. Water in the distribution system with HPC less than or equal to 500/ml, measured as specified in Section 611.531(a), is deemed to have a detectable RDC for purposes of determining compliance with this requirement. Thus, the value "V" in the following formula cannot exceed 5 percent in one month, for any two consecutive months.

$$V = \frac{100(c + d + e)}{(a + b)}$$

where the terms mean the following:

- a= Number of instances where the RDC is measured;
- b= Number of instances where the RDC is not measured, but HPC is measured;
- e= Number of instances where the RDC is measured but not detected and no HPC is measured;
- d= Number of instances where the RDC is measured but not detected, and where the HPC is greater than 500/ml; and
- e= Number of instances where the RDC is not measured and HPC is greater than 500/ml.

- 2) Subsection (d)(1) does not apply if the Agency determines, under Section 611.213, that a supplier has no means for having a sample analyzed for HPC by a certified laboratory under the requisite time and temperature conditions specified by Section 611.531(a) and that the supplier is providing adequate disinfection in the distribution system.

BOARD NOTE: Derived from 40 CFR 141.72(a).

(Source: Repealed at 47 Ill. Reg. _____, effective _____)

Section 611.242 Filtered PWSs

Each supplier ~~providing that provides~~ filtration treatment must provide disinfection treatment ~~as follows~~:

- a) The disinfection treatment must ~~sufficiently be sufficient to~~ ensure that the ~~system's~~ total treatment processes ~~of that system~~ achieve at least 99.9 percent (3-log) inactivation or removal of Giardia lamblia cysts and at least 99.99 percent (4-log) inactivation or removal of viruses.
- b) The RDC in the water entering the distribution system, measured as ~~Sections specified in Section~~ 611.531(b) and 611.533(b) ~~specify~~, cannot be less than 0.2 mg/l for more than four hours.

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c) RDC in the Distribution System

- 1) The RDC in the distribution system, measured as total chlorine, combined chlorine, or chlorine dioxide, as ~~Sections specified in Section~~ 611.531(b) and 611.533(c) specify, cannot be undetectable in more than 5 percent of the samples the supplier collects each month, for any two consecutive months ~~during which that~~ the system serves water to the public. Water in the distribution system with HPC less than or equal to 500/ml, measured as ~~specified in~~ Section 611.531(a) specifies, is deemed to have a detectable RDC for ~~complying purposes of determining compliance~~ with this requirement. Thus, the value "V" in ~~this the following~~ formula cannot exceed 5 percent in one month, for any two consecutive months:-

$$V = \frac{100(c + d + e)}{(a + b)}$$

$$V = 100(c + d + e)/(a + b)$$

where ~~the terms mean the following~~:

- a = ~~The number~~ Number of times when the supplier measured instances where the RDC ~~is measured~~;
- b = ~~The number~~ Number of times when the supplier did not measure instances where the RDC ~~is not measured~~, but did measure HPC is measured;
- c = ~~The number~~ Number of times when the supplier measured but did not detect instances where the RDC is measured but did not measure detected and no HPC is measured;
- d = ~~The number~~ Number of times when the supplier measured but did not detect instances where the RDC is measured but not detected, and ~~where~~ HPC is greater than 500/ml; and
- e = ~~The number~~ Number of times when the supplier did not measure instances where the RDC, is not measured and HPC is greater than 500/ml.

- 2) Subsection (c)(1) does not apply if the Agency determines, under Section 611.213, that a supplier has no means for having a sample analyzed for HPC by a certified laboratory under the requisite time and temperature conditions ~~specified by~~ Section 611.531(a) specifies and that the supplier ~~provides~~ is providing adequate disinfection in ~~its~~ the distribution system.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.72(b).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

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Section 611.250 Filtration

A supplier ~~using that uses~~ a surface water source or a groundwater source under the direct influence of surface water, ~~and does not meet all of the criteria in Sections 611.231 and 611.232 for avoiding filtration;~~ must provide ~~treatment consisting of~~ both disinfection ~~treatment,~~ as ~~specified in~~ Section 611.242 ~~specifies,~~ and filtration treatment ~~complying that complies~~ with ~~the requirements of~~ subsection (a), (b), (c), (d), or (e) within 18 months after the Agency issues a SEP requiring the supplier to apply ~~failure to meet any one of the criteria for avoiding~~ filtration ~~treatment in Sections 611.231 and 611.232.~~ Failing ~~Failure to apply~~ filtration treatment before the time the Agency provides in a SEP ~~violates~~ meet any requirement after the date specified in this introductory paragraph is a treatment technique ~~violation.~~

a) Conventional Filtration Treatment or Direct Filtration

- 1) For a supplier's system using conventional filtration or direct filtration, the turbidity level of ~~its representative samples of the system's~~ filtered water must ~~not exceed~~ be less than or equal to 0.5 NTU in more than five ~~at least~~ 95 percent of the measurements ~~taken~~ each month under Sections; ~~measured as specified in Section~~ 611.531(a) and 611.533(a). However, ~~except that~~ if the Agency ~~issues~~ determines, ~~by a SEP~~ determining, that the supplier can achieve ~~system is capable of achieving~~ at least 99.9 percent removal or inactivation of Giardia lamblia cysts at some turbidity level higher than 0.5 NTU in at least 95 percent of the measurements ~~taken~~ each month, the Agency must substitute this higher turbidity limit in the SEP for that system. ~~However,~~ in no case may the Agency must not approve a turbidity limit allowing that allows more than 1 NTU in more than five percent of the samples ~~taken~~ each month under Sections, ~~measured as specified in Section~~ 611.531(a) and 611.533(a).
- 2) The turbidity level of representative samples of a supplier's system's filtered water must ~~never at no time~~ exceed 5 NTU.
- 3) A supplier serving at least 10,000 or more persons must comply with ~~meet~~ the turbidity ~~in requirements of~~ Section 611.743(a).
- 4) A supplier servicing that serves fewer than 10,000 people must comply with ~~meet~~ the turbidity ~~requirements~~ in Section 611.955.

b) Slow Sand Filtration

- 1) For a supplier's system using slow sand filtration, the turbidity level of ~~its representative samples of the system's~~ filtered water must ~~not exceed~~ be

~~less than or equal to~~ 1 NTU in ~~more than five~~ at least 95 percent of the measurements ~~taken~~ each month ~~under, measured as specified in~~ Section 611.531(a) and 611.533(a). ~~However, except that~~ if the Agency ~~issues determines, by~~ a SEP ~~determining,~~ that there is no significant interference with disinfection at a higher level, the Agency must substitute the higher turbidity limit in the SEP ~~for that system.~~

2) The turbidity ~~level of representative samples~~ of a supplier's system's filtered water must ~~never at no time~~ exceed 5 NTU, measured as Sections specified in Section 611.531(a) and 611.533(a) specify.

c) Diatomaceous Earth Filtration

1) For a supplier's system using diatomaceous earth filtration, the turbidity level of ~~its representative samples of the system's~~ filtered water must ~~not exceed~~ be less than or equal to 1 NTU in more than five ~~at least 95~~ percent of the measurements ~~taken~~ each month under Sections, ~~measured as specified in Section~~ 611.531(a) and 611.533(a).

2) The turbidity level of representative samples of a supplier's system's filtered water must ~~never at no time~~ exceed 5 NTU under Sections, ~~measured as specified in Section~~ 611.531(a) and 611.533(a).

d) Other Filtration Technologies. The Agency may issue a SEP allowing a supplier ~~to may~~ use a filtration technology not ~~included listed~~ in subsections (a) through (c) if the supplier ~~it~~ demonstrates, by a SEP application, to the Agency, using pilot plant studies or other means, that the alternative filtration technology, in combination with disinfection treatment complying with that meets the requirements of Section 611.242, consistently achieves 99.9 percent removal or inactivation of Giardia lamblia cysts and 99.99 percent removal or inactivation of viruses. Subsection (b) applies to ~~For~~ a supplier making that makes this demonstration, ~~the requirements of subsection (b) apply.~~ A supplier serving 10,000 or more persons must comply with ~~meet the requirements for other filtration technologies in~~ Section 611.743(b). A supplier serving that serves fewer than 10,000 people must comply with ~~meet the requirements for other filtration technologies in~~ Section 611.955.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.73.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.261 Unfiltered PWSs: Reporting and Recordkeeping

7498 ~~A supplier that uses a surface water source and does not provide filtration treatment must report~~
 7499 ~~monthly to the Agency the information specified in this Section, unless the Agency has~~
 7500 ~~determined that filtration is required, in which case the Agency must, by a SEP, specify~~
 7501 ~~alternative reporting requirements, as appropriate, until filtration is in place.~~ A supplier using that
 7502 uses a groundwater source under the direct influence of surface water ~~and does not~~
 7503 providing provide filtration treatment must report monthly to the Agency the information
 7504 ~~specified in~~ this Section specifies beginning six months after the Agency determines that the
 7505 groundwater source is under the direct influence of surface water. ~~When, unless~~ the Agency
 7506 issues a SEP requiring has determined that filtration treatment and specifying appropriate is
 7507 required, in which case the Agency must, by a SEP, specify alternative reporting requirements;
 7508 ~~as appropriate,~~ until the supplier applies filtration treatment is in place.

7509
 7510 a) The supplier must report sourceSource water quality information ~~must be reported~~
 7511 to the Agency within ten days after the end of each month the supplier system
 7512 serves water to the public. ~~The information information that~~ must include certain
 7513 information be reported includes the following:

- 7514
 7515 1) The cumulative number of months for which the supplier reports results
 7516 are reported.
- 7517
 7518 2) The number of fecal or total coliform samples, whichever the supplier are
 7519 analyzed during the month (if a supplier system monitors for both, the
 7520 supplier needs only report fecal coliform samples coliforms must be
 7521 reported), the dates the supplier collected the samples of sample collection,
 7522 and the dates when the turbidity level exceeded 1 NTU.
- 7523
 7524 3) The number of samples during the month that had equal to or fewer than
 7525 20/100 ml fecal coliforms or equal to or fewer than 100/100 ml total
 7526 coliforms, whichever the supplier are analyzed.
- 7527
 7528 4) The cumulative number of fecal or total coliform samples, whichever the
 7529 supplier are analyzed, during the previous six months the supplier system
 7530 served water to the public.
- 7531
 7532 5) The cumulative number of samples that had equal to or fewer than 20/100
 7533 ml fecal coliforms or equal to or fewer than 100/100 ml total coliforms,
 7534 whichever the supplier are analyzed, during the previous six months the
 7535 supplier system served water to the public.
- 7536
 7537 6) The percentage of samples that had equal to or fewer than 20/100 ml fecal
 7538 coliforms or equal to or fewer than 100/100 ml total coliforms, whichever
 7539 the supplier are analyzed, during the previous six months the
 7540 supplier system served water to the public.

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- 7) The maximum turbidity level the supplier measured during the month, the dates of occurrence for any measurements ~~exceeding that exceeded~~ 5 NTU, and the dates the supplier reported the occurrences ~~were reported~~ to the Agency.
 - 8) For the first 12 months of recordkeeping, the dates and cumulative number of events during which the turbidity exceeded 5 NTU. ~~After, and after~~ one year of recordkeeping for turbidity measurements, the dates and cumulative number of events during which the turbidity exceeded 5 NTU in the previous 12 months the suppliersystem served water to the public.
 - 9) For the first 120 months of recordkeeping, the dates and cumulative number of events during which the turbidity exceeded 5 NTU. ~~After, and after~~ ten years of recordkeeping for turbidity measurements, the dates and cumulative number of events during which the turbidity exceeded 5 NTU in the previous 120 months the suppliersystem served water to the public.
- b) The supplier must report the Agency disinfection~~Disinfection~~ information ~~specified in~~ Section 611.532 ~~specifies must be reported to the Agency~~ within ten days after the end of each month the suppliersystem serves water to the public. The information the supplier reports~~Information that~~ must include specific information~~be reported includes the following~~:
- 1) For each day, the lowest RDC measurement ~~of RDC~~ in mg/ℓ in water entering the distribution system.
 - 2) The date and duration of each period ~~during which when~~ the RDC in water entering the distribution system fell below 0.2 mg/ℓ and the supplier notified~~when~~ the Agency ~~was notified~~ of the occurrence.
 - 3) The daily RDCs (in mg/ℓ) and disinfectant contact times (in minutes) the supplier used for calculating the CT values.
 - 4) If the supplier uses chlorine ~~is used~~, the daily pH measurements ~~of pH~~ of disinfected water following each point of chlorine disinfection.
 - 5) The daily water temperature measurements (~~of water temperature in °C~~)degrees C following each point of disinfection.
 - 6) The daily CT_{calc} and A_i values for each disinfectant measurement or sequence and the sum of all A_i values (B) before or at the first customer.

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- 7) The daily determination ~~of~~ whether disinfection achieves adequate Giardia cyst and virus inactivation, i.e., whether A_i is at least 1.0. If the supplier uses a disinfectant or, where disinfectants other than chlorine are used, the supplier must use other indicator conditions that the Agency determines appropriate; under Section 611.241(a)(1), ~~determines are appropriate, are met.~~
- 8) ~~Specific~~The following information on the supplier's distribution system samples the supplier took for taken in the distribution system in conjunction with total coliform monitoring under SectionsSection 611.240 through 611.242:
- A) The numberNumber of times when the supplier measuredinstances where the RDC is measured;
 - B) The numberNumber of times when the supplier did not measureinstances where the RDC is not measured but did measure HPC is measured;
 - C) The numberNumber of times the supplier measured but did not detectinstances where the RDC is measured but not detected and measuredno HPC is measured;
 - D) The numberNumber of times when the supplier measured but did not detectinstances where no the RDC₂ is detected and thewhere HPC is greater than 500/ml;
 - E) The numberNumber of times when the supplier did not measureinstances where the RDC₂ is not measured and the HPC is greater than 500/ml;
 - F) For the current and previous month the suppliersystem served water to the public, the value of "V" in the following formula:

$$V = \frac{100(c + d + e)}{(a + b)}$$

where ~~the terms mean the following:~~

- a = The valueValue in subsection (b)(8)(A);
- b = The valueValue in subsection (b)(8)(B);
- c = The valueValue in subsection (b)(8)(C);
- d = The valueValue in subsection (b)(8)(D); and

e = The value~~Value~~ in subsection (b)(8)(E).

G) Subsections~~The requirements of subsections~~ (b)(8)(A) through (b)(8)(F) do not apply if the Agency determines, under Section 611.213, that a supplier~~system~~ has no means for having a sample analyzed for HPC by a certified laboratory under the requisite time and temperature conditions specified by Section 611.531(a) and that the supplier adequately provides~~is providing adequate~~ disinfection in the distribution system.

9) A supplier~~system~~ need~~not~~ report the data listed in~~subsections~~ (b)(1) and (b)(3) through (b)(6) require~~, if all data listed in~~ subsections (b)(1) through (b)(8) require remain on file at the system, and the Agency issues~~determines, by a SEP making specific determinations, that the following is true:~~

A) That the supplier~~The system has~~ submitted to the Agency~~all the~~ information required by~~subsections (b)(1) through (b)(8) require~~ to the Agency for at least 12 months; and

B) That the supplier~~needs~~ The Agency has determined that the system~~is~~ not required to provide filtration treatment.

c) By October 10 of each year, every supplier~~each system~~ must provide to the Agency~~to the Agency summarizing that summarizes~~ a report to the Agency summarizing its compliance with all watershed control program requirements specified~~in~~ Section 611.232(b).

d) By October 10 of each year, every supplier~~each system~~ must provide to the Agency~~to the Agency~~ a report to the Agency on the on-site inspection the supplier conducted during that year under Section 611.232(c), unless the Agency conducted the on-site inspection was conducted by the Agency. If the Agency conducted the inspection was conducted by the Agency, the Agency must provide a copy of its report to the supplier.

e) Reporting Health Threats

1) Upon~~Each system, upon~~ discovering that a waterborne disease outbreak occurred that is potentially attributable to its~~that~~ water system has~~occurred, a supplier~~ must report that occurrence to the Agency as soon as possible; but no later than by the end of the next business day.

2) If at any time the turbidity exceeds 5 NTU, the supplier~~system~~ must consult with the Agency as soon as practical, but no later than 24 hours

after ~~the supplier knows of~~ the exceedance ~~is known, in accordance with~~
~~the public notification requirements~~ under Section 611.903(b)(3).

- 3) If at any time the RDC falls below 0.2 mg/ℓ in the water entering the distribution system, the ~~supplier system~~ must notify the Agency as soon as possible, but no later than by the end of the next business day. The ~~supplier system also~~ must also notify the Agency by the end of the next business day whether or not the supplier restored the RDC ~~was restored~~ to at least 0.2 mg/ℓ within four hours.

BOARD NOTE: ~~This Section derives~~ Derived from 40 CFR 141.75(a).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.262 Filtered PWSs: Reporting and Recordkeeping

A supplier ~~using that uses~~ a surface water source or a groundwater source under the direct influence of surface water ~~that and~~ provides filtration treatment must monthly report specific information monthly to the Agency ~~the information specified in this Section~~.

- a) ~~The supplier must report turbidity~~ Turbidity measurements ~~that as required by~~ Section 611.533(a) ~~requires must be reported~~ within ten days after the end of each month the supplier serves water to the public. ~~The report~~ Information that must ~~include specific information~~ be reported includes the following:
 - 1) The total number of filtered water turbidity measurements the supplier took taken during the month.
 - 2) The number and percentage of filtered water turbidity measurements the supplier took taken during the month that are less than or equal to the turbidity limits ~~specified in~~ Section 611.250 specifies for the filtration technology the supplier uses being used.
 - 3) The date and value of any turbidity measurements the supplier took taken during the month that exceed 5 NTU.
- b) ~~The supplier must report the disinfection~~ Disinfection information ~~specified in~~ Section 611.533 ~~specifies must be reported~~ to the Agency within ten days after the end of each month the supplier serves water to the public. ~~The report~~ Information that must ~~include specific information~~ be reported includes the following:
 - 1) For each day, the lowest RDC measurement (~~of RDC~~ in mg/ℓ) in water entering the distribution system.

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- 2) The date and duration of each period ~~during which~~when the RDC in water entering the distribution system fell below 0.2 mg/l and when ~~the supplier notified~~ the Agency ~~was notified~~of the occurrence.
- 3) ~~Specific~~The following information on the samples ~~the supplier took~~taken in the distribution system ~~for in conjunction with~~ total coliform monitoring under Sections 611.240 through 611.242:
- A) ~~The number~~Number of ~~times when the supplier measured~~instances ~~where~~ the RDC ~~is measured~~;
 - B) ~~The number~~Number of ~~times when the supplier did not measure~~instances where the RDC ~~is not measured~~ but did measure HPC ~~is measured~~;
 - C) ~~The number~~Number of ~~times when the supplier measured but did not detect~~instances where the RDC ~~is measured~~ but did not measure ~~detected and no~~ HPC ~~is measured~~;
 - D) ~~The number~~Number of ~~times when the supplier measured but did not detect~~the instances where ~~no~~ RDC ~~is detected~~ and ~~the~~ where HPC is greater than 500/ml;
 - E) ~~The number~~Number of ~~times when the supplier did not measure~~instances where the RDC ~~is not measured~~ and HPC is greater than 500/ml;
 - F) For the current and previous month the supplier serves water to the public, the value of "V" in the following formula:

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$$V = \frac{100(c + d + e)}{(a + b)}$$

where ~~the terms mean the following~~:

- a = ~~The value~~Value in subsection (b)(3)(A);
- b = ~~The value~~Value in subsection (b)(3)(B);
- c = ~~The value~~Value in subsection (b)(3)(C);
- d = ~~The value~~Value in subsection (b)(3)(D); and
- e = ~~The value~~Value in subsection (b)(3)(E).

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7743 G) Subsections (b)(3)(A) through (b)(3)(F) do not apply if the Agency
7744 determines, under Section 611.213, that a supplier has no means
7745 for having a sample analyzed for HPC by a certified laboratory
7746 under the requisite time and temperature conditions specified by
7747 Section 611.531(a) and that the supplier adequately provides
7748 ~~is providing adequate~~ disinfection in the distribution system.
7749

7750 c) Reporting Health Threats
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7752 1) ~~Upon Each supplier, upon~~ discovering that a waterborne disease outbreak
7753 occurred that is potentially attributable to ~~its that~~ water system ~~has~~
7754 ~~occurred, a supplier~~ must report that occurrence to the Agency as soon as
7755 possible, but no later than by the end of the next business day.
7756

7757 2) If at any time the turbidity exceeds 5 NTU, the supplier must consult with
7758 the Agency as soon as practical, but no later than 24 hours the supplier
7759 knows of after the exceedance ~~is known, in accordance with the public~~
7760 ~~notification requirements~~ under Section 611.903(b)(3).
7761

7762 3) If at any time the RDC residual falls below 0.2 mg/l in the water entering
7763 the distribution system, the supplier must notify the Agency as soon as
7764 possible, but no later than by the end of the next business day. The
7765 supplier ~~also~~ must also notify the Agency by the end of the next business
7766 day whether or not the supplier restored the ~~residual was restored~~ to at
7767 least 0.2 mg/l within four hours.
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7769 BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.75(b).
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7771 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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7773 **Section 611.276 Recycle Provisions**
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7775 a) Applicability. A Subpart B system supplier employing that employs conventional
7776 filtration or direct filtration treatment ~~and~~ that recycles spent filter backwash
7777 water, thickener supernatant, or liquids from dewatering processes must comply
7778 with meet the requirements in subsections (b) through (d).
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7780 b) Reporting. A supplier must notify the Agency in writing if the supplier recycles
7781 spent filter backwash water, thickener supernatant, or liquids from dewatering
7782 processes. This notification must minimally include, ~~at a minimum,~~ the
7783 information ~~specified in~~ subsections (b)(1) and (b)(2) specify, as follows:
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7785 1) A plant schematic showing the origin of all recycled flows ~~that are~~

~~recycled~~ (including spent filter backwash water, thickener supernatant, and liquids from dewatering processes), the hydraulic conveyance used to transport ~~these fluids~~~~them~~, and the location where ~~the supplier reintroduces these fluids~~~~they are re-introduced~~ back into the treatment plant.

2) ~~The typical~~~~Typical~~ recycle flow in gallons per minute (gpm), the highest ~~observed~~ plant flow ~~the supplier observed~~~~experienced~~ in the previous year (gpm), design flow for the treatment plant (gpm), and ~~the~~ Agency-approved operating capacity for the plant if the Agency ~~makes this~~~~has made such a~~ determination.

c) Treatment Technique Requirement. Any supplier ~~recycling that recycles~~ spent filter backwash water, thickener supernatant, or liquids from dewatering processes must return these flows through the processes of the supplier's existing conventional ~~filtration~~ or direct filtration system, as defined in Section 611.101, or at an alternative location approved by a permit issued by the Agency.

d) Recordkeeping. The supplier must collect and retain on file ~~the~~ recycle flow information ~~specified in~~ subsections (d)(1) through (d)(6) ~~specify~~ for review and evaluation by the Agency, ~~as follows~~:

1) A copy of the recycle notification and information ~~the supplier~~ submitted to the ~~Agency~~~~State~~ under subsection (b).

2) A list of all recycle flows and the frequency with which ~~the supplier returns them~~~~they are returned~~.

3) The average and maximum backwash flow rate through the filters and the average and maximum ~~duration of the~~ filter backwash process ~~duration~~ in minutes.

4) The typical filter run length and a written summary of how filter run length is determined.

5) The type of treatment ~~the supplier provides~~~~provided~~ for the recycle flow.

6) Data on the physical dimensions of the equalization or treatment units, typical and maximum hydraulic loading rates, type of treatment chemicals used and average dose and frequency of use, and ~~the~~ frequency at which ~~the supplier removes~~ solids ~~are removed~~, if applicable.

BOARD NOTE: ~~This Section derives~~~~Derived~~ from 40 CFR 141.76.

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(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART C: USE OF NON-CENTRALIZED TREATMENT DEVICES

Section 611.280 Point-of-Entry Devices

- a) A supplierSuppliers may use point-of-entry devices to comply with an MCLMCLs only while complying with~~if they meet the requirements of~~ this Section.
- b) The supplier is responsible~~It is the responsibility of the supplier~~ to operate and maintain the point-of entry treatment system.
- c) The supplier must develop a monitoring plan before installing point-of-entry devices ~~to comply~~are installed for compliance.
 - 1) Point-of-entry devices must protect human~~provide~~ health equivalently~~protection equivalent~~ to central water treatment. "Equivalently Equivalent" means that the water would meet all NPDWRs~~NPDWR~~ and ~~would~~ be of acceptable quality similar to water distributed by a well-operated central treatment plant.
 - 2) In addition to the VOCs, the supplier's monitoring must include physical measurements and observations like these~~such as~~ total flow treated and mechanical condition of the treatment equipment.
 - 3) The Agency must approve any useUse of point-of-entry devices ~~in~~must be approved by a SEP ~~granted by the Agency~~.
- d) The supplier must properly apply effectiveEffective technology ~~must be properly applied~~ under an Agency-approveda plan, ~~approved by the Agency~~ and the supplier must maintain the microbiological safety of the water ~~must be maintained~~.
 - 1) The Agency must require adequate performance certification ~~of performance~~, field testing, and rigorous engineering design review of the point-of-entry devices; (if not included in the certification process), ~~a rigorous engineering design review of the point-of-entry devices~~.
 - 2) The design and application of the point-of-entry devices must consider the tendency for increased~~increase in~~ heterotrophic bacteria concentrations in water treated with activated carbon. The Agency may issue~~require, by~~ a

SEP ~~requiring~~, frequent backwashing, post-contactor disinfection, and HPC monitoring to ensure that nothing compromises the microbiological safety of the water ~~is not compromised~~.

- e) The point-of-entry devices must protect all ~~All~~ consumers ~~must be protected~~. Every building connected to the system must have a point-of-entry device installed, maintained, and adequately monitored. The supplier must assure the Agency ~~must be assured~~ that every building is subject to treatment and monitoring, and that the rights and responsibilities of the PWS customer convey with title upon sale of the property.
- f) Using ~~Use of~~ any point-of-entry device must not cause increased corrosion of lead-lead and copper-bearing ~~copper bearing~~ materials ~~located~~ between the device and the tap that could increase contaminant levels at the tap.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.100 and 142.62(h)(7) ~~(2002)~~.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.290 ~~Use of~~ Point-of-Use Devices or Bottled Water

- a) A supplier may ~~Suppliers must~~ not use bottled water to comply ~~achieve compliance~~ with an MCL.
- b) A supplier may use bottled ~~Bottle~~ water or point-of-use devices ~~may be used~~ on a temporary basis to avoid an unreasonable risk to human health under an Agency-issued ~~a~~ SEP ~~granted by the Agency~~.
- c) Any use of bottled water must comply with the substantive requirements of Section 611.130(d), except that the supplier must submit this ~~its~~ quality control plan to the ~~for~~ Agency for review as part of its SEP request, rather than to the ~~for~~ Board for review.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.101.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART D: TREATMENT TECHNIQUES

Section 611.295 General Requirements

This ~~The requirements of this~~ Subpart D constitutes ~~constitute~~ NPDWRs. This Subpart D

7915 establishes treatment techniques in lieu of MCLs for specified contaminants.

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7917 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.110-(2002).

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7919 (Source: Amended at 47 Ill. Reg. _____, effective _____)

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7921 **Section 611.296 Acrylamide and Epichlorohydrin**

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- 7923 a) Each supplier must ~~annually~~certify ~~annually~~in writing to the Agency that when ~~it~~
7924 ~~uses~~ products containing acrylamide or epichlorohydrin ~~are used~~in the PWS, the
7925 product of monomer level and dose does not exceed the ~~level~~levels ~~specified in~~
7926 subsection (b) ~~specifies~~. The ~~supplier must compute the~~ product of monomer
7927 level and dose ~~are computed as follows~~:

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$$P = A \times B$$

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7931 Where ~~the terms mean the following~~:

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7933 A = Percent by weight of unreacted monomer in the product used;

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7935 B = Parts per million by weight of finished water at which the ~~supplier doses~~
7936 ~~the product is dosed~~; and

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7938 P = Product of monomer level and dose.

- 7939
- 7940 b) Maximum Product of monomer level and dose ~~is the following~~:

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7942 1) For acrylamide, P = 0.05 ~~ppm~~; and

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7944 2) For epichlorohydrin, P = 0.20 ~~ppm~~.

- 7945
- 7946 c) ~~The supplier's certification~~Suppliers' ~~certifications~~ may rely on manufacturers or
7947 third parties, as ~~approved by~~the Agency ~~approves~~.

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7949 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.111-(2002).

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7951 (Source: Amended at 47 Ill. Reg. _____, effective _____)

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7953 SUBPART F: MAXIMUM CONTAMINANT LEVELS (MCLs)
7954 AND MAXIMUM RESIDUAL DISINFECTANT LEVELS (MRDLs)

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7956 **Section 611.300 ~~State-Only~~Old MCLs for Inorganic Chemical Contaminants**

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7958 a) The ~~State-only~~ MCLs listed in subsection (b) for inorganic chemical
 7959 contaminants (IOCs) are additional State requirements. The ~~State-only~~ MCLs
 7960 apply only to CWS suppliers. The supplier must determine
 7961 compliance with ~~the State-only~~ MCLs for inorganic chemicals ~~is~~
 7962 ~~calculated~~ under Section 611.612.

7963 ~~BOARD NOTE: This subsection (a) is an additional State requirement.~~

7964 b) ~~State-only~~ ~~The following are the old~~ MCLs for IOCs:

Contaminant	Level, mg/ℓ
Iron	1.0
Manganese	0.15
Zinc	5.

7968 ~~BOARD NOTE: This subsection (b) is an additional State requirement.~~

7969 c) This subsection corresponds with 40 CFR 141.11(c), marked as reserved by
 7970 USEPA. This statement maintains structural parity with the federal rules.

7971 d) Nitrate
 7972 ~~A non-CWS~~ ~~Non-CWSs~~ may exceed the MCL for nitrate under certain
 7973 the following circumstances:

- 7974 1) The nitrate level must not exceed 20 mg/ℓ;
- 7975 2) The water must not be available for consumption by children under six
 7976 months of age;
- 7977 3) The NCWS supplier complies with ~~is meeting~~ the public notification
 7978 requirements under Section 611.909, including continuous posting ~~of the~~
 7979 ~~fact~~ that the nitrate level exceeds 10 mg/ℓ ~~together~~ with the potential
 7980 health effects of exposure;
- 7981 4) The supplier ~~will~~ annually notifies ~~notify~~ local public health authorities and
 7982 the Department of Public Health of ~~the~~ nitrate levels exceeding ~~that exceed~~
 7983 10 mg/ℓ; and
- 7984 5) No adverse public health effects result.

7985 BOARD NOTE: This subsection (d) derives ~~Derived~~ from 40 CFR 141.11(d). The
 7986 Department of Public Health regulations may impose a nitrate limitation
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requirement. ~~Those regulations are~~ at 77 Ill. Adm. Code 900.50.

e) Supplementary conditions apply~~The following supplementary condition applies~~ to the MCLs ~~listed in subsection (b)~~ for iron and manganese in subsection (b):

- 1) A CWS supplier serving~~CWS suppliers that serve~~ a population of 1,000~~1000~~ or fewer, or 300 service connections or fewer, are exempt from the standards for iron and manganese.
- 2) The Agency may issue~~by~~ a SEP allowing~~allow~~ iron and manganese in excess of the MCL if sequestration ~~tried on an experimental basis~~ proves ~~to be~~ effective on an experimental basis. If sequestration is not effective, the supplier must provide positive iron or manganese reduction treatment, as applicable ~~must be provided~~. A supplier may try experimental use~~Experimental use of~~ a sequestering agent ~~may be tried~~ only if the Agency approves~~in approved by~~ a SEP.

BOARD NOTE: This subsection (e) is an additional State requirement.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.301 Revised MCLs for Inorganic Chemical Contaminants

- a) This subsection corresponds with 40 CFR 141.62(a), reserved by USEPA. This statement maintains structural consistency with USEPA rules.
- b) The MCLs in the following table apply to CWSs. Except for fluoride, the MCLs also apply to NTNCWSs. The MCLs for nitrate, nitrite, and total nitrate and nitrite also apply to transient non-CWSs.

Contaminant	MCL	Units
Antimony	0.006	mg/l
Arsenic	0.010	mg/l
Asbestos	7	MFL
Barium	2	mg/l
Beryllium	0.004	mg/l
Cadmium	0.005	mg/l
Chromium	0.1	mg/l
Cyanide (as free CN ⁻)	0.2	mg/l
Fluoride	4.0	mg/l
Mercury	0.002	mg/l
Nitrate (as N)	10	mg/l

Nitrite (as N)	1	mg/ℓ
Total Nitrate and Nitrite (as N)	10	mg/ℓ
Selenium	0.05	mg/ℓ
Thallium	0.002	mg/ℓ

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BOARD NOTE: See Section 611.300(d) for an elevated nitrate level for non-CWSs. USEPA removed and reserved the MCL for nickel on June 29, 1995, at 60 Fed. Reg. 33932, as a result of a judicial order in Nickel Development Institute v. EPA, No. 92-1407, and Specialty Steel Industry of the U.S. v. Browner, No. 92-1410 (D.C. Cir. Feb. 23 & Mar. 6, 1995), while retaining the contaminant, analytical methodology, and detection limit entries~~listings~~ for this contaminant.

- c) USEPA identifies specific treatment technologies~~has identified the following~~ as BAT for achieving compliance with the IOC MCLs~~MCL for the IOCs identified in subsection (b)~~, except for fluoride:

Contaminant	BATs
Antimony	C/F RO
Arsenic (BATs for As ^V . Pre-oxidation may be required to convert As ^{III} to As ^V .)	AAL C/F IX LIME RO ED O/F (to Fe to obtain high removals, the iron to arsenic ratio must be at least 20:1)
Asbestos	C/F DDF CC
Barium	IX LIME RO ED
Beryllium	AA C/F IX

LIME
RO

Cadmium

C/F
IX
LIME
RO

Chromium

C/F
IX
LIME, ~~BAT~~ (for Cr^{III} only)
RO

Cyanide

IX
RO
ALK Cl₂

Mercury

C/F, ~~BAT~~ (only if influent Hg concentrations less than or equal to 10 µg/l)
GAC
LIME, ~~BAT~~ (only if influent Hg concentrations less than or equal to 10 µg/l)
RO, ~~BAT~~ (only if influent Hg concentrations less than or equal to 10 µg/l)

Nickel

IX
LIME
RO

Nitrate

IX
RO
ED

Nitrite

IX
RO

Selenium

AAL
C/F, ~~BAT~~ (for Se^{IV} only)
LIME
RO

ED

Thallium

AAL
IX

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Abbreviations

AAL	Activated alumina
ALK Cl ₂	Alkaline chlorination (pH ≥ 8.5)
C/F	Coagulation/filtration (not BAT for a system having that has fewer than 500 service connections)
CC	Corrosion control
Cl ₂	Oxidation (chlorine)
DDF	Direct and diatomite filtration
ED	Electrodialysis
GAC	Granular activated carbon
IX	Ion exchange
LIME	Lime softening
O/F	Oxidation/filtration
RO	Reverse osmosis
UV	Ultraviolet irradiation

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- d) At 40 CFR 141.62(d) ~~(2016)~~, USEPA identified the ~~following as the~~ affordable technology, treatment technique, or other means available to systems serving 10,000 persons or fewer for achieving compliance with the ~~MCL~~ maximum contaminant level for arsenic:

Small System Compliance Technologies (SSCTs)¹ for Arsenic²

Small system compliance technology	Affordable for listed small system categories ³
Activated alumina (centralized)	All size categories
Activated alumina (point-of-use) ⁴	All size categories
Coagulation/filtration ⁵	501 to 3,300 501-3,300 persons, 3,301 to 10,000 3,301-10,000 persons
Coagulation-assisted microfiltration	501 to 3,300 501-3,300 persons, 3,301 to 10,000 3,301-10,000 persons
Electrodialysis reversal ⁶	501 to 3,300 501-3,300 persons, 3,301 to 10,000 3,301-10,000 persons
Enhanced coagulation/filtration	All size categories
Enhanced lime softening (pH >10.5)	All size categories

Ion exchange Lime softening ⁵	All size categories 501 to 3,300 501-3,300 persons, 3,301 to 10,000 3,301-10,000 persons
Oxidation/filtration ⁷ Reverse osmosis (centralized) ⁶	All size categories 501 to 3,300 501-3,300 persons, 3,301 to 10,000 3,301-10,000 persons
Reverse osmosis (point-of-use) ⁴	All size categories

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- ¹ Section 1412(b)(4)(E)(ii) of ~~the federal~~ SDWA (42 USC 300g-1(b)(4)(E)(ii)) specifies that SSCTs must be affordable and technically feasible for a small system supplier.
- ² SSCTs for As^V. Pre-oxidation may be required to convert As^{III} to As^V.
- ³ ~~The federal~~ SDWA specifies three categories of small system suppliers: (1) those serving 25 or more, but fewer than 501 persons, (2) those serving more than 500 but fewer than 3,301 persons, and (3) those serving more than 3,300 but fewer than 10,001 persons. 42 U.S.C. 300g-1(b)(4)(E)(ii).
- ⁴ When a supplier uses POU or POE devices ~~are used~~ for compliance, the supplier must provide programs to ensure proper long-term operation, maintenance, and monitoring ~~must be provided by the water supplier~~ to ensure adequate performance.
- ⁵ A supplier will not likely install this technology ~~Unlikely to be installed~~ solely for arsenic removal. This technology may ~~May~~ require pH adjustment to optimal range to obtain ~~if high removals are needed~~.
- ⁶ This technology rejects ~~Technologies reject~~ a large volume of water and ~~may water~~ may not be appropriate for areas where water quantity is ~~may be~~ an issue.
- ⁷ To obtain high removals using this technology, the iron to arsenic ratio must be at least 20:1.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.62-~~(2016)~~.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.310 State-Only Maximum Contaminant Levels (MCLs) for Organic Chemical Contaminants

The following are State-only MCLs for organic chemical contaminants. ~~These~~ The State-only MCLs ~~for organic chemical contaminants in this Section~~ apply to all CWSs. A supplier must calculate compliance ~~They are additional State requirements. Compliance with these~~ the State-only MCLs in subsections (a) and (b) under ~~is calculated pursuant to~~ Subpart O ~~of this Part~~.

Contaminant	MCL (mg/ℓ)
Aldrin	0.001
DDT	0.05
Dieldrin	0.001
Heptachlor	0.0001
Heptachlor epoxide	0.0001
2,4-D	0.01

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 8081 BOARD NOTE: ~~This Section originally~~Originally derived from 40 CFR 141.12 (1992),
 8082 USEPA removed the last ~~entries from~~entry in subsections (a) and (b) and marked them reserved
 8083 at 57 Fed. Reg. 31838 (July 17, 1992). USEPA ~~entirely~~ removed ~~all of~~40 CFR 141.12 and
 8084 marked it "reserved" at 71 Fed. Reg. 388 (Jan. 4, 2006). ~~USEPA's~~USEPA added another listing
 8085 ~~of~~ organic ~~chemical~~ MCLs ~~are now~~ at 40 CFR 141.61, ~~which corresponds with Section~~
 8086 ~~611.311(2006)~~. ~~Different MCLs for heptachlor~~Heptachlor, heptachlor epoxide, and 2,4-D
 8087 appear in both this Section and ~~in~~ Section 611.311, ~~with a different MCL in each Section~~. The
 8088 heptachlor, heptachlor epoxide, and 2,4-D MCLs in this Section are Illinois limitations that are
 8089 more stringent than the federal requirements. However, detection of these contaminants or
 8090 violation of ~~the~~their federally-derived revised ~~MCLs in~~ Section 611.311 ~~MCLs~~ imposes more
 8091 stringent monitoring, reporting, and notice requirements.

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 8093 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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8095 **Section 611.311 Revised MCLs for Organic Chemical Contaminants**

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 8097 a) Volatile Organic Chemical Contaminants. The ~~following~~ MCLs for ~~volatile~~
 8098 ~~organic chemical contaminants~~ (VOCs) apply to CWS suppliers and NTNCWS
 8099 suppliers:-
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CAS No.	Contaminant	MCL (mg/ℓ)
71-43-2	Benzene	0.005
56-23-5	Carbon tetrachloride	0.005
95-50-1	o-Dichlorobenzene	0.6
106-46-7	p-Dichlorobenzene	0.075
107-06-2	1,2-Dichloroethane	0.005
75-35-4	1,1-Dichloroethylene	0.007
156-59-2	cis-1,2-Dichloroethylene	0.07
156-60-5	trans-1,2-Dichloroethylene	0.1
75-09-2	Dichloromethane (methylene chloride)	0.005
78-87-5	1,2-Dichloropropane	0.005
100-41-4	Ethylbenzene	0.7
108-90-7	Monochlorobenzene	0.1
100-42-5	Styrene	0.1

127-18-4	Tetrachloroethylene	0.005
108-88-3	Toluene	1
120-82-1	1,2,4-Trichlorobenzene	0.07
71-55-6	1,1,1-Trichloroethane	0.2
79-00-5	1,1,2-Trichloroethane	0.005
79-01-6	Trichloroethylene	0.005
75-01-4	Vinyl chloride	0.002
1330-20-7	Xylenes (total)	10

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~~BOARD NOTE: See the definition of "initial compliance period" at Section 611.101.~~

- b) USEPA ~~identifies~~ has identified, as indicated below, granular activated carbon (GAC), packed tower aeration (PTA), or oxidation (OX) as BAT for achieving compliance with the MCLs for ~~volatile organic chemical contaminants (VOCs)~~ and ~~synthetic organic chemical contaminants (SOCs)~~ in subsections (a) and (c), as indicated:-

CAS No.	Contaminant	MCL (mg/ℓ)
15972-60-8	Alachlor	GAC
116-06-3	Aldicarb*	GAC
1646-87-4	Aldicarb sulfone*	GAC
1646-87-3	Aldicarb sulfoxide*	GAC
1912-24-9	Atrazine	GAC
71-43-2	Benzene	GAC, PTA
50-32-8	Benzo(a)pyrene	GAC
1563-66-2	Carbofuran	GAC
56-23-5	Carbon tetrachloride	GAC, PTA
57-74-9	Chlordane	GAC
94-75-7	2,4-D	GAC
75-99-0	Dalapon	GAC
96-12-8	Dibromochloropropane	GAC, PTA
95-50-1	o-Dichlorobenzene	GAC, PTA
106-46-7	p-Dichlorobenzene	GAC, PTA
107-06-2	1,2-Dichloroethane	GAC, PTA
156-59-2	cis-1,2-Dichloroethylene	GAC, PTA
156-60-5	trans-1,2-Dichloroethylene	GAC, PTA
75-35-4	1,1-Dichloroethylene	GAC, PTA
75-09-2	Dichloromethane	PTA
78-87-5	1,2-Dichloropropane	GAC, PTA
103-23-1	Di(2-ethylhexyl)adipate	GAC, PTA
117-81-7	Di(2-ethylhexyl)phthalate	GAC

88-85-7	Dinoseb	GAC
85-00-7	Diquat	GAC
145-73-3	Endothall	GAC
72-20-8	Endrin	GAC
106-93-4	Ethylene dibromide (EDB)	GAC, PTA
100-41-4	Ethylbenzene	GAC, PTA
1071-53-6	Glyphosate	OX
76-44-8	Heptachlor	GAC
1024-57-3	Heptachlor epoxide	GAC
118-74-1	Hexachlorobenzene	GAC
77-47-3	Hexachlorocyclopentadiene	GAC, PTA
58-89-9	Lindane	GAC
72-43-5	Methoxychlor	GAC
108-90-7	Monochlorobenzene	GAC, PTA
23135-22-0	Oxamyl	GAC
87-86-5	Pentachlorophenol	GAC
1918-02-1	Picloram	GAC
1336-36-3	Polychlorinated biphenyls (PCB)	GAC
122-34-9	Simazine	GAC
100-42-5	Styrene	GAC, PTA
1746-01-6	2,3,7,8-TCDD	GAC
127-18-4	Tetrachloroethylene	GAC, PTA
108-88-3	Toluene	GAC
8001-35-2	Toxaphene	GAC
120-82-1	1,2,4-trichlorobenzene	GAC, PTA
71-55-6	1,1,1-Trichloroethane	GAC, PTA
79-00-5	1,1,2-trichloroethane	GAC, PTA
79-01-6	Trichloroethylene	GAC, PTA
93-72-1	2,4,5-TP	GAC
75-01-4	Vinyl chloride	PTA
1330-20-7	Xylene	GAC, PTA

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*See the Board note ~~at~~ appended to the end of this Section.

c) Synthetic Organic Chemical Contaminants. ~~The following~~ MCLs for SOCs apply to CWS and NTNCWS suppliers:-

CAS Number	Contaminant	MCL (mg/ℓ)
15972-60-8	Alachlor	0.002
116-06-3	Aldicarb*	0.002
1646-87-4	Aldicarb sulfone*	0.002
1646-87-3	Aldicarb sulfoxide*	0.004

1912-24-9	Atrazine	0.003
50-32-8	Benzo(a)pyrene	0.0002
1563-66-2	Carbofuran	0.04
57-74-9	Chlordane	0.002
94-75-7	2,4-D	0.07
75-99-0	Dalapon	0.2
96-12-8	Dibromochloropropane	0.0002
103-23-1	Di(2-ethylhexyl)adipate	0.4
117-81-7	Di(2-ethylhexyl)phthalate	0.006
88-85-7	Dinoseb	0.007
85-00-7	Diquat	0.02
145-73-3	Endothall	0.1
72-20-8	Endrin	0.002
106-93-4	Ethylene dibromide	0.00005
1071-53-6	Glyphosate	0.7
76-44-8	Heptachlor	0.0004
1024-57-3	Heptachlor epoxide	0.0002
118-74-1	Hexachlorobenzene	0.001
77-47-4	Hexachlorocyclopentadiene	0.05
58-89-9	Lindane	0.0002
72-43-5	Methoxychlor	0.04
23135-22-0	Oxamyl (Vydate)	0.2
87-86-5	Pentachlorophenol	0.001
1918-02-1	Picloram	0.5
1336-36-3	Polychlorinated biphenyls (PCBs)	0.0005
122-34-9	Simazine	0.004
1746-01-6	2,3,7,8-TCDD (Dioxin)	0.00000003
8001-35-2	Toxaphene	0.003
93-72-1	2,4,5-TP	0.05

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* See the Board note ~~at appended to~~ the end of this Section.

BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.61. ~~See the definition of "initial compliance period" at Section 611.101.~~ More stringent state MCLs for 2,4-D, heptachlor, and heptachlor epoxide appear at Section 611.310. ~~See the Board Note at that provision.~~ In 40 CFR 141.6(g), USEPA postponed the effectiveness of the MCLs for aldicarb, aldicarb sulfone, and aldicarb sulfoxide until it took further action on those MCLs. See 40 CFR 141.6(g) and 57 Fed. Reg. 22178 (May 27, 1992). USEPA ~~later has~~ since stated that it ~~anticipated~~anticipates taking no action until 2005 on a federal national primary drinking water regulation (NPDWR) applicable to the aldicarbs. 68 Fed. Reg. 31108 (May 27, 2003). In 2005, USEPA indicated no projected date for final action on the aldicarbs. See 70 Fed. Reg. 27501, 671 (May 16, 2005). An entry for the aldicarbs last appeared in USEPA's Spring 2007 semiannual regulatory agenda, indicating no

8131 projected dates for further action. See 72 Fed. Reg. 23156, 97 (Apr. 30, 2007); see also
8132 72 Fed. Reg. 70118, 23 (Dec. 10, 2007) (the first USEPA regulatory agenda that included
8133 no entry for the aldicarbs). As of early 2022, USEPA did not include the aldicarbs
8134 among the NPDWRs on its webpage. USEPA, Ground Water and Drinking Water,
8135 National Primary Drinking Water Regulations (www.epa.gov/ground-water-and-
8136 drinking-water/national-primary-drinking-water-regulations; accessed February 16,
8137 2022). While the Board must maintain entries for aldicarb, aldicarb sulfoxide, and
8138 aldicarb sulfone to maintain consistency with the literal text ~~letter~~ of the federal
8139 rules ~~regulations~~ (see Sections 7.2 and 17.5 of the Act; 42 USC 300g-2; 40 CFR 142.10),
8140 the Board intends that no aldicarb requirements apply in Illinois until after USEPA
8141 adopts such requirements, and the Board removes ~~has removed~~ this statement.
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8143 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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8145 **Section 611.312 Maximum Contaminant Levels (MCLs) for Disinfection Byproducts**
8146 **(DBPs)**

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8148 a) Bromate and Chlorite. MCLs ~~The maximum contaminant levels (MCLs)~~ for
8149 bromate and chlorite apply to CWS and NTNCWS suppliers ~~are as follows:~~
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Disinfection Byproduct	MCL (mg/l)
Bromate	0.010
Chlorite	1.0

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8152 1) ~~Compliance dates for CWSs and NTNCWSs.~~ A Subpart B system
8153 supplier ~~that serves 10,000 or more persons~~ must comply with this
8154 subsection (a). ~~A Subpart B system supplier that serves fewer than 10,000~~
8155 ~~persons and systems using only groundwater not under the direct influence~~
8156 ~~of surface water must comply with this subsection (a).~~
8157
8158 2) USEPA identifies ~~has identified the following as the~~ best available
8159 technology, treatment techniques, or other means available for achieving
8160 compliance with the MCLs ~~maximum contaminant levels~~ for bromate and
8161 chlorite ~~identified in this subsection (a):~~

Disinfection Byproduct	Best Available Technology
Bromate	<u>Controlling the</u> Control of ozone treatment process to reduce <u>bromate</u> production of bromate.
Chlorite	<u>Controlling the</u> Control of treatment processes to reduce disinfectant demand

and ~~controlling the control of~~ disinfection treatment processes to reduce disinfectant levels.

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b) TTHM and HAA5

- 1) ~~A supplier must comply with the Compliance Dates. The~~ Subpart Y MCLs for TTHM and HAA5 ~~must be complied with~~ as a locational running annual average at each monitoring location, ~~as required in~~ Section 611.970(c) ~~requires~~.

Disinfection Byproduct	MCL (mg/ℓ)
Total trihalomethanes (TTHM)	0.080
Haloacetic acids (five) (HAA5)	0.060

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- 2) USEPA ~~identifies~~ ~~has identified the following as~~ the best available technology, treatment techniques, or other means available for ~~complying~~ ~~achieving compliance~~ with the ~~MCLs~~ ~~maximum contaminant levels~~ for TTHM and HAA5 ~~identified in this subsection (b)(2)~~ for any supplier ~~disinfecting~~ ~~that disinfects~~ its source water:

Disinfection Byproduct	Best Available Technology
Total trihalomethanes (TTHM) and Haloacetic acids (five) (HAA5)	Enhanced coagulation or enhanced softening, plus GAC10; or nanofiltration with a molecular weight cutoff ≤ 1000 Daltons; or GAC20.

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- 3) USEPA ~~identifies~~ ~~has identified the following as~~ the best available technology, treatment techniques, or other means available for achieving compliance with the ~~MCLs~~ ~~maximum contaminant levels for~~ TTHM and HAA5 ~~identified in this subsection (b)(2)~~ for consecutive systems, ~~which only apply and applies only~~ to the disinfected water that a consecutive system buys or otherwise receives from a wholesale system:

Disinfection Byproduct	Best Available Technology
Total trihalomethanes (TTHM) and	Any system servicing that serves 10,000 or more

Haloacetic acids (five)
(HAA5)

persons: Improved distribution system and storage tank management to reduce residence time, plus ~~using the use of~~ chloramines for disinfectant residual maintenance; or Any system ~~servicing that serves~~ fewer than 10,000 persons: Improved distribution system and storage tank management to reduce residence time.

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BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.64.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.313 Maximum Residual Disinfectant Levels (MRDLs)

a) ~~Maximum residual disinfectant levels (MRDLs) are as follows:~~

Disinfectant residual	MRDL (mg/ℓ)
Chlorine	4.0 (as Cl ₂)
Chloramines	4.0 (as Cl ₂)
Chlorine dioxide	0.8 (as ClO ₂)

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b) ~~Compliance Dates~~

- 1) CWSs and NTNCWSs. A Subpart B system ~~supplier serving 10,000 or more persons~~ must comply with this Section. ~~A Subpart B system supplier serving fewer than 10,000 persons or a supplier using only groundwater not under the direct influence of surface water must comply with this Section.~~
- 2) Transient NCWSs. A Subpart B system supplier ~~serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant~~ must comply with the chlorine dioxide MRDL. ~~A Subpart B system supplier serving fewer than 10,000 persons and using chlorine dioxide as a disinfectant or oxidant or a supplier using only groundwater not under the direct influence of surface water and using chlorine dioxide as a~~

~~disinfectant or oxidant must comply with the chlorine dioxide MRDL.~~

- c) ~~USEPA identified~~The following are identified as the best technology, treatment techniques, or other means available for ~~complying~~achieving compliance with the ~~MRDLs~~maximum residual disinfectant levels identified in subsection (a): ~~controlling~~control of treatment processes to reduce disinfectant demand and ~~controlling~~control of disinfection treatment processes to reduce disinfectant levels.

BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.65.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.325 Microbiological Contaminants

- a) A supplier ~~complies~~is in compliance with the MCL for E. coli for samples taken under ~~the provisions of~~ Subpart AA, unless any of the conditions identified in subsections (a)(1) through (a)(4) occur. For purposes of ~~the~~ public notification ~~under requirements in~~ Subpart V, ~~violating~~violation of the MCL may pose an acute risk to human health.

- 1) The supplier has an E. coli-positive repeat sample following a total coliform-positive routine sample.
- 2) The supplier has a total coliform-positive repeat sample following an E. coli-positive routine sample.
- 3) The supplier fails to take all required repeat samples following an E. coli-positive routine sample.
- 4) The supplier fails to test for E. coli when any repeat sample tests positive for total coliform.

- b) A supplier must determine ~~whether it complies~~compliance with the MCL for E. coli in subsection (a) for each month ~~during~~in which ~~the supplier must~~it is ~~required to~~ monitor for total coliforms.

- c) ~~USEPA identified the best technology, treatment techniques, or other means for~~complying~~BATs for achieving compliance~~ with the MCL maximum contaminant level for E. coli in subsection (a) ~~are the following~~:

- 1) ~~Protecting~~Protection of wells from fecal contamination by appropriate placement and construction;

- 8253 2) ~~Maintaining~~Maintenance of RDC throughout the distribution system;
- 8254
- 8255 3) ~~Properly maintaining~~Proper maintenance of the distribution system,
8256 including appropriate pipe replacement and repair procedures, main
8257 flushing programs, ~~properly operating and maintaining~~proper operation
8258 ~~and maintenance~~ of storage tanks and reservoirs, cross-connection control,
8259 and ~~continually maintaining~~continual maintenance positive water pressure
8260 in all parts of the distribution system;
- 8261
- 8262 4) ~~Filtering~~Filtration and ~~disinfecting~~disinfection of surface water, as
8263 ~~described in~~ Subparts B, R, X, and Z ~~describe of this Part~~, or ~~disinfecting~~disinfection
8264 ~~of~~ groundwater, as ~~described in~~ Subpart S ~~describes~~, using a
8265 strong ~~oxidant like~~oxidants such as chlorine, chlorine dioxide, or ozone; or
- 8266
- 8267 5) For ~~a systems~~systems using groundwater, ~~complying~~compliance with
8268 ~~permit conditions the Agency imposes under~~ the USEPA-endorsed Illinois
8269 ~~wellhead protection program, after USEPA approves the program.~~

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8271 BOARD NOTE: USEPA requires the supplier to comply with the
8272 wellhead protection program. The Illinois program operates under the
8273 Illinois Groundwater Protection Act [415 ILCS 55]. USEPA endorses,
8274 rather than approves, state groundwater protection programs and
8275 periodically reviews those programs with the state. See “Final
8276 Comprehensive State Ground Water Protection Program Guidance”,
8277 USEPA, Office of the Administrator, doc. no. EPA 100-R-93-001 (Dec.
8278 1992), at p. 1-21 & n. 4 and pp. 1-24 and 1-25. Section 18(a) of the Act
8279 requires a supplier to operate under an Agency-issued permit. Other
8280 Illinois laws may require a permit for a groundwater well. E.g., Sections
8281 5(b), 5b, and 6 of the Illinois Water Well Construction Code [415 ILCS
8282 30/5(b), 5b, and 6].

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- 8284 d) USEPA ~~identifies~~has identified, pursuant to ~~42 USC 300g-1~~, the technology,
8285 treatment techniques, or other means ~~available~~identified in subsection (c) as
8286 affordable technology, treatment techniques, or other means available to suppliers
8287 serving 10,000 or fewer people for achieving compliance with the ~~MCL~~ for E.
8288 coli MCL in subsection (a).

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8290 BOARD NOTE: This subsection (a) derives from 40 CFR 141.63(c), subsection (b)
8291 derives from the second sentence of 40 CFR 141.63(d), and subsection (c) derives from
8292 40 CFR 141.63(e). The Board omits 40 CFR 141(a) and (b) and the first sentence of 40
8293 CFR 141.63(d), which expired by their own terms March 31, 2016~~Derived from 40 CFR~~
8294 141.63 (2016).

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(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.330 Maximum Contaminant Levels for Radionuclides

- a) This subsection (a) corresponds with 40 CFR 141.66(a), marked reserved by USEPA. This statement maintains structural consistency with USEPA rules.
- b) MCL for Combined Radium-226 and -228. The ~~MCL maximum contaminant level~~ for combined radium-226 and radium-228 is 5 pCi/l. ~~Determine the~~The combined radium-226 and radium-228 value ~~is determined by adding the addition~~ of the results of ~~analyses the analysis~~ for radium-226 and ~~the analysis for~~ radium-228.
- c) MCL for Gross Alpha Particle Activity (Excluding Radon and Uranium). The ~~MCL maximum contaminant level~~ for gross alpha particle activity (including radium-226 but excluding radon and uranium) is 15 pCi/l.
- d) MCL for Beta Particle and Photon Radioactivity
 - 1) The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in drinking water must not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year (mrem/year).
 - 2) Except for the radionuclides ~~listed in this subsection (d)(2) the following table, the supplier must calculate~~ the concentration of man-made radionuclides causing 4 mrem total body or organ dose equivalents ~~must be calculated~~ on the basis of two liters per day drinking water intake, using the 168-hour data list ~~set forth~~ in NBS Handbook 69 (63), incorporated by reference in Section 611.102. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ must not exceed 4 mrem/year.

Average Annual Concentrations Assumed to Produce a Total Body or Organ Dose of 4 mrem/yr

Radionuclide	Critical organ	pCi per liter
1. Tritium	Total body	20,000
2. Strontium-90	Bone marrow	8

BOARD NOTE: USEPA listed factors for computing the fraction of the maximum permissible annual dose of 4 mrem/yr based on NBS Handbook 69 (63) in Appendix I

(Comparison of Derived Values of Beta and Photon Emitters), Implementation Guidance for Radionuclides, EPA 816-F-00-002. The units for these factors allow direct use for computing fractional dose equivalents. The Board listed USEPA’s conversion factors in Table R, including information about applying the factors to determine compliance.

- e) MCL for Uranium. The ~~MCL~~maximum contaminant level for uranium is 30 µg/l.
- f) ~~Compliance Dates for~~ Combined Radium-226 and -228, Gross Alpha Particle Activity, Gross Beta Particle and Photon Radioactivity, and Uranium. A CWS supplier must comply with the MCLs listed in subsections (b) through (e), ~~determining and~~ compliance must be determined in accordance with the requirements of Subpart Q provides.
- g) Best Available Technologies (BATs) for Radionuclides. USEPA ~~identifies~~has identified the technologies indicated in the following table as the BAT for ~~complying~~achieving compliance with the MCLs for combined radium-226 and -228, uranium, gross alpha particle activity, and beta particle and photon radioactivity:-

BAT for Combined Radium-226 and Radium-228, Uranium, Gross Alpha Particle Activity, and Beta Particle and Photon Radioactivity

Contaminant	BAT
1. Combined radium-226 and radium-228	Ion exchange, reverse osmosis, lime softening-
2. Uranium	Ion exchange, reverse osmosis, lime softening, coagulation/ filtration-
3. Gross alpha particle activity (excluding radon <u>Radon</u> and uranium <u>Uranium</u>)	Reverse osmosis-
4. Beta particle and photon radioactivity	Ion exchange, reverse osmosis-

- h) Small Systems Compliance Technologies List for Radionuclides. USEPA identified BAT as affordable technology, treatment techniques, or other means available to suppliers serving 10,000 or fewer people for achieving compliance with the radionuclides MCLs in subsections (a) through (e).

List of Small Systems Compliance Technologies for Radionuclides and Limitations to Use

Unit technologies	Limitations (see footnotes)	Operator skill level required ¹	Raw water quality range and considerations ¹
1. Ion exchange (IE)	(a)	Intermediate	All ground waters-
2. Point of use (POU ²) IE	(b)	Basic	All ground waters-
3. Reverse osmosis (RO)	(c)	Advanced	Surface waters usually require pre-filtration-
4. POU ² RO	(b)	Basic	Surface waters usually require pre-filtration-
5. Lime softening	(d)	Advanced	All waters-
6. Green sand filtration	(e)	Basic	
7. Co-precipitation with Barium sulfate	(f)	Intermediate to advanced Advanced	Ground waters with suitable water quality-
8. Electrodialysis / electro dialysis reversal		Basic to intermediate Intermediate	All ground waters-
9. Pre-formed hydrous Manganese oxide filtration	(g)	Intermediate	All ground waters-
10. Activated alumina	(a), (h)	Advanced	All ground waters; competing anion concentrations may affect regeneration frequency-
11. Enhanced coagulation/ filtration	(i)	Advanced	Can treat a wide range of water qualities-

1 National Research Council (NRC). "Safe Water from Every Tap: Improving Water Service to Small Communities", National Academy Press, Washington, D.C. 1997.

2 A POU, or "point-of-use" technology is a treatment device ~~installed~~ at a single consumer's tap ~~used~~ for ~~the purpose of~~ reducing contaminants in drinking water at that ~~one~~ tap. POU devices are typically on a installed at the kitchen tap. BOARD NOTE: USEPA refers ~~the reader~~ to the notice of data availability (NODA) at 66 Fed. Reg. 21576 (April 21, 2000) for ~~more~~ details.

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Limitations Footnotes: Technologies for Radionuclides:

- (a) The regeneration solution contains high concentrations of the contaminant ions. A supplier should carefully consider disposal~~Disposal~~ options ~~should be carefully considered~~ before choosing this technology.
- (b) When a supplier uses POU devices ~~to comply are used for compliance, the supplier must provide~~ programs for long-term operation, maintenance, and monitoring ~~must be provided by water utility~~ to ensure proper performance.
- (c) The supplier should carefully consider reject~~Reject~~ water disposal options ~~should be carefully considered~~ before choosing this technology.

BOARD NOTE: In corresponding 40 CFR 141.66, Table C, footnote c states in part ~~as follows~~: "See other RO limitations described in the SWTR Compliance Technologies Table." USEPA based Table C ~~was based in significant part~~ on "Table 13. – Technologies for Radionuclides" ~~appearing that appears~~ at 63 Fed. Reg. 42032, 42043 (Aug. 6, 1998). Table 13 refers to "Table 2. – SWTR Compliance Technology Table: Filtration". That Table 2, at 63 Fed. Reg. at 42036, lists the limitations on RO ~~as follows~~:

- d Blending (combining treated water with untreated raw water) cannot be practiced at risk of increasing microbial concentrations in finished water.
- e Post-disinfection recommended as a safety measure and for residual maintenance.
- f Post-treatment corrosion control will be needed prior to distribution.

- 8391 (d) The combination of variable source water quality and the complexity of
8392 the water chemistry involved may make this technology too complex for a
8393 small surface water systems~~systems~~.
- 8394
- 8395 (e) Removal efficiencies can vary depending on water quality.
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- 8397 (f) This technology may be very limited in application to small systems.
8398 Since the process requires static mixing, detention basins, and filtration, it
8399 is most applicable to systems with sufficiently high sulfate levels that
8400 already have a suitable filtration treatment train in place.
- 8401
- 8402 (g) This technology is most applicable to small systems that already have
8403 filtration in place.
- 8404
- 8405 (h) Handling ~~of~~ chemicals required during regeneration and pH adjustment
8406 may be too difficult for small systems without an adequately trained
8407 operator.
- 8408
- 8409 (i) Assumes modification of~~to~~ a coagulation/filtration process already in
8410 place.
- 8411

Compliance Technologies by System Size Category
for Radionuclide NPDWRs

Compliance Technologies⁺ for System Size Categories
(Population Served)

Contaminant	25-500	501-3,300	3,300-10,000
1. Combined radium-226 and radium-228	1, 2, 3, 4, 5, 6, 7, 8, 9	1, 2, 3, 4, 5, 6, 7, 8, 9	1, 2, 3, 4, 5, 6, 7, 8, 9
2. Gross alpha particle activity	3, 4	3, 4	3, 4
3. Beta particle activity and photon activity	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4
4. Uranium	1, 2, 4, 10, 11	1, 2, 3, 4, 5, 10, 11	1, 2, 3, 4, 5, 10, 11

Note:

⁺Numbers correspond to the numbered~~those~~ technologies ~~found listed~~ in the above table, "List of Small Systems Compliance Technologies for Radionuclides and Limitations to Use", set

8417 ~~forth above.~~

8418
8419 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.66.

8420
8421 (Source: Amended at 47 Ill. Reg. _____, effective _____)

8422
8423 SUBPART G: LEAD AND COPPER

8424
8425 **Section 611.350 General Requirements**

8426
8427 a) Applicability and Scope

8428
8429 1) ~~Applicability of and Complying with this Subpart G. This~~The
8430 ~~requirements of this~~ Subpart G ~~and Subpart AG constitute NPDWRs~~
8431 ~~constitute national primary drinking water regulations~~ for lead and copper.
8432 This Subpart G ~~and Subpart AG apply~~applies to all ~~community water~~
8433 ~~systems (CWSs)~~ and ~~non-transient, non-community water systems~~
8434 ~~(NTNCWSs)~~.

8435
8436 A) A supplier must comply with this Subpart G beginning no later
8437 than October 16, 2024, except as otherwise required by Section
8438 611.351, 622.354, 611.385, 611.386, or 611.360.

8439
8440 B) If the Agency issued a SEP before December 16, 2021, that expires
8441 on or after October 16, 2024, and the SEP exempts a supplier
8442 under any rule in former Subpart G (now redesignated Subpart
8443 AG), the supplier must comply with this Subpart G after the SEP
8444 expires, regardless of subsection (a)(1)(A). If the SEP expires
8445 before October 16, 2024, the supplier must comply with this
8446 Subpart G as required by subsection (a)(1)(A).

8447
8448 C) The Agency may issue a SEP requiring a supplier to comply with
8449 specified rules in this Subpart G before subsection (a)(1)(A) or
8450 (a)(1)(B) otherwise requires or as necessary to address issues in a
8451 notice the Agency received from USEPA under 40 CFR 142.23 or
8452 142.30. The SEP must specify the rules in this Subpart G with
8453 which the supplier must comply and their counterparts in Subpart
8454 AG with which the supplier needs no longer comply. The supplier
8455 must comply with the SEP-specified Subpart G rules in lieu of
8456 their counterparts in Subpart AG.

8457
8458 BOARD NOTE: This subsection (a)(1) derives from 40 CFR 141.80(a).
8459 USEPA’s Lead and Copper Rules Revisions (LCRR) apply to all suppliers

8460 on December 16, 2021. However, USEPA delays complying with LCRR
8461 until October 16, 2024, when any previously granted exemption expires,
8462 or as provided otherwise by any of several specified rules for corrosion
8463 control treatment; lead service line replacement; public education,
8464 supplemental monitoring, and mitigation; monitoring; and reporting
8465 (corresponding with 35 Ill. Adm. Code 611.351, 622.354, 611.355,
8466 611.356, or 611.360). Until a supplier must comply with the LCRR,
8467 USEPA requires the supplier to comply with subpart I of 40 CFR 141
8468 (2020). This requires the Board to codify two versions of the Lead and
8469 Copper Rule: one in Subpart AG, representing the Lead and Copper Rules
8470 prior to the LCRR (40 CFR 141 (2020)), and the other in this Subpart G,
8471 representing 40 CFR 141 incorporating the LCRR.

8472
8473 2) Scope. This Subpart G establishes a treatment technique ~~including that~~
8474 ~~includes~~ requirements for corrosion control treatment, source water
8475 treatment, lead service line inventory, replacing lead service lines~~line~~
8476 replacement, public notice, monitoring for lead in schools and child care
8477 facilities, and public education. ~~Lead~~~~These requirements are triggered, in~~
8478 ~~some cases, by lead~~ and copper action levels and the lead trigger
8479 level measured in samples collected at consumers' taps prompt these
8480 requirements. The rules in this Subpart G requiring lead sampling in
8481 schools and child care facilities and public education apply to all CWS
8482 results.

8483
8484 b) Definitions. For ~~the purposes of only~~ this Subpart G only, this subsection (b)
8485 defines certain~~the following~~ terms ~~have the following meanings:~~

8486
8487 "Action level" means ~~the computed~~~~that~~ concentration of lead or copper in
8488 water ~~computed~~ under subsection (c) determining applicability of~~that~~
8489 ~~determines, in some cases, the~~ treatment requirements under~~of~~ this
8490 Subpart G ~~that a supplier must complete.~~ The action level for lead is
8491 0.015 mg/l, and the. ~~The~~ action level for copper is 1.3 mg/l.

8492
8493 "Aerator" means the device embedded in a water faucet to enhance air
8494 flow in the water stream and prevent splashing.

8495
8496 "Child care facility" means a facility providing child care, day care, or
8497 early learning services to children under a license issued by a competent
8498 State or local agency.

8499 BOARD NOTE: See, e.g., the Child Care Act of 1969 [225 ILCS 10].

8500
8501 "Corrosion inhibitor" means a substance that can reduce~~capable of~~
8502 ~~reducing the~~ corrosivity of water toward metal plumbing materials,

8503 especially lead and copper, by forming a protective film on the interior
8504 surface of those materials.

8505
8506 "Effective corrosion inhibitor residual" means a concentration of corrosion
8507 inhibitor in the drinking water sufficient to form a passivating film on the
8508 interior walls of a pipe.

8509
8510 "Elementary school" means a school State and local practice classifies as
8511 elementary and comprising any span of grades (including pre-school) to
8512 grade 8.

8513
8514 "Exceed" or "exceedance", ~~relative as this term is applied~~ to either the lead
8515 or the copper action level, means that the 90th percentile
8516 concentration level of the ~~supplier's~~ samples the supplier collected during a
8517 six-month tap monitoring ~~cycle period~~ is greater than the lead or copper
8518 action level ~~for that contaminant~~.

8519
8520 "Fifth-liter tap sample" means a one-liter tap water sample a supplier
8521 collects under Section 611.356(b).

8522
8523 "Find-and-fix" means the requirements under this Subpart G that water
8524 systems must perform at every tap sampling site yielding a lead result
8525 above 15 µg/ℓ.

8526
8527 "First-draw tap~~First draw~~ sample" means the first one-liter sample of tap
8528 water a supplier collects under,~~collected in accordance with~~ Section
8529 611.356(b)(2), ~~that has been standing in plumbing pipes for at least six~~
8530 ~~hours and which is collected without flushing the tap.~~

8531
8532 "Full lead service line replacement" means replacing a lead service line (as
8533 well as galvanized service lines requiring replacement) resulting in the
8534 entire length of the service line, regardless of service line ownership,
8535 complying with Section 611.126 at the time of replacement. A full lead
8536 service line replacement includes replacing a service line having only one
8537 portion that is lead, like a service line previously subject to a partial lead
8538 service line replacement, as long as the entire service line complies with
8539 Section 611.126 after the replacement. A full lead service line
8540 replacement requires replacing galvanized service lines downstream of a
8541 lead service line. A full lead service line replacement could leave a lead
8542 service line in place in the ground but out-of-service if using a new non-
8543 lead service line replaces the out-of-service lead service line.

8544

8545 "Galvanized requiring replacement" refers to a galvanized service line
8546 Section 611.354(a)(4)(B) describes.
8547 BOARD NOTE: This definition derives from 40 CFR 141.84(a)(4)(ii) for
8548 a term used in various rules.

8549
8550 "Galvanized service line" means iron or steel piping zinc-dipped to
8551 prevent corrosion and rusting.

8552
8553 "Gooseneck, pigtail, or connector" is a short section of flexible piping,
8554 typically not exceeding two feet, connecting segments of rigid service
8555 piping. Lead goosenecks, pigtails, and connectors are not part of the lead
8556 service line, but Section 611.354(c) may require replacing them.

8557
8558 "Large ~~supplier~~system" means a ~~supplier~~water system that regularly
8559 servingserves water to more than 50,000 persons.

8560
8561 "Lead service line" means a ~~portion of pipe~~service line made of lead
8562 ~~connecting that connects~~ the water main to the building inlet, ~~including any~~
8563 ~~lead pigtail, gooseneck, or other fitting that is connected to such lead line.~~
8564 The water system, property owner, or both may own a lead service line. A
8565 galvanized service line is a lead service line if ever downstream of any
8566 lead service line or service line of unknown material. If the only lead
8567 piping serving a home is a lead gooseneck, pigtail, or connector that is not
8568 a galvanized service line that is a lead service line, the service line is not a
8569 lead service line. Under Section 611.356(a) only, a galvanized service line
8570 is not a lead service line.

8571
8572 "Lead status unknown service line" means a service line that not shown to
8573 comply with Section 611.126. Physically verifying the material
8574 composition is not necessary (for example, copper or plastic) of a service
8575 line for its lead status to be identified (e.g., records demonstrating the
8576 service line was installed after a municipal, State, or Federal lead ban).
8577 BOARD NOTE: See the description of "lead status unknown" in Section
8578 611.354(a)(4)(D).

8579
8580 "Lead trigger level" means a particular concentration of lead in water that
8581 prompts certain activities under this Subpart G. The trigger level for lead
8582 is a concentration of 10 µg/ℓ.

8583
8584 "Maximum permissible concentration" or "MPC" means ~~the~~that
8585 concentration of lead or copper ~~in~~for finished water entering the supplier's
8586 distribution system, ~~which designated by~~ the Agency ~~designates in~~by a
8587 SEP ~~based on~~that reflects the contaminant removal ~~ability~~capability of the

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treatment properly operated and maintained.

BOARD NOTE: ~~This definition derives~~Derived from 40 CFR 141.83(b)(4). (See Section 611.353(b)(4)(B).)

~~"Medium-sized system" means a water system that regularly serves water to more than 3,300 up to 50,000 or fewer persons.~~

"Meet" ~~or comply with~~, ~~relating as this term is applied~~ to either the lead or the copper action level, means that the 90th percentile ~~concentration level~~ of the supplier's samples collected during a six-month ~~tap~~ monitoring ~~cycle period~~ is less than or equal to the ~~lead or copper~~ action level ~~for that contaminant~~.

~~"Method detection limit" or "MDL" is as defined at Section 611.646(a). The MDL for lead is 0.001 mg/l. The MDL for copper is 0.001 mg/l, or 0.020 mg/l by atomic absorption direct aspiration method. BOARD NOTE: Derived from 40 CFR 141.89(a)(1)(iii).~~

~~"Mid-sized supplier" means a supplier regularly serving water to more than 10,000 persons up to 50,000 persons.~~

~~"Monitoring period" means any of the six-month periods of time during which a supplier must complete a cycle of monitoring under this Subpart G.~~

~~BOARD NOTE: USEPA refers to these as "monitoring periods". The Board uses "six-month monitoring period" to avoid confusion with "compliance period", as used elsewhere in this Part and defined at Section 611.101.~~

"Multiple-family residence" means a building ~~in which multiple families that is~~ currently ~~reside used as a multiple-family residence~~, but not one that is also a "single-family structure".

"90th percentile ~~concentration level~~" means ~~the that~~ concentration of lead or copper ~~the supplier computes under subsection (c)(4) using the results of tap water sampling under Section 611.356~~ ~~contaminant exceeded by ten percent or fewer of all samples collected during a six-month monitoring period under Section 611.356 (i.e., that concentration of contaminant greater than or equal to the results obtained from 90 percent of the samples). The 90th percentile levels for copper and lead must be determined under subsection (c)(3).~~

BOARD NOTE: ~~This definition derives~~Derived from 40 CFR 141.80(c)(4).

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"Optimal corrosion control treatment" or "OCCT" means the corrosion control treatment minimizing that minimizes the lead and copper concentrations at users' taps while ensuring that the treatment will does not ~~cause the water system to~~ violate any national primary drinking water regulations.

"Partial lead service line replacement" means replacing any portion of a lead service line or galvanized requiring replacement service line leaving any length of the lead service line or galvanized requiring replacement service line in service and requiring replacement upon completion of the work. Section 141.84(d) allows partial lead service line replacements, but these do not count towards the mandatory or goal-based lead service line replacement rate under Section 611.384.

"Pitcher filter" means a non-plumbed water filtration device consisting of a gravity fed water filtration cartridge and a filtered drinking water reservoir that is certified by its manufacturer, importer, or accredited third-party certifying body as complying with NSF/ANSI 53 as in effect on the date of manufacture or import.

BOARD NOTE: NSF/ANSI 53 is the health-based standard for lead and several other contaminants for water filter devices, including pitcher filter-type devices. Identifying a device as certified under NSF/ANSI 53 at the time of purchase is possible. NSF maintains an on-line list of certified devices at info.nsf.org/Certified/dwtu/listings_leadreduction.asp. See the definition of "accredited third-party certifying body" in 35 Ill. Adm. Code 611.126(b) relating to NSF/ANSI 372.

"Practical quantitation limit" or "PQL" means the lowest concentration of an analyte (substance) a contaminant that a well-operated laboratory can measure with a high degree of confidence that the analyte is present at or above that concentration reliably achieve within specified limits of precision and accuracy during routine laboratory operating conditions. ~~The PQL for lead is 0.005 mg/l. The PQL for copper is 0.050 mg/l.~~

BOARD NOTE: This definition derives ~~Derived~~ from 40 CFR 141.89(a)(1)(ii) and (a)(1)(iv).

"Pre-stagnation flushing" means opening taps to flush standing water from plumbing before a minimum six-hour stagnation period before lead and copper tap sampling under Subpart G.

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"School" means any building or building complex associated with public, private, or charter institutions primarily educating elementary or secondary students.

"Secondary school" means a school comprising any span of grades beginning with the next grade following an elementary or middle school (usually 7, 8, or 9) and ending with or below grade 12. This definition includes both junior high schools and senior high schools.

"Service line sample" means a one-liter sample of water, collected in accordance with Section 611.356(b)(3), that has been standing for at least six hours in a service line.

"Single-family structure" means a building ~~that was~~ constructed as a residence for a single-family ~~that the occupant residence and which is~~ currently ~~uses~~used as ~~either~~ a residence or a place of business.

"Small system supplier" or "small CWS supplier" means a CWS serving 10,000 or fewer persons.

BOARD NOTE: A small CWS is a small supplier that is a CWS. This definition derives from the preamble of 40 CFR 141.93. Corresponding Section 611.363 distinguishes a small CWS supplier from an NTNCWS supplier.

"Small ~~supplier~~system" means a ~~supplier~~water system that regularly ~~serving~~serves water to ~~10,000~~3,300 or fewer persons.

BOARD NOTE: USEPA did not revise its corresponding definition of "small water system" in 40 CFR 141.2 from 3,300 or fewer to 10,000 or fewer persons. This creates an inconsistency the Board corrected.

"Source water monitoring period" means any of the six-month periods during which a supplier must complete source water monitoring under Section 611.358.

BOARD NOTE: The Board added this definition to avoid confusion with "tap sampling period," "tap monitoring cycle", and "water quality monitoring period", as used under this Subpart G, and "compliance period" and "compliance cycle", as used elsewhere in this Part and Section 611.101 defines.

"Supplier not applying corrosion control treatment" means a PWS not fulfilling either of two conditions or purchasing all of its water from a supplier not fulfilling either of two conditions:

8714 Neither the PWS nor the supplier providing its water has Agency-
8715 approved optimal corrosion control treatment; or

8716
8717 No other water quality adjustment in either the PWS's or the
8718 supplier's treatment train infrastructure includes adjusting pH or
8719 alkalinity or adding corrosion inhibitor.

8720
8721 "Tap monitoring cycle" means the term when a supplier must sample taps
8722 for lead and copper analyses. The lead and copper concentrations in tap
8723 samples determines the tap monitoring cycle, and the frequency can range
8724 from every six months (i.e., semi-annually) to once every nine years. A
8725 supplier semi-annually sampling taps must collect samples no less
8726 frequently than every six months, while a supplier annually sampling taps
8727 must sample no less frequently than every year. A supplier triennially
8728 sampling taps must collect samples no less frequently than every three
8729 years, and a supplier sampling taps under an Agency-issued waiver must
8730 sample no less frequently than every nine years. The start of each new tap
8731 monitoring cycle, with the exception of semi-annual monitoring, must
8732 begin on January 1.

8733 BOARD NOTE: This term is equivalent to "tap sampling monitoring
8734 period" in 40 CFR 141. "Tap monitoring cycle" describes sampling
8735 frequency.

8736
8737 "Tap sampling period" means the period within a tap monitoring cycle
8738 when the supplier must collect samples for lead and copper analysis. For a
8739 supplier sampling at a reduced frequency, the supplier must sample taps
8740 between June and September, unless the Agency issues a SEP approving a
8741 different four-month period.

8742 BOARD NOTE: "Tap sampling period" describes when the supplier
8743 collects samples.

8744
8745 "Tap sampling protocol" means the instructions a supplier gives to
8746 residents or those sampling on the supplier's behalf to sample taps under
8747 this Subpart G.

8748
8749 "Water quality monitoring period" means any of the six-month periods
8750 during which a supplier must complete a cycle of tap and entry point water
8751 quality monitoring under Section 611.357.

8752 BOARD NOTE: The Board added this definition. USEPA refers to these
8753 as "monitoring periods". The Board uses "water quality monitoring
8754 period" to avoid confusion with "tap sampling period," "tap monitoring
8755 cycle", and "source water monitoring period", as used under this Subpart

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G, and "compliance period" and "compliance cycle", as used elsewhere in this Part and Section 611.101 defines.

"Wide-mouthed bottles" means bottles one liter in volume having a mouth that is at least 55 mm wide.

BOARD NOTE: This subsection (b) derives~~Derived~~ from 40 CFR 141.2.

c) Lead Trigger Level and Lead and Copper Action Levels. The supplier determines the lead trigger levels and lead and copper action levels based on tap water samples it collects under Section 141.86 to calculate the 90th percentile concentration and tests using the analytical methods in Section 141.89.

1) The supplier exceeds the lead trigger level if the 90th percentile lead concentration subsection (c)(4) determines is greater than 10 µg/l.

2) The supplier exceeds the lead action level ~~is exceeded~~ if the 90th percentile lead concentration ~~level~~ is greater than 0.015 mg/l.

3) The supplier exceeds the copper action level ~~is exceeded~~ if the 90th percentile copper concentration ~~level~~ is greater than 1.3 mg/l.

4) The supplier~~Suppliers~~ must compute the 90th percentile lead and copper concentrations using the specified procedure ~~levels as follows:~~

A) Suppliers Not Having Sites with a Lead Service Line and Only Having Tier 3, 4, or 5 Sites Under Section 141.86(a)

i) The supplier must list ~~List~~ the results of all lead or copper samples it took ~~taken~~ during a tap sampling ~~six-month monitoring~~ period in ascending order, ranging from the sample with the lowest concentration ~~first~~ to the sample with the highest concentration ~~last~~. The supplier must assign ~~Assign~~ each sampling result an ordinal ~~a~~ number, ascending by single integers, assigning ~~beginning with~~ the number 1 for the sample with the lowest contaminant level. The number the supplier assigns ~~assigned~~ to the sample with the highest contaminant level must be equal to ~~to~~ the total number of samples the supplier took ~~taken~~.

ii) To determine the 90th percentile sample, the supplier must multiply ~~Determine the number for the 90th percentile sample by multiplying~~ the total number of samples taken during the ~~four-month tap sampling~~ six-month monitoring

period ~~times~~by 0.9.

iii~~C~~) The contaminant concentration in the sample corresponding with the ordinal number ~~yielded by the calculation in~~ subsection ~~(c)(4)(A)(ii) yields(e)(3)(B)~~ is the 90th percentile concentration~~contaminant level~~.

iv~~D~~) For ~~a supplier collecting~~suppliers that collect five samples per ~~four-month tap samplingsix-month monitoring~~ period, the 90th percentile concentration is ~~computed by taking~~ the average of the highest and second highest concentrations.

v~~E~~) For a supplier ~~that has been allowed by the Agency~~ allows to collect fewer than five samples ~~underin accordance with~~ Section 611.356(c) ~~or failing to collect five samples, the~~ result for the sample ~~result~~ with the highest concentration is ~~considered~~ the 90th percentile concentration~~value~~.

B) Suppliers Having Enough Sites with a Lead Service Line Identified as Tier 1 or 2 Under Section 141.86(a) to Meet the Minimum Number of Sites Section 141.86(c) Requires

i) The supplier must arrange the results of all lead or copper samples it took at Tier 1 or Tier 2 sites during a tap sampling period in ascending order from the sample with the lowest concentration to the sample with the highest concentration. The supplier must not include sample results from Tier 3, 4, or 5 sites in this calculation. The supplier must assign each sampling result a number, beginning with the number 1 for the sample with the lowest contaminant concentration and ascending by single integers through increasing concentrations. The number assigned to the sample with the highest contaminant concentration must equal the total number of samples the supplier took.

ii) The supplier must multiply the number of samples it took at Tier 1 or Tier 2 sites during the tap sampling period times 0.9.

iii) The 90th percentile concentration is the contaminant concentration in the numbered sample corresponding with the number the calculation under subsection (c)(4)(B)(ii) yields.

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iv) For a supplier serving fewer than 100 people that collects five samples per tap sampling period, the 90th percentile concentration is the average of the highest and second highest concentration.

v) For a supplier the Agency allows to collect fewer than five samples under Section 141.86(c), or failing to collect five samples, the highest sample concentration is the 90th percentile concentration.

C) Suppliers Having Sites with a Lead Service Line Identified as Tier 1 or 2 Under Section 141.86(a) but Fewer Than the Minimum Number of Sites Section 141.86(c) Requires

i) The supplier must combine the results of all lead or copper samples it took at Tier 1 or Tier 2 sites with a sufficient number of the highest results from Tier 3, 4, or 5 sites to complete the minimum number of sites. The supplier must arrange the combined results in ascending order from the sample with the lowest concentration to the sample with the highest concentration. The supplier must not include sample results from any remaining Tier 3, 4, and 5 sites in this calculation. The supplier must assign each sampling result a number, beginning with the number 1 for the sample with the lowest contaminant concentration and ascending by single integers through increasing concentrations. The number the supplier assigns to the sample with the highest contaminant concentration must equal the total minimum number of sites listed in Section 141.86(c).

ii) The supplier must multiply the number of samples it took at Tier 1 or Tier 2 sites during the tap sampling period times 0.9.

iii) The 90th percentile concentration is the contaminant concentration in the numbered sample corresponding with the number the calculation under subsection (c)(4)(C)(ii) yields.

iv) For a supplier serving fewer than 100 people that collects five samples per tap sampling period, the 90th percentile

concentration is the average of the highest and second highest concentration.

v) For a supplier the Agency allows to collect fewer than five samples under Section 611.356(c) or failing to collect five samples, the highest sample concentration is the 90th percentile concentration.

d) Corrosion Control ~~Treatment~~ Requirements

- 1) Every supplier~~All suppliers~~ must install and operate corrosion control treatment under Sections 611.351 and 611.352 meeting the definition of optimal corrosion control treatment.
- 2) Any supplier ~~complying that complies~~ with the applicable corrosion control treatment requirements ~~specified by~~ the Agency specifies under Sections 611.351 and 611.352 is deemed as complying in compliance with ~~the treatment requirement of~~ subsection (d)(1).
- 3) A small CWS or NTNCWS supplier complying with the applicable small supplier compliance flexibility requirements the Agency specifies under Sections 611.351(a)(3) and 611.353 complies with the treatment requirement in subsection (d)(1).
- 4) A supplier must notify the Agency in writing under Section 141.90(a)(3) of any upcoming long-term change in water treatment or plan to add a new source as Section 611.360(a)(3) describes. The supplier must not implement a long-term change in water treatment or add a new source until after the Agency reviews and approves the action in a SEP. The SEP may require the supplier to conduct additional monitoring or take other action the Agency deems appropriate to ensure that the supplier maintains minimal levels of corrosion control in its distribution system.

e) Source Water ~~Treatment~~ Requirements-

- 1) Any supplier ~~exceeding whose system exceeds~~ the lead or copper action level must implement all applicable source water treatment requirements ~~specified by~~ the Agency specifies under Section 611.353.
- 2) A supplier planning changes in its source water or making long-term treatment changes must describe the change to the Agency in writing under Sections 611.351(a)(3), 611.356(d)(2)(D), and 611.360(a)(3). The

supplier must not implement the change until the Agency reviews and approves the change in a SEP.

f) Lead Service Line Replacement and Inventory Requirements. A supplier must conduct lead service line replacements as this subsection (f) requires.

1) Any supplier whose system exceeds the lead action level subsection (c) specifies after implementation of applicable corrosion control and source water treatment requirements must complete mandatory the lead service line replacement requirements contained in Section 611.354. The supplier must conduct lead service line replacement under Section 611.354(g) and must include public education under Section 611.355(a) and (b).

2) A supplier exceeding the lead trigger level subsection (c) specifies must complete goal-based lead service line replacement under Section 611.354(f) and public education under Section 611.355(g) and (h).

3) All suppliers must prepare an inventory of service lines connected to their distribution systems, whether or not the supplier owns or controls the service lines, to identify lead service lines and lead status unknown service lines. The supplier must prepare the inventory under Section 611.354(a).

g) Public Education and Notification Requirements. Under Section 611.355(d), the supplier must provide notification a consumer notice of the lead tap water monitoring results to the persons served at each tested site (tap) that is tested. A CWS supplier must conduct annual outreach to the Illinois Department of Public Health and local health agencies under Section 611.355(i). The supplier must complete additional actions:

1) Any supplier exceeding whose system exceeds the lead action level must implement the public education requirements under Section 611.355.

2) Any supplier exceeding the lead trigger level subsection (c) specifies must notify all customers with a lead service line under Section 611.355(g).

3) Any supplier exceeding the lead action level subsection (c) specifies must notify the public under Subpart V.

4) Any supplier with lead service lines, galvanized service lines needing replacement, or lead status unknown service lines in its inventory, as Section 611.354(a) specifies, must notify all consumers with a lead service line, galvanized service line needing replacement, or a lead status unknown service line under Section 611.355(e).

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5) Any supplier failing to reach its lead service line replacement rate goal, as required under Section 611.354(f) must conduct outreach activities in accordance with Section 611.355(h).

h) Monitoring and Analytical Requirements. ~~A supplier~~Suppliers must complete all tap water monitoring for lead and copper, monitoring for water quality parameters, ~~and~~ source water monitoring for lead and copper, and ~~analyze~~analyses of the monitoring results under this Subpart G ~~as in compliance with~~ Sections 611.356, 611.357, 611.358, and 611.359 ~~require~~.

i) Reporting Requirements. ~~A supplier~~Suppliers must report ~~to the Agency~~ any information ~~required by~~ the treatment provisions of this Subpart G and Section 611.360 ~~require to the Agency~~.

j) Recordkeeping Requirements. ~~A supplier~~Suppliers must maintain records ~~as in accordance with~~ Section 611.361 ~~requires~~.

k) ~~Violating~~Violation of National Primary Drinking Water Regulations. ~~Failing~~Failure to comply with ~~the applicable requirements of~~ this Subpart G, including conditions ~~imposed by~~ the Agency ~~imposes in any~~ SEP, ~~violates~~will constitute a violation of the national primary drinking water regulations for lead ~~and~~ copper NPDWR.

l) Testing in Schools and Child Care Facilities. A supplier must collect samples from all schools and child care facilities within its distribution system under Section 611.362.

BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.80.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.351 Applicability of Corrosion Control

a) Corrosion Control ~~Treatment~~Required. ~~This Section provides when a supplier must complete the corrosion control treatment steps in subsection (d) or (e) to optimize or re-optimize corrosion control treatment based on size, whether the supplier has corrosion control treatment, and whether the supplier exceeded the lead trigger level, lead action level, or copper action level.~~Suppliers must complete the applicable corrosion control treatment requirements described in Section 611.352 on or before the deadlines set forth in this Section.

1) Large ~~Suppliers~~Systems. ~~Each large system supplier (one regularly~~

9013 serving more than 50,000 persons) must complete the corrosion control
9014 treatment steps specified in subsection (d), unless it is deemed to have
9015 optimized corrosion control under subsection (b)(2) or (b)(3).
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9017 A) A large supplier applying corrosion control treatment exceeding
9018 either the lead trigger level or copper action level must complete
9019 the corrosion control treatment steps subsection (d) specifies.
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9021 B) A large supplier not applying corrosion control treatment with 90th
9022 percentile concentration results under Section 611.350(c)(4)
9023 exceeding either the lead practical quantitation limit of 0.005 mg/l
9024 or the copper action level must complete the corrosion control
9025 treatment steps subsection (e) specifies.
9026

9027 C) The Agency may issue a SEP requiring a large supplier applying
9028 corrosion control treatment with 90th percentile concentration
9029 results under Section 611.350(c)(4) exceeding the lead practical
9030 quantitation limit but not exceeding the lead trigger level or the
9031 copper action level to complete the corrosion control treatment
9032 steps in subsection (d).
9033

9034 2) Mid-Sized Suppliers (serving >10,000 and ≤50,000 people).
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9036 A) A mid-sized supplier applying corrosion control treatment but
9037 exceeding either the lead trigger level or the copper action level
9038 must complete the corrosion control treatment steps subsection (d)
9039 specifies.
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9041 B) A mid-sized supplier not applying corrosion control treatment but
9042 exceeding either the lead or copper action level must complete the
9043 corrosion control treatment steps subsection (d) specifies.
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9045 C) A mid-sized supplier not applying corrosion control treatment but
9046 exceeding the lead trigger level but not exceeding the lead or
9047 copper action level must complete the treatment recommendation
9048 step subsection (e)(1) specifies (Step 1). The water system must
9049 complete the remaining steps subsection (e) specifies if the
9050 supplier subsequently exceeds either the lead or copper action
9051 level.
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9053 3) Small CWS and Non-Transient, Non-Community Water System Suppliers
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- 9055 A) A small CWS or NTNCWS supplier applying corrosion control
 9056 treatment but exceeding the lead trigger level or the lead action
 9057 level and not exceeding the copper action level, must complete the
 9058 corrosion control treatment steps subsection (d) specifies, if the
 9059 Agency issues a SEP approving corrosion control treatment as a
 9060 compliance option under Section 611.363(a).
- 9061
- 9062 B) A small CWS or NTNCWS supplier applying corrosion control
 9063 treatment but exceeding the copper action level must complete the
 9064 corrosion control treatment steps subsection (d) specifies.
- 9065
- 9066 C) A small CWS or NTNCWS supplier not applying corrosion control
 9067 treatment but exceeding the lead action level must complete the
 9068 corrosion control treatment steps subsection (e) specifies if the
 9069 Agency issues a SEP approving corrosion control treatment as a
 9070 compliance option under Section 611.363.
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- 9072 D) A small CWS or NTNCWS supplier not applying corrosion control
 9073 treatment but exceeding the copper action level must complete the
 9074 corrosion control treatment steps subsection (e) specifies.
- 9075
- 9076 2) ~~Medium-Sized and Small Systems. Each small system supplier (one~~
 9077 ~~regularly serving 3,300 or fewer persons) and each medium-sized system~~
 9078 ~~(one regularly serving more than 3,300 up to 50,000 persons) must~~
 9079 ~~complete the corrosion control treatment steps specified in subsection (e),~~
 9080 ~~unless it is deemed to have optimized corrosion control under one of~~
 9081 ~~subsections (b)(1), (b)(2), or (b)(3).~~
- 9082
- 9083 b) Suppliers Deemed to Have Optimized Corrosion Control. Subsection (b)(1),
 9084 (b)(2), or (b)(3) deems a supplier~~A supplier is deemed to have OCCT or re-~~
 9085 ~~optimized OCCT if the supplier satisfies the criterion the subsection~~
 9086 ~~specifies optimized corrosion control, and is not required to complete the~~
 9087 ~~applicable corrosion control treatment steps identified in this Section, if the~~
 9088 ~~supplier satisfies one of the criteria specified in subsections (b)(1) through (b)(3).~~
 9089 Any ~~such~~ system subsection (b)(1), (b)(2), or (b)(3) deems~~deemed to have OCCT~~
 9090 ~~having corrosion control~~optimized corrosion control under this subsection, and
 9091 ~~which has~~ treatment in place, must continue operating to operate and maintaining
 9092 ~~that maintain optimal corrosion control~~ treatment and meeting~~meet~~ any additional
 9093 requirements ~~that~~ the Agency determines are appropriate to ensure that the
 9094 supplier maintains OCCT~~optimal corrosion control treatment is maintained.~~
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- 9096 1) Small and Mid-Sized Suppliers Not Applying Corrosion Control
 9097 Treatment. Not exceeding the lead or copper action level during two

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~~consecutive six-month tap monitoring cycles and remaining at or below the lead trigger level and copper action level in all subsequent tap monitoring cycles under Section 611.356 deems a small or mid-sized supplier not applying corrosion control treatment to have OCCT. Small or Medium-Sized System Meeting Action Levels. A small system or medium-sized system supplier is deemed to have optimized corrosion control if the system meets the lead and copper action levels during each of two consecutive six-month monitoring periods with monitoring conducted in accordance with Section 611.356.~~

2) Small and Mid-Sized Suppliers Applying Corrosion Control Treatment and Not Exceeding Levels. Not exceeding the lead or copper action level during two consecutive six-month tap monitoring cycles under Section 611.356 and remaining at or below the lead trigger level and copper action level in all subsequent tap monitoring cycles under Section 611.356 deems a small or mid-sized supplier applying corrosion control treatment to have OCCT. Complying with this Section deems a small or mid-sized supplier applying corrosion control treatment exceeding the lead trigger level but not exceeding the lead or copper action level during two consecutive six-month tap monitoring cycles and remaining at or below the lead and copper action levels in all subsequent tap monitoring cycles the supplier conducts under Section 611.356 to have re-optimized OCCT. If the Agency issued a SEP setting optimal water quality parameters (OWQPs) under subsection (d) or (e), a supplier is not eligible to be deemed as having optimized or re-optimized OCCT under subsection (b). SEP for Equivalent Activities to Corrosion Control. The Agency must, by a SEP, deem any supplier to have optimized corrosion control treatment if it determines that the supplier has conducted activities equivalent to the corrosion control steps applicable under this Section. In making this determination, the Agency must specify the water quality control parameters representing optimal corrosion control in accordance with Section 611.352(f). A water supplier that is deemed to have optimized corrosion control under this subsection (b)(2) must operate in compliance with the Agency-designated optimal water quality control parameters in accordance with Section 611.352(g) and must continue to conduct lead and copper tap and water quality parameter sampling in accordance with Sections 611.356(d)(3) and 611.357(d), respectively. A supplier must provide the Agency with the following information in order to support an Agency SEP determination under this subsection (b)(2):

A) ~~The results of all test samples collected for each of the water quality parameters in Section 611.352(c)(3);~~

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- B) ~~A report explaining the test methods the supplier used to evaluate the corrosion control treatments listed in Section 611.352(c)(1), the results of all tests conducted, and the basis for the supplier's selection of optimal corrosion control treatment;~~
 - C) ~~A report explaining how the supplier has installed corrosion control and how the supplier maintains it to insure minimal lead and copper concentrations at consumer's taps; and~~
 - D) ~~The results of tap water samples collected in accordance with Section 611.356 at least once every six months for one year after corrosion control has been installed.~~
- 3) Results Less Than or Equal to the Practical Quantitation Level (PQL) for Lead. ~~Monitoring results deem a~~Any supplier ~~is deemed~~ to have optimized or re-optimized OCCT~~corrosion control~~ if the supplier~~it~~ submits results of tap water monitoring undere~~conducted in accordance with~~ Section 611.356 demonstrating~~and source water monitoring conducted in accordance with Section 611.358 that demonstrate~~ that for two consecutive six-month monitoring periods the difference between the 90th percentile tap water lead concentration~~level~~, computed under Section 611.350(c)(3), and the highest source water lead concentration is less than or equal to the lead PQL of 0.005 mg/l and does not exceed the copper action level for two consecutive six-month tap monitoring cycles, and the Agency did not issue a SEP setting OWQPs under subsection (d) or (e). Any water system this subsection (b)(3) deems to have optimized corrosion control must continue tap water monitoring for lead and copper no less frequently than once every three calendar years using the reduced number of sites Section 611.356(c) specifies and collecting the samples at times and locations Section 611.356(d)(4)(E) specifies. Any supplier this subsection (b)(3) deems to have OCCT must continue monitoring for lead and copper at the tap no less frequently than once every three calendar years using the reduced number of sites Section 611.356(c) specifies and collecting samples at times and locations Section 141.86(d)(4)(E) specifies. practical quantitation level for lead specified in Section 611.359(a)(1)(B)(i).
- A) ~~Those systems whose highest source water lead level is below the method detection limit (MDL) may also be deemed to have optimized corrosion control under this subsection (b) if the 90th percentile tap water lead level is less than or equal to the PQL for lead for two consecutive six-month monitoring periods.~~

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~~B) Any water system deemed to have optimized corrosion control in accordance with this subsection (b) must continue monitoring for lead and copper at the tap no less frequently than once every three calendar years using the reduced number of sites specified in Section 611.356(e) and collecting the samples at times and locations specified in Section 611.356(d)(4)(D).~~

~~C) Any water system deemed to have optimized corrosion control under this subsection (b) must notify the Agency in writing under Section 611.360(a)(3) of any upcoming long term change in treatment or the addition of a new source, as described in that Section. The Agency must review and approve the addition of a new source or any long term change in water treatment before the addition or long term change is implemented by the water system.~~

~~D) A supplier is not deemed to have optimized corrosion control under this subsection (b), and must implement corrosion control treatment under subsection (b)(3)(E), unless it meets the copper action level.~~

~~E) Any supplier triggered into corrosion control because it is no longer deemed to have optimized corrosion control under this subsection must implement corrosion control treatment in accordance with the deadlines in subsection (e). Any such large system supplier must adhere to the schedule specified in that subsection (e) for a medium-sized system supplier, with the time periods for completing each step being triggered by the date the supplier is no longer deemed to have optimized corrosion control under this subsection (b).~~

c) Completing Corrosion Control Steps for Small and Mid-Sized Suppliers Applying Corrosion Control Treatment~~Suppliers Not Required to Complete Corrosion Control Steps for Having Met Both Action Levels~~

1) Any small ~~system or mid-sized~~medium-sized system supplier not applying corrosion control treatment, otherwise required to complete the corrosion control steps in subsection (e) because it exceeded due to its exceedance of the lead or copper action level, may cease completing the ~~treatment~~ steps after not exceeding either the lead or copper action levels during each of two consecutive six-month tap monitoring cycles under Section 611.356 before beginning Step 3 under subsection (e)(3) or Step 5 under subsection (e)(5). The supplier needs not begin the applicable of Step 3 or Step 5, except that a mid-sized supplier with lead service lines or a small supplier with lead service lines choosing the corrosion control option under Section 611.353 must complete a corrosion control treatment study under

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~~subsection (e)(3)(A). A supplier initiating Step 5 may not cease the steps and must complete all remaining steps in subsections (e)(6) through (e)(8).has fulfilled both of the following conditions:~~

~~A) It has met both the copper action level and the lead action level during each of two consecutive six-month monitoring periods conducted under Section 611.356; and~~

~~B) The supplier has submitted the results for those two consecutive six-month monitoring periods to the Agency.~~

2) ~~A supplier ceasing the steps prior to either Step 3 or Step 5 and later exceeding the lead or copper action level may not cease the steps a second time and that has ceased completing the corrosion control steps under subsection (e)(1) (or the Agency, if appropriate) must completely resume completion of the applicable treatment steps, beginning with the first treatment step that the supplier previously did not complete in its entirety, if the supplier thereafter exceeds the lead or copper action level during any monitoring period.~~

3) ~~The Agency may issue a, by SEP requiring, require a supplier to repeat treatment steps the supplier previously completed if the Agency by the supplier where it determines that this is necessary to properly implement the treatment requirements of this Section. Any such SEP must explain the basis for this decision.~~

4) ~~A small or mid-sized supplier exceeding the lead or copper action level must The requirement for any small or medium-sized system supplier to implement corrosion control treatment steps under in accordance with subsection (e) (including a suppliersystems deemed to have optimized corrosion control under subsection (b)(1)) is triggered whenever any small or medium-sized system supplier exceeds the lead or copper action level.~~

d) ~~Treatment Steps and Deadlines for Suppliers Re-Optimizing OCCT Large Systems. Except as subsection provided in subsections (b)(2) or Section 611.363 provides otherwise and (b)(3), a supplier with corrosion control treatment large system suppliers must complete certain have completed the following corrosion control treatment steps (described in the referenced portions of Sections 611.352, 611.356, and 611.357 the steps describe) before the indicated times:~~

1) ~~Step 1: Initial monitoring (Sections 611.356(d)(1) and 611.357(b)) during two consecutive six-month monitoring periods.~~

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A) A supplier other than one to which subsection (d)(1)(ii) applies must recommend re-optimized OCCT (Section 611.352(c)) within six months after the end of the tap sampling period during which the supplier exceeds either the lead trigger level or copper action level. The Agency may issue a SEP allowing a supplier to modify its existing corrosion control treatment without a study for a supplier exceeding the lead trigger level but not the lead or copper action level. The Agency must specify re-optimized OCCT within six months after receiving the supplier’s treatment recommendation. The supplier must modify its corrosion control treatment to install re-optimized OCCT within six months after the Agency specifies re-optimized OCCT.

B) A supplier having lead service lines and exceeding the lead action level must harvest lead pipes from its distribution system, construct flow-through pipe loops, and operate the loops with finished water within one year after the end of the tap sampling period during which the supplier exceeds the lead action level. The supplier must proceed to Step 3 under subsection (d)(3) and conduct the corrosion control studies for re-optimizing OCCT under subsection (d)(3)(A) using the pipe loops.

2) ~~Step 2: Corrosion control studies (Section 611.352(e)).~~

A) A large supplier must conduct the corrosion control studies for re-optimizing OCCT under subsection (d)(3) (Step 3), unless the system is at or below the lead action level and the Agency issues a SEP modifying the existing corrosion control treatment the Agency specified under subsection (d)(1)(A) (Step 1).

B) Within 12 months after the end of the tap sampling period during which a small or mid-sized water system supplier applying corrosion control treatment exceeds the lead trigger level or copper action level, the Agency may issue a SEP requiring the supplier to perform corrosion control studies for re-optimizing OCCT (Section 611.352(b)(2) or (b)(3)). If the Agency does not require the supplier to perform corrosion control studies, the Agency must issue a SEP specifying re-optimized OCCT (Section 611.352(d)(2)) within the timeframes subsections (d)(2)(B)(i) and (d)(2)(B)(ii) specify.

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- i) A mid-sized supplier must perform corrosion control studies for re-optimizing OCCT within 12 months after the end of the tap sampling period during which the supplier exceeded the lead trigger level or copper action level.
- ii) A small supplier must perform corrosion control studies for re-optimizing OCCT within 18 months after the end of the tap sampling period during which the supplier exceeded the lead trigger level or copper action level.

3) ~~Step 3: Agency approval of optimal corrosion control treatment (Section 611.352(d)) by a SEP.~~

A) A supplier having lead service lines and exceeding the lead action level must complete the corrosion control treatment studies for re-optimizing OCCT within 30 months after the end of the tap sampling period during which the supplier exceeded the lead action level.

B) If subsection (d)(2) (Step 2) requires the supplier to perform corrosion control studies, the supplier must complete the studies (Section 611.352(c)(2)) within 18 months after the Agency issues a SEP requiring the supplier to conduct the studies.

4) ~~Step 4: Installing optimal corrosion control treatment (Section 611.352(e)).~~

A) The Agency must issue a SEP designating re-optimized OCCT (subsection (d)(4)) within six months after the supplier completes subsection (e)(3)(A) (Step 3).

B) If the supplier performed corrosion control studies under subsection (d)(2) (Step 2), the Agency must issue a SEP designating re-optimized OCCT (Section 611.352(d)(2) or (d)(4)) within six months after the supplier completes subsection (d)(3)(B) (Step 3).

5) ~~Step 5: Completing follow-up sampling (Sections 611.356(d)(2) and 611.357(e)).~~

A) A large supplier must complete modifying its corrosion control treatment to have installed re-optimized OCCT within 12 months after the supplier completes subsection (d)(4)(A) (Step 4).

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B) A small or mid-sized supplier must install re-optimized OCCT (Section 611.352(e)(1)) within 12 months after the supplier completes subsection (d)(4)(B) (Step 4).

6) Step 6 A supplier must complete follow-up sampling (Sections 611.356(d)(2) and 611.357(c)) within 12 months after the supplier completes subsection (d)(5)(A) or (d)(5)(B) (Step 5).:– Agency review of installation of treatment and approval of optimal water quality control parameters (Section 611.352(f)).

7) Step 7 The Agency must review the supplier’s installed treatment and designate optimal water quality control parameters (Section 611.352(f)(1)) within six months after completing subsection (d)(6) (Step 6).:– Operating in compliance with the Agency specified optimal water quality control parameters (Section 611.352(g)) and continue to conduct tap sampling (Sections 611.356(d)(3) and 611.357(d)).

8) Step 8 The supplier must operate complying with the Agency-designated optimal water quality control parameters (Section 611.352(g)) and continue conducting tap sampling (Section 611.356(d)(3) and monitoring water quality parameters under Section 611.357(d)).

e) Treatment Steps and Deadlines for Suppliers Not Applying Corrosion Control Treatment~~Small and Medium Sized System Suppliers~~. Except as provided in subsection (b) or Section 611.363 provides otherwise, a supplier not applying corrosion control treatments~~small and medium sized system suppliers~~ must complete certain~~the following~~ corrosion control treatment steps (~~described in the~~ referenced portions of Sections 611.352, 611.356, and 611.357 the steps describe) before~~by~~ the indicated time~~time~~ periods.

1) Step 1:– The supplier must conduct initial tap sampling (Sections 611.356(d)(1) and 611.357(b)) until the supplier either exceeds the lead action level or the copper action level or it becomes eligible for reduced monitoring under Section 611.356(d)(4).– A supplier exceeding the lead action level or the copper action level must recommend optimal corrosion control treatment (Section 611.352(a)) within six months after the end of the monitoring period during which it exceeds one of the action levels.

A) A supplier other than one to which subsection (e)(1)(B) or (e)(1)(C) applies must recommend OCCT (Section 611.352(a)(1), (a)(2), (a)(3), or (a)(4)) within six months after the end of the tap

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sampling period during which the supplier exceeds either the lead trigger level or copper action level.

B) A supplier having lead service lines and exceeding the lead action level must harvest lead pipes from its distribution system, construct flowthrough pipe loops, and operate the loops with finished water within one year after the end of the tap sampling period during which the supplier exceeds the lead action level. The supplier must proceed to Step 3 in subsection (e)(3) of this section and use the pipe loops to conduct the corrosion control studies for optimizing OCCT under subsection (e)(3)(A).

C) A large supplier subsection (a)(1)(B) directs to perform corrosion control treatment under this subsection (e) must conduct the corrosion control studies for optimizing OCCT under subsection (e)(3) (Step 3).

2) Step 2: Within 12 months after the end of the tap sampling monitoring period during which a supplier exceeds the lead ~~action level~~ or the copper action level, ~~if not otherwise required by this rule~~, the Agency may ~~issue a SEP requiring a~~ require the supplier to perform corrosion control studies (Section 611.352(b)). If the Agency does not require the supplier to perform corrosion control ~~such~~ studies, the Agency must issue, by a SEP specifying OCCT, specify optimal corrosion control treatment (under Section 611.352(d)) within the appropriate of the following timeframes subsections (e)(2)(A) and (e)(2)(B) establish.:

A) For a mid-sized supplier ~~medium-sized systems~~, the supplier must complete corrosion control studies within 18 months after the end of the tap monitoring cycle period during which the ~~such~~ supplier exceeded ~~exceeds~~ the lead trigger ~~action~~ level or ~~the~~ copper action level; or

B) For a small suppliers ~~systems~~, the supplier must complete corrosion control studies within 24 months after the end of the tap monitoring cycle period during which the ~~such~~ supplier exceeded ~~exceeds~~ the lead trigger ~~action~~ level or ~~the~~ copper action level.

3) Step 3: ~~If the Agency requires a supplier to perform corrosion control studies under step 2 (subsection (e)(2)), the supplier must complete the studies (Section 611.352(c)) within 18 months after the Agency requires that such studies be conducted.~~

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- A) A large supplier having or not having lead service lines and exceeding the lead action level or a small or mid-sized supplier having lead service lines and exceeding the lead action level must complete the corrosion control treatment studies for optimizing OCCT within 30 months after the end of the tap sampling period during which the supplier exceeds the lead action level.
 - B) If the Agency requires a supplier to perform corrosion control studies under subsection (e)(2) of this section (Step 2), the supplier must complete the studies (Section 611.352(c)(1)) within 18 months after the Agency issues a SEP requiring the supplier to conduct the studies.
- ~~4) Step 4: If the supplier has performed corrosion control studies under step 2 (subsection (e)(2)), the Agency must, by a SEP, approve optimal corrosion control treatment (Section 611.352(d)) within six months after completion of step 3 (subsection (e)(3)).~~

 - A) The Agency must issue a SEP designating re-optimized OCCT (Section 611.352(d)(3)) within six months after the supplier completes subsection (d)(3)(A) (Step 3).
 - B) If the supplier has performed corrosion control studies under subsection (e)(2) (Step 2), the Agency must issue a SEP designating OCCT (Section 611.352(d)(1)) within six months after subsection (e)(3) (Step 3) is complete.
- ~~5) Step 5: The supplier must install OCCT~~optimal corrosion control treatment~~ (Section 611.352(e)) within 24 months after the Agency designates OCCT under subsection (e)(2) or (e)(4) (Step 2 or Step 4)~~approves that treatment~~.~~
- ~~6) Step 6: The supplier must complete follow-up sampling under (Sections 611.356(d)(2)(A) and 611.357(c)) within 12~~36~~ months after completing subsection (e)(5) (Step 5)~~the Agency approves optimal corrosion control treatment~~.~~
- ~~7) Step 7: The Agency must review the supplier's installation of treatment and issue, by a SEP approving, approve optimal water quality control parameters (Section 611.352(f)) within six months after the supplier completes subsection (e)(5) (Step 5)~~completion of step 6 (subsection (e)(6))~~.~~

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8) Step 8: The supplier must ~~comply~~~~operate in compliance~~ with the Agency-approved optimal water quality control parameters (Section 611.352(g)(1)) and continue ~~to conduct~~ tap sampling (~~Section~~~~Sections~~ 611.356(d)(3)) and monitoring water quality parameters (Section 611.357(d)).

f) Treatment Steps and Deadlines for Small CWS and NTNCWS Suppliers Electing Corrosion Control Treatment (CCT) As a Compliance Option under Section 611.363 or As the Agency Requires. A small CWS or NTNCWS supplier selecting the corrosion control treatment option as small supplier compliance flexibility under Section 611.363(a)(2) must complete two steps by the indicated times:

1) Step 1. A supplier must recommend the corrosion control treatment option as small supplier compliance flexibility under Section 611.363(a)(2) within six months after the end of the tap sampling period during which the supplier exceeds either the lead trigger level or the lead action level. When recommending to the Agency, the supplier must comply with Section 611.382(a)(1).

2) Step 2. The Agency must issue a SEP approving the recommendation of corrosion control treatment option as small supplier compliance flexibility or designating an alternative option under Section 611.363(a) within six months after the supplier recommends the option under subsection (f)(1) (Step 1). A supplier the Agency requires to optimize or re-optimize OCCT must follow the schedules in subsection (d) or (e), beginning with Step 3 in subsection (d)(3) or (e)(3), unless the Agency specifies OCCT under the applicable of subsection (d)(2)(B) or (e)(2)(B).

BOARD NOTE: ~~This Section derives~~~~Derived~~ from 40 CFR 141.81.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.352 Corrosion Control Treatment

Designating Optimal Corrosion Control Treatment for Systems Optimizing or Re-Optimizing Corrosion Control Treatment. A~~Each~~ supplier must complete the corrosion control treatment requirements in this Section as described below that they apply~~are applicable~~ to thesuch supplier under Section 611.351.

a) System Recommendation Regarding Corrosion Control Treatment for Suppliers Not Having Lead Service Lines and Suppliers Having Lead Service Lines but Not Exceeding the Lead Action Level

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- 1) A supplier that must recommend under Section 611.351(e) one or more of the corrosion control treatments in subsection (c)(1)(A) for the Agency to designate must base its recommendation~~Based~~ on the results of lead and copper tap monitoring and water quality parameter monitoring, ~~small and medium-sized system suppliers exceeding the lead action level or the copper action level must recommend to the Agency installation of one or more of the corrosion control treatments listed in subsection (c)(1) that the supplier believes constitutes optimal corrosion control for its system.~~
 - A) A small CWS supplier or NTNCWS supplier exceeding the copper action level and recommending corrosion control treatment to the Agency under Section 611.363(a) must comply with this subsection (a)(1).
 - B2) The Agency may ~~issue, by~~ a SEP ~~requiring, require~~ the supplier to conduct additional water quality parameter monitoring ~~in accordance with Section 611.357(b)~~ to assist ~~the Agency~~ in reviewing the supplier's recommendation.
- 2) A small CWS supplier or NTNCWS supplier subject to this subsection (a) not applying corrosion control treatment that Section 611.361(f) requires to recommend a small supplier compliance flexibility option under Section 611.363 must base its recommendation on the results of lead tap sampling and water quality parameter monitoring. A supplier not having lead service lines, exceeding the lead action level, and selecting corrosion control under Section 611.363(a)(2) must recommend the Agency designate one or more of the corrosion control treatments in subsection (c)(1) as OCCT for that system.
- 3) A supplier exceeding the lead action level and selecting corrosion control treatment under Section 611.363(a)(2) must recommend that the Agency designate one or more of the corrosion control treatments in subsection (c)(1)(A) as the OCCT for its system. A small or mid-sized supplier exceeding the lead trigger level but not exceeding the lead or copper action level needs not perform a corrosion control study under subsection (c), unless the Agency issues a SEP requiring the supplier to do so.
- 4) A small CWS or NTNCWS supplier applying corrosion control treatment exceeding the lead action level and selecting corrosion control under Section 611.363(a)(2) must recommend designation of one or more of the corrosion control treatments in subsection (c)(2) as OCCT for its system.

9568 5) The Agency may issue a SEP waiving subsection (a)(4)'s OCCT-
9569 recommendation requirement for a supplier if the SEP requires the
9570 supplier to complete a corrosion control study within three months after
9571 the end of the tap sampling period during which the supplier exceeded the
9572 lead action level. In that case, the supplier must proceed directly to
9573 subsection (c) and complete a corrosion control study.

9574
9575 b) Agency-Required Studies to Identify Initial Optimal~~of~~ Corrosion Control
9576 Treatment and Re-Optimized OCCT Except for Large Suppliers and Small and
9577 Mid-Sized Suppliers Having Lead Service Lines and Exceeding the Lead Action
9578 Level. Certain suppliers must conduct corrosion control treatment studies: large
9579 suppliers exceeding the lead action level, large suppliers not applying corrosion
9580 control treatment whose 90th percentile concentration results exceed either the
9581 lead practical quantitation limit of 0.005 mg/l or the copper action level, mid-
9582 sized water system suppliers having lead service lines and exceeding the lead
9583 action level, and small suppliers having lead service lines and exceeding the lead
9584 action level and selecting the corrosion control treatment option under Section
9585 611.363(a).

9586
9587 1) The Agency may ~~issue, by a SEP requiring a small, require any small-~~ or
9588 ~~mid-sized medium-sized system~~ supplier ~~not applying corrosion control~~
9589 ~~treatment exceeding that exceeds~~ the lead ~~action level~~ or the copper action
9590 level to perform corrosion control ~~treatment~~ studies under subsection (c) to
9591 identify ~~OCCT optimal corrosion control treatment~~ for ~~the supplier's~~s
9592 system.

9593
9594 2) The Agency may issue a SEP requiring a small or mid-sized supplier not
9595 applying corrosion control treatment and exceeding the lead trigger level
9596 but not the lead or copper action level to perform corrosion control
9597 treatment studies under subsection (c)(1) to identify OCCT for its system.
9598 The supplier must install this corrosion control treatment if the supplier
9599 subsequently exceeds the lead or copper action level.

9600
9601 3) The Agency may issue a SEP requiring a small or mid-sized supplier
9602 applying corrosion control treatment exceeding either the lead trigger level
9603 or copper action level to perform corrosion control treatment studies under
9604 subsection (c)(2) to identify re-optimized OCCT for its system (i.e., after
9605 evaluating re-optimized OCCT).

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9607 c) Performing Corrosion Control~~Performance of~~ Studies

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9609 1) A supplier not applying corrosion control treatment conducting corrosion
9610 control studies must complete certain actions:

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- A) ~~Any~~ Any supplier ~~not applying corrosion control treatment~~ performing corrosion control studies must evaluate the effectiveness of each of ~~certain~~ the following treatments; and, ~~if appropriate,~~ combinations of ~~those~~ the following treatments if appropriate, to identify the OCCT ~~optimal corrosion control treatment~~ for its system:
 - iA) Adjusting alkalinity ~~Alkalinity~~ and pH ~~adjustment~~;
 - B) Calcium hardness adjustment; and
 - iiC) Adding an orthophosphate ~~The addition of a phosphate-~~ or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective corrosion inhibitor residual concentration in all test ~~tap~~ samples.
 - iii) Adding an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain an orthophosphate residual concentration of 1 mg/l (as PO₄) in all test samples; and
 - iv) Adding an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain an orthophosphate residual concentration of 3 mg/l (as PO₄) in all test samples.
- B2) The supplier must evaluate each of the corrosion control treatments using pipe rig/loop tests; metal coupon tests; partial-system tests; or analyses based on documented analogous treatments in other systems of similar size, water chemistry, and distribution system configuration. A large or mid-sized supplier or a small CWS or NTNCWS supplier selecting the corrosion control treatment option under Section 611.363 having lead service lines and exceeding the lead action level must conduct pipe rig/loop studies using harvested lead service lines from its distribution system to assess the effectiveness of corrosion control treatment options on the existing pipe scale. The supplier may use metal coupon tests as a screen to reduce the number of options the supplier evaluates using pipe rig/loop tests to the current conditions and two options.
- C3) The supplier must measure ~~specific~~ the following water quality parameters in any tests the supplier conduct ~~conducted~~ under this subsection (c) before and after evaluating the corrosion control

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treatments in subsections (c)(1)(A) and (c)(1)(B) listed above:

iA) Lead;

iiB) Copper;

iiiC) pH;

ivD) Alkalinity;

E) Calcium;

F) Conductivity;

vG) Orthophosphate as PO₄ (when the supplier uses an orthophosphate-based inhibitor containing a phosphate compound is used); and

viH) Silicate (when the supplier uses an inhibitor containing a silicate compound is used); and

I) Water temperature.

D4) The supplier must identify all chemical or physical constraints that limit or prohibit using any~~the use of a~~ particular corrosion control treatment; and document those such constraints ~~with at least one of the following:~~

iA) With data~~Data~~ and documents~~documentation~~ showing that a particular corrosion control treatment ~~has~~ adversely affects~~affected~~ other water treatment processes when another supplier uses that treatment in a system with water having used by another supplier with comparable water quality characteristics; ~~or~~

iiB) With data~~Data~~ and documents~~documentation~~ demonstrating that the supplier ~~has~~ previously evaluated~~attempted to evaluate~~ a particular corrosion control treatment, finding either that the treatment is ineffective or ~~that it~~ adversely affects other drinking water quality treatment processes.

E5) The supplier must evaluate the effect of the evaluated~~chemicals~~ used for corrosion control treatment chemicals on other water

9697 quality treatment processes. A supplier using coupon studies to
9698 screen or pipe loop/rig studies to evaluate treatment options must
9699 not exclude treatment strategies from the studies based on the
9700 effects the supplier identifies under this Section.

9701
9702 F6) Based on~~On the basis of~~ an analysis of the data the supplier
9703 generated during each evaluation, the supplier must recommend in
9704 writing to the Agency~~the, in writing, that~~ treatment option the
9705 corrosion control studies indicate constitutes OCCT~~optimal~~
9706 corrosion control treatment for the supplier's~~its~~ system. The
9707 supplier must give~~provide~~ a rationale for its recommendation
9708 together, along with all supporting documentation specified in
9709 subsections (c)(~~24~~)(A) through (c)(~~25~~)(E) specify.

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9711 2) A supplier applying corrosion control treatment that must conduct
9712 corrosion control studies to determine re-optimized OCCT must complete
9713 specific tasks:

9714
9715 A) The supplier must evaluate the efficacy of certain treatments and
9716 appropriate combinations of those treatments to identify the re-
9717 optimized OCCT for its system:

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9719 i) Alkalinity or pH adjustment or re-adjustment;

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9721 ii) Adding an orthophosphate- or silicate-based corrosion
9722 inhibitor at a concentration sufficient to maintain an
9723 effective corrosion inhibitor residual concentration in all
9724 test samples if the supplier does not already use the
9725 inhibitor;

9726
9727 iii) Adding an orthophosphate-based corrosion inhibitor at a
9728 concentration sufficient to maintain an orthophosphate
9729 residual concentration of 1 mg/l (PO₄) in all test samples
9730 unless the current inhibitor process already meets this
9731 residual; and

9732
9733 iv) Adding an orthophosphate-based corrosion inhibitor at a
9734 concentration sufficient to maintain an orthophosphate
9735 residual concentration of 3 mg/l (PO₄) in all test samples
9736 unless the current inhibitor process already meets this
9737 residual.
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B) The supplier must evaluate each of the corrosion control treatments using pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry, and distribution system configurations. If the supplier’s system has lead service lines and exceeds the lead action level, the supplier must conduct pipe rig/loop studies using harvested lead service lines from its distribution system to assess the efficacy of corrosion control treatment options on the existing pipe scale. The supplier can use metal coupon tests as a screen to reduce the number of options it evaluates using pipe rig/loops to the current conditions and two options.

C) The supplier must measure specific water quality parameters in any tests conducted under this subsection (c)(2)(C) before and after evaluating the corrosion control treatments in subsections (c)(2)(A) and (c)(2)(B):

- i) Lead;
- ii) Copper;
- iii) pH;
- iv) Alkalinity;
- v) Orthophosphate as PO₄ (if the supplier uses an orthophosphate-based inhibitor); and
- vi) Silicate (if the supplier uses a silicate-based inhibitor).

D) The supplier must identify all chemical or physical constraints limiting or prohibiting using a particular corrosion control treatment and document those constraints with certain information:

- i) Data and documents showing that a particular corrosion control treatment adversely affected other drinking water treatment processes when another supplier with comparable water quality characteristics used the treatment. A supplier using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the constraints the supplier identifies under this Section; or

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- ii) Data and documents demonstrating that the supplier previously evaluated a particular corrosion control treatment and found that the treatment is ineffective or adversely affects other drinking water quality treatment processes. A supplier using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the constraints the supplier identifies under this Section, unless the supplier found the treatment ineffective in a previous pipe loop/rig study.
 - E) The supplier must evaluate the effect of the chemicals it uses for corrosion control treatment on other drinking water quality treatment processes. A supplier using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the effects the supplier identifies under this Section.
 - F) Based on its analysis of the data the supplier generated during each evaluation, the supplier must recommend to the Agency in writing the treatment option that the corrosion control studies indicate constitutes OCCT for its system. The supplier must provide a rationale for its recommendation together with all supporting documentation subsections (c)(1)(A) through (c)(1)(E) specify.
- d) Agency Approval of Optimized and Re-Optimized Corrosion Control Treatment. When designating OCCT, the Agency must consider the effects of additional corrosion control treatment on water quality parameters and other water quality treatment processes. The Agency must notify the supplier of the basis for designating OCCT in any SEP it issues under this subsection (d).
 - 1) Designating OCCT for a Supplier Applying Corrosion Control Treatment. Considering available information, including applicable studies conducted under subsection (c)(1) or the supplier's recommended corrosion control treatment option, the Agency must issue a SEP designating from among the supplier-recommended corrosion control treatment option, alternative corrosion control treatments from among those in subsection (c)(1)(A), or an applicable alternative small supplier compliance flexibility option under Section 611.363(a).~~Based on consideration of available information including, where applicable, studies performed under subsection (c) and a supplier's recommended treatment alternative, the Agency must, by a SEP, either approve the corrosion control treatment option recommended by the~~

supplier, or deny and require investigation and recommendation of alternative corrosion control treatments from among those listed in subsection (c)(1). When approving optimal treatment, the Agency must consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes.

2) Designation of Re-Optimized OCCT for Suppliers Applying Corrosion Control Treatment. Considering available information, including applicable studies under subsection (c)(2) or the supplier's recommended corrosion control treatment option, the Agency must issue a SEP designating from among the supplier-recommended corrosion control treatment option, alternative corrosion control treatments from among those in subsection (c)(2)(A), or an applicable alternative small supplier compliance flexibility option under Section 611.363(a). The Agency must, in any SEP issued under subsection (d)(1), notify the supplier of the basis for this determination.

e) Installing OCCT and Re-Optimizing OCCT~~Installation of Optimal Corrosion Control.~~ ~~A~~Each supplier must properly install and operate the OCCT; throughout its distribution system; that ~~optimal corrosion control treatment approved by~~ the Agency approved under subsection (d).

f) Agency Review of Treatment and Specification of Optimal Water Quality Control Parameters for OCCT and Re-Optimized OCCT. The Agency must evaluate the results of all lead and copper tap ~~samplingsamples~~ and water quality parameter ~~samplingsamples submitted by~~ the supplier submits and determine whether the supplier ~~it has~~ properly installs~~installed~~ and operates~~operated~~ the OCCT the Agency approves~~optimal corrosion control treatment approved~~ under subsection (d)(1) or (d)(2).

1) Upon reviewing the results of the supplier's tap water and water quality parameter monitoring ~~by the supplier~~, both before and after installing OCCT~~the installation of optimal corrosion control treatment~~, the Agency must issue, ~~by~~ a SEP specifying operating parameters, ~~specify the following:~~

A) A minimum value or ~~a~~ range of values for pH ~~measured~~ at each entry point to the distribution system.;

B) A minimum pH value for, ~~measured in~~ all tap samples. This~~Such~~ value must be equal to or greater than 7.0, unless the Agency determines that meeting a pH ~~level of~~ 7.0 is not technologically

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feasible or is not necessary for the supplier to optimize corrosion control.;

C) If the supplier uses a corrosion inhibitor ~~is used~~, a minimum inhibitor concentration or ~~a~~ range of concentrations for orthophosphate (as PO₄) or silicate~~the inhibitor~~, measured at each entry point to the distribution system, ~~and in all tap samples, that the Agency determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system;~~

D) If the supplier uses a corrosion inhibitor, the supplier must maintain a minimum orthophosphate or silicate concentration measured in all tap samples that is necessary to form a passivating film on the interior walls of the pipes of the distribution system, as determined by the Agency in a SEP. If the supplier uses orthophosphate, the supplier must maintain an orthophosphate concentration equal to or greater than 0.5 mg/l (as PO₄) for OCCT the Agency designates under subsection (d)(1) or 1.0 mg/l for OCCT the Agency designates under subsection (d)(2), unless the Agency determines that meeting the applicable minimum orthophosphate residual is not technologically feasible or is not necessary for OCCT.

~~E)~~ If the supplier adjusts alkalinity ~~is adjusted~~ as part of OCCT optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity for, ~~measured at~~ each entry point to the distribution system and in all tap samples.;

~~E)~~ ~~If calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples.~~

2) The values for the applicable water quality control parameters listed in subsection (f)(1) must be those ~~that~~ the Agency determines reflect OCCT optimal corrosion control treatment for the supplier.

3) ~~The Agency may, by a SEP, approve values for additional water quality control parameters determined by the Agency to reflect optimal corrosion control for the supplier's system.~~

34) The Agency must, ~~in issuing a SEP~~, explain these determinations and give to the supplier, along with the basis for its decisions when issuing a

SEP.

g) Continued Operation and Monitoring for OCCT and Re-Optimized OCCT. All suppliers optimizing or re-optimizing corrosion control must continue to operate and maintain OCCT optimal corrosion control treatment, including maintaining water quality parameter values at or above minimum values or within ranges approved by the Agency approved under subsection (f), under in accordance with this subsection (g) for all samples the supplier collectsecollected under Section 611.357(d) through (f). This subsection (g) applies to all suppliers that Section 611.357 does not require to monitor water quality parameters, including consecutive system suppliers distributing water that another supplier has treated applying corrosion control treatment and any suppliers applying corrosion control treatment, OCCT, or re-optimized OCCT. The supplier must determine whether it complies. Compliance with the requirements of this subsection (g) must be determined every six months, as specified under Section 611.357(d) specifies. A supplier does not comply water system is out of compliance with the requirements of this subsection (g) in anyfor a six-month period during which the supplierif it has excursions fromfor any Agency-specified water quality parameter on more than nine cumulative days during the six-month period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the Agency-designated minimum value or outside the Agency-designated range designated by the Agency. The supplier calculates dailyDaily values are calculated as provided in subsections (g)(1) through (g)(3) provide. The Agency may excludemust delete results from this calculation that it determines are obvious sampling errors from this calculation. The supplier must record sampling errors even when not included in calculations.

- 1) On days when the supplier collects more than one measurement for athe water quality parameter is collected at athe sampling location, the daily value ismust be the average of all results the supplier collected during the day, regardless of whether the supplier collected the samples are collected through continuous monitoring, grab sampling, or a combination of both.

BOARD NOTE: Corresponding 40 CFR 141.82(g)(1) further provides as follows: If USEPA approves an alternative formula under 40 CFR 142.16(d)(1)(ii) in the State's application for a program revision submitted under 40 CFR 142.12, the approvedState's formula ismust be used to aggregate multiple measurements taken at a sampling point for the water quality parametersparameter in lieu of the formula in this subsection (g)(1).

- 2) On days when the supplier collects only one measurement for athe water quality parameter is collected at athe sampling location, the daily value

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~~is must be the result of~~ that measurement.

3) On days when ~~the supplier collects~~ no measurement ~~is collected~~ for ~~a the~~ water quality parameter at ~~the~~ sampling location, the daily value ~~is must~~ ~~be~~ the daily value calculated on the most recent day on which ~~the supplier measured~~ the water quality parameter ~~was measured~~ at the ~~sampling locationsample site~~.

h) ~~Modifying Modification of~~ Agency Treatment Decisions ~~for OCCT and re-optimized OCCT~~

1) On its own initiative, or in response to a request by ~~thea~~ supplier, the Agency may ~~issue, by~~ a SEP ~~modifying, modify~~ its determination of the ~~OCCToptimal corrosion control treatment~~ under subsection (d) or of the optimal water quality control parameters under subsection (f).

2) A ~~supplier must~~ request ~~for~~ modification ~~must be~~ in writing, ~~explaining the propriety of explain why~~ the modification ~~is appropriate,~~ and ~~providing provide~~ supporting documentation.

3) The Agency may modify its determination ~~if where~~ it determines that ~~asuch~~ change ~~will is necessary to~~ ensure that the supplier continues ~~optimizing to optimize~~ corrosion control treatment. A revised determination must ~~give set forth~~ the new treatment requirements ~~or water quality parameters,~~ explain the basis for the Agency's decision, and provide an implementation schedule for completing the treatment modifications ~~for re-optimized OCCT~~.

4) Any interested person may submit information to the Agency bearing on whether the Agency should ~~exercise, within~~ its discretion ~~and,~~ issue a SEP ~~modifying to modify~~ its determination under subsection (h)(1). An Agency determination not to act on ~~a submission of such~~ information ~~by~~ an interested person ~~submits~~ is not an Agency determination for the purposes of Sections 39 and 40 of the Act.

i) ~~USEPA~~ Treatment Decisions ~~on OCCT and re-optimized OCCT~~ ~~by USEPA~~.

Under ~~the procedures in~~ 40 CFR 142.19, ~~the~~ USEPA ~~reserves~~ ~~Regional Administrator has reserved~~ the prerogative to review ~~Agency OCCT~~ treatment determinations ~~made by the Agency~~ under subsections (d)(1) or (d)(2), (f), or (h) and issue federal treatment determinations consistent with ~~the requirements of~~ 40 CFR 141.82(d)(1) or (d)(2), (e), or (h) ~~if USEPA, where the Regional Administrator~~ finds that ~~certain conditions exist~~ ~~the following is true:~~

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- 1) The Agency ~~fails~~~~has failed~~ to issue a treatment determination by the applicable deadlines ~~contained~~ in Section 611.351 (corresponding with 40 CFR 141.81);
- 2) The Agency ~~abuses~~~~has abused~~ its discretion in a substantial number of instances~~cases~~ or in instances~~cases~~ affecting a substantial population; or
- 3) The technical aspects of the Agency's determination would be indefensible in ~~an~~~~expected~~ federal enforcement action taken against ~~the~~~~a~~ supplier.

j) Find-and-fix Assessment for Tap Sample Sites Exceeding the Lead Action Level. The supplier must conduct specific steps when a tap sampling site exceeds the lead action level in monitoring under Section 611.356.

- 1) Step 1: Corrosion Control Treatment Assessment. The supplier must sample at a new water quality parameter sampling site that is on the same-sized water main, in the same pressure zone, and located within a half mile of the sampling site that exceeded the action lead level within five days after receiving the sample results. A small supplier not applying corrosion control treatment may take up to 14 days to collect the samples. The supplier must measure certain parameters:
 - A) pH;
 - B) Alkalinity;
 - C) Orthophosphate (as PO₄), if the supplier uses an inhibitor containing an orthophosphate compound;
 - D) Silica, if the supplier uses an inhibitor containing a silicate compound; and
 - E) A supplier having an existing water quality parameter sampling site complying with this Section may sample from that site.
 - F) A supplier that must meet optimal water quality control parameters but not having an existing water quality parameter sampling site complying with this Section must add new sampling sites to the minimum number of sites Section 611.357(g) requires. The supplier must add sites until it has twice the minimum number of sites Section 611.357(a)(2)(A) requires. If a supplier exceeds this upper threshold for the number of sites, the Agency may issue a SEP determining that a newer site can better assess the efficacy of

the corrosion control treatment and remove existing sites during sanitary survey evaluating OCCT.

2) Step 2: Site Assessment. A supplier must collect a follow-up sample at any tap sampling site exceeding the lead action level within 30 days after receiving the sample results. The supplier may use different sample volumes or different sampling procedures collecting these follow-up samples to assess the source of elevated lead levels. The supplier must submit samples it collects under this Section to the Agency but must not include them in calculating the 90th percentile concentration under Section 611.356. If the supplier cannot collect a follow-up sample at a site, the supplier must document to the Agency why it was unable to collect a follow-up sample.

3) Step 3: Evaluating Results and Recommending OCCT or Other Actions. Within six months after the end of the tap sampling period during which a supplier exceeds the lead action level, the supplier must evaluate the results of the monitoring conducted under subsection (j)(2) to determine if the supplier must either locally or centrally adjust the OCCT or other distribution system actions are necessary and submit the recommendation to the Agency. Modifying corrosion control treatment might not be necessary to address every exceedance. Other distribution system actions may include flushing to reduce water residence time in the system. If known from the site assessment, the supplier must note the cause of the elevated lead level in its recommendation to the Agency because site-specific issues can be an important factor in why the supplier does not recommend any adjustment of corrosion control treatment or other distribution system actions. A supplier in the process of optimizing or re-optimizing OCCT under subsections (a) through (f) needs not recommend a find-and-fix treatment to the Agency.

4) Step 4: Agency Action. The Agency must issue a SEP approving the supplier's treatment recommendation or specify a different approach within six months after the supplier completes Step 3, as subsection (j)(3) describes.

5) Step 5: Implementing the Agency's SEP. If the Agency-issued SEP requires the water system to adjust the OCCT, the supplier must modify its corrosion control treatment within 12 months after completing Step 4, as subsection (j)(4) describes. A supplier not applying corrosion control treatment and needing to install OCCT must follow the schedule in Section 611.351(e).

- 6) Step 6: Follow-up Sampling. A supplier adjusting its OCCT must complete follow-up sampling (Sections 611.356(d)(2) and 611.357(c)) within 12 months after completing Step 5, as subsection (j)(5) describes.
- 7) Step 7: Agency Review. For a supplier adjusting its OCCT, the Agency must review the supplier’s modified corrosion control treatment, and the Agency must designate optimal water quality control parameters (Section 611.352(f)(1)) within six months after the supplier completes Step 6, as subsection (j)(6) describes.
- 8) Step 8: Operating and Complying. A supplier adjusting its OCCT must comply with the Agency-designated optimal water quality control parameters (Section 611.352(g)) and continue tap sampling (Sections 611.356(d)(3) and 611.357(d)).

BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.82.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.353 Source Water Treatment

A supplier ~~Suppliers~~ must complete ~~the applicable~~ source water monitoring and treatment requirements (~~under described in the referenced portions of~~ subsection (b); and ~~in~~ Sections 611.356 and 611.358) before specific ~~by the following~~ deadlines.

a) Deadlines for Completing Source Water Treatment Steps

- 1) Step 1: A supplier exceeding the lead ~~action level~~ or ~~the~~ copper action level must complete lead and copper and source water monitoring (under Section 611.358(b)) and recommend ~~make a treatment recommendation to~~ the Agency (under subsection (b)(1)) within 180 days after the end of the tap monitoring period during which the supplier exceeded the pertinent action level.
- 2) Step 2: The Agency must ~~issue, by~~ a SEP determining, make a determination regarding source water treatment (under subsection (b)(2)) within six months after the supplier submits submission of monitoring results under step 1.
- 3) Step 3: If the Agency requires installing ~~installation of~~ source water treatment, the supplier must install that treatment (under subsection (b)(3)) within 24 months after the Agency completes completion of step 2.

- 10126 4) Step 4: The supplier must complete follow-up tap water monitoring
10127 (under Section 611.356(d)(2)) and source water monitoring (under Section
10128 611.358(c)) within 36 months after completion of step 2.
10129
- 10130 5) Step 5: The Agency must ~~issue, by~~ a SEP ~~reviewing, review~~ the supplier's
10131 installation and operation of source water treatment and specify MPCs for
10132 lead and copper (under subsection (b)(4)) within six months after the
10133 Agency completes completion of step 4.
10134
- 10135 6) Step 6: The supplier must ~~comply operate in compliance~~ with the
10136 Agency-specified lead and copper MPCs (under subsection (b)(4)) and
10137 continue source water monitoring (under Section 611.358(d)).
10138

10139 b) ~~Description of~~ Source Water Treatment Requirements
10140

- 10141 1) System Treatment Recommendation. Any supplier ~~exceeding that~~
10142 ~~exceeds~~ the lead ~~action level~~ or ~~the~~ copper action level must recommend
10143 ~~in writing~~ to the Agency in writing the installation and operation of one of
10144 the source water treatments ~~listed~~ in subsection (b)(2). A supplier may
10145 recommend ~~installing that~~ no treatment ~~be installed~~ based on a
10146 demonstration that source water treatment is not necessary to minimize
10147 lead and copper levels at users' taps.
10148
- 10149 2) Agency Determination Regarding Source Water Treatment
10150
- 10151 A) The Agency must evaluate ~~complete an evaluation of~~ the results of
10152 all source water samples the supplier submitted ~~by the supplier~~ to
10153 determine whether source water treatment is necessary to minimize
10154 lead or copper levels in water the supplier delivers ~~delivered~~ to
10155 users' taps.
10156
- 10157 B) If the Agency determines ~~that~~ treatment ~~necessary is needed~~, the
10158 Agency must ~~issue, by~~ a SEP requiring the supplier to install,
10159 ~~either require installation and operate either operation of~~ the source
10160 water treatment the supplier recommended ~~by the supplier~~ (if any)
10161 or ~~require the installation and operation of~~ another from among
10162 specific source water treatment ~~techniques from among the~~
10163 following:
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- 10165 i) ion exchange;
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- 10167 ii) reverse osmosis;
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- iii) lime softening; or
- iv) coagulation/filtration.
- C) The Agency may ~~require request and~~ the supplier to must submit, ~~on or before a certain date, any such~~ additional information, ~~on or before a certain date,~~ as the Agency determines is necessary to aid ~~in~~ its review.
- D) The Agency must notify the supplier in writing of its determination, ~~stating and set forth~~ the basis for its decision.
- 3) ~~Installing Installation of~~ Source Water Treatment. ~~A Each~~ supplier must properly install and operate the source water treatment ~~approved by~~ the Agency approves under subsection (b)(2).
- 4) Agency ~~Reviewing Review of~~ Source Water Treatment and Specifying Specification of Maximum Permissible Source Water Levels (MPCs)
 - A) The Agency must review the source water samples ~~taken by~~ the supplier took both before and after the supplier installs source water treatment, and determine whether the supplier ~~has~~ properly installs installed and operates operated the approved source water treatment.
 - B) Based on its review, the Agency must ~~issue, by~~ a SEP approving, approve the lead and copper MPCs for finished water entering the supplier's distribution system. ~~The MPC Such~~ levels must reflect the contaminant removal capability of the treatment when properly operated and maintained.
 - C) The Agency must explain the basis for its decision under subsection (b)(4)(B).
- 5) Continued Operation and Maintenance. ~~A Each~~ supplier must maintain lead and copper levels below the MPCs the Agency approved ~~by the Agency~~ at ~~every each~~ sampling point the supplier monitors under monitored in accordance with Section 611.358. The supplier ~~does not comply is out of compliance~~ with this subsection (b) if the level of lead or copper at any sampling point is greater than the MPC the Agency approved ~~by the Agency~~ under subsection (b)(4)(B).
- 6) Modifying Modification of Agency Treatment Decisions

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- A) On its own initiative, or in response to a request by ~~the a~~-supplier, the Agency may ~~issue, by~~ a SEP ~~modifying, modify~~ its determination of the source water treatment under subsection (b)(2); or the lead and copper MPCs under subsection (b)(4).
 - B) A ~~supplier must make a~~ request ~~to modify for modification by a supplier must be~~ in writing, ~~explaining the propriety of explain why~~ the modification ~~is appropriate~~, and ~~providing provide~~ supporting documentation.
 - C) The Agency may ~~issue, by~~ a SEP ~~modifying, modify~~ its determination ~~if where~~ it concludes that ~~the such~~ change is necessary to ensure that the supplier continues ~~minimizing to minimize~~ lead and copper concentrations in source water.
 - D) A revised determination ~~made~~ under subsection (b)(6)(C) must ~~state set forth~~ the new treatment requirements, explain the basis for the Agency's decision, and provide ~~a an implementation~~ schedule for completing the treatment modifications.
 - E) Any interested person may submit information to the Agency, in writing ~~bearing , that bears~~ on whether the Agency should ~~exercise, within~~ its discretion ~~and ,~~ issue a SEP ~~modifying to modify~~ its determination under subsection (b)(2). An Agency determination not to act on ~~a submission of such~~ information ~~by~~ an interested person ~~submits~~ is not an Agency determination for the purposes of Sections 39 and 40 of the Act.
- 7) USEPA Treatment Decisions ~~by USEPA~~. Under ~~the procedures in~~ 40 CFR 142.19, ~~the~~ USEPA ~~reserves~~ Regional Administrator reserves the prerogative to review Agency treatment determinations ~~made by the Agency~~ under subsections (b)(2), (b)(4), or (b)(6) and issue federal treatment determinations consistent with ~~the requirements of~~ 40 CFR 141.83(b)(2), (b)(4), and (b)(6) ~~if USEPA, where the Administrator~~ finds that certain conditions exist ~~the following is true~~:
- A) the Agency ~~fails has failed~~ to issue a treatment determination by the applicable deadline ~~contained~~ in subsection (a);
 - B) the Agency ~~abuses has abused~~ its discretion in a substantial number of ~~instances eases~~ or in ~~instances eases~~ affecting a substantial population; or

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- C) the technical aspects of the Agency's determination would be indefensible in a ~~an expected~~ federal enforcement action taken against the a supplier.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.83.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.354 Lead Service Line Inventory and Replacing Lead Service LinesReplacement

- a) Lead Service Line Inventory. A supplier must develop an inventory identifying the materials composition for all service lines connected to its distribution system. The inventory must meet specific requirements:
 - 1) The supplier must develop an initial inventory before October 16, 2024 and submit the inventory to the Agency as Section 611.360(e) requires.
 - 2) The inventory must include all service lines connected to the supplier's distribution system regardless of ownership status (e.g., where the supplier shares service line ownership, the inventory would include both the supplier-owned and customer-owned portions of the service line).
 - 3) When conducting the inventory of service lines in its distribution system for the initial inventory under subsection (a)(1), the supplier must use any information on lead and galvanized iron or steel system components the supplier identified complying with 40 CFR 141.42(d). The supplier must also review the sources of information in subsections (a)(3)(A) through (a)(3)(D) to identify service line materials for the initial inventory. The supplier may use other sources of information the Agency approves in a SEP.
 - A) All construction and plumbing codes, permits, and existing records or other documents indicating the service line materials connecting structures to its distribution system.
 - B) All supplier records, including distribution system maps and drawings, historical records on each service connection, meter installation records, historical capital improvement or master plans, and standard operating procedures.

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- C) All inspections and distribution system records indicating the materials composing the service connections connecting structures to its distribution system.
 - D) Any resource, information, or method for identifying and assessing service line materials the Agency provides or requires in a SEP.
- 4) The supplier must categorize every service line and supplier-owned portion of a service line under split ownership:
- A) “Lead” for a lead service line.
 - B) “Galvanized Requiring Replacement” for a galvanized service line at any time downstream of a lead service line or currently downstream of a lead status unknown service line. If the supplier cannot demonstrate that a galvanized service line was never downstream of a lead service line, the supplier must presume a lead service line was upstream.
 - C) “Non-Lead” for a service line the supplier determines through an evidence-based record, method, or technique is not lead or galvanized requiring replacement under subsection (a)(4)(A) or (a)(4)(B). The supplier may classify the service line using its actual material of construction (e.g., “plastic” or “copper”) as an alternative to non-lead.
 - D) “Lead Status Unknown” for a service line of material the supplier does not know is lead, galvanized requiring replacement, or non-lead service line under subsection (a)(4)(A), (a)(4)(B), or (a)(4)(C), e.g., if the supplier has no documented evidence supporting material classification. The supplier may classify the line as “unknown”, as an alternative to classifying it as lead status unknown, however, all requirements applying to lead status unknown service lines will apply to those the supplier classifies as Unknown. A supplier may provide more information regarding its lead status unknown lines, as long as the inventory clearly distinguishes unknown service lines from those for which the supplier verified the material of construction through records or inspection.
BOARD NOTE: See the definition of “lead status unknown service line” in Section 611.350(b).

- 10339 5) The supplier must identify and track service line materials in its inventory
10340 as the supplier encounters them in the course of its normal operations
10341 (e.g., checking service line materials when reading water meters or
10342 performing maintenance activities).
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- 10344 6) The supplier must update its inventory based on all applicable sources in
10345 subsections (a)(3) and (a)(5) and any lead service line replacements or
10346 service line material inspections the supplier conducted. The supplier may
10347 use other sources of information the Agency approves in a SEP and must
10348 use other sources of information the Agency requires in a SEP. The
10349 supplier must submit the updated inventory to the Agency as Section
10350 611.360(e) requires. The publicly accessible inventory must reflect
10351 inventory updates no less frequently than when the supplier must submit
10352 them to the Agency.
- 10353
- 10354 A) A supplier whose inventory contains only non-lead service lines
10355 needs not provide inventory updates to the Agency or public. If
10356 the supplier subsequently finds a lead service line within its
10357 system, the supplier must prepare an updated inventory under
10358 subsection (a) on a schedule the Agency establishes in a SEP.
- 10359
- 10360 B) This subsection (a)(6)(B) corresponds with 40 CFR
10361 141.84(a)(6)(ii), which USEPA marked “Reserved”. This
10362 statement maintains structural consistency with USEPA’s rule.
- 10363
- 10364 7) To calculate the number of service line replacements under subsections (f)
10365 or (g), the supplier must apply the replacement rate to the sum of known
10366 lead and galvanized requiring replacement service lines when the supplier
10367 first exceeds the lead trigger level or lead action level plus the number of
10368 lead status unknown service lines in the beginning of each year of the
10369 supplier’s annual goal-based or mandatory full lead service line
10370 replacement program.
- 10371
- 10372 A) A supplier must count each service line only once when calculating
10373 the required number of service lines it must replace, even if the
10374 supplier shares service line ownership, and the supplier must
10375 replace both the customer-owned and system-owned portions.
- 10376
- 10377 B) The supplier must annually update the number of service lines it
10378 needs to replace by subtracting the number of lead status unknown
10379 service lines the supplier discovered are non-lead and adding the
10380 number of non-lead service lines the supplier discovered are lead
10381 or galvanized requiring replacement service lines.

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C) Verifying a lead status unknown service line as non-lead in its inventory does not count as replacing a service line.

BOARD NOTE: Using the number of lead and galvanized requiring replacement service lines at the time of first exceeding the lead trigger level applies for subsection (f). The number at the time of first exceeding the lead action level applies for subsection (g). The number of lead status unknown service lines remaining at the beginning of each year applies to both.

8) The supplier must keep its service line materials inventory publicly accessible.

A) The inventory must include a locational identifier, like a street address, block, intersection, or landmark, for each lead or galvanized requiring replacement service line. A supplier may include a locational identifier for lead status unknown service lines or list the exact address of each service line.

B) A supplier serving more than 50,000 persons must make the publicly accessible inventory available online.

9) If a supplier has no lead, galvanized requiring replacement, or lead status unknown service lines (regardless of ownership) in its inventory, the supplier may comply with subsection (a)(8) using a written statement, in lieu of the inventory, declaring that its distribution system has no lead or galvanized requiring replacement service lines. The statement must include a general description of all applicable sources the supplier used under subsections (a)(3), (a)(5), and (a)(6) to determine these service lines are absent.

10) The supplier must include instructions for accessing the service line inventory (including inventories consisting only of a statement under subsection (a)(9)) in its Consumer Confidence Report under Section 141.153(d)(4)(K).

b) Lead Service Line Replacement Plan. A supplier with one or more lead, galvanized requiring replacement, or lead status unknown service lines in its distribution system must submit a lead service line replacement plan to the Agency under Section 611.360(e) before October 16, 2024. The lead service line replacement plan must have sufficient detail to ensure the supplier can comply

10424 with lead service line replacement requirements under this Section. The plan
10425 must include specific descriptions:

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- 10427 1) A strategy for determining the composition of lead status unknown service
10428 lines in its inventory;
- 10429
- 10430 2) A procedure for conducting full lead service line replacement;
- 10431
- 10432 3) A strategy for informing customers before a full or partial lead service line
10433 replacement;
- 10434
- 10435 4) For a supplier serving more than 10,000 persons, a lead service line
10436 replacement goal rate the supplier recommends if the supplier exceeds the
10437 lead trigger level;
- 10438
- 10439 5) A procedure for customers to flush particulate lead from service lines and
10440 premises plumbing;
- 10441
- 10442 6) A prioritization strategy for lead service line replacement based on factors,
10443 including targeting known lead service lines, replacing lead service lines
10444 for disadvantaged consumers and populations most sensitive to the effects
10445 of lead, etc.; and
- 10446
- 10447 7) A strategy for funding lead service line replacements considering ways to
10448 replace the customer-owned portion for those unable to pay.

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10450 c) Operating Procedures for Replacing Lead Goosenecks, Pigtails, or Connectors

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- 10452 1) The supplier must replace any lead gooseneck, pigtail, or connector it
10453 owns when the supplier encounters it during planned or unplanned water
10454 system infrastructure work.
- 10455
- 10456 2) The supplier must offer to replace a customer-owned lead gooseneck,
10457 pigtail, or connector; however, the supplier needs not bear the cost of
10458 replacing the customer-owned parts.
- 10459
- 10460 3) The supplier needs not replace a customer-owned lead gooseneck, pigtail,
10461 or connector if the customer objects to replacing it.
- 10462
- 10463 4) Replacing a lead gooseneck, pigtail, or connector does not count towards
10464 goal-based or mandatory lead service line replacements under subsections
10465 (f) or (g).
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5) When replacing any gooseneck, pigtail, or connector attached to a lead service line, the supplier must follow the risk mitigation procedures Section 141.85(f)(2) specifies.

d) Conducting Lead Service Line Replacement That May Result in Partial Replacements

1) A supplier planning to partially replace a lead service line (e.g., replace only the supplier-owned portion) in the course of planned infrastructure work must notify the service line’s owner, or the owner’s authorized agent, and any non-owner residents the service line serves at least 45 days before the replacement. The notice must explain that the supplier will replace the supplier-owned portion of the service line and offer to replace the customer-owned portion (not supplier-owned). The supplier needs not bear the cost of replacing the customer-owned portion of the lead service line.

A) Before returning a service line to service, the supplier must provide notice complying with Section 611.355(a) and explaining that consumers may experience a temporary increase of lead levels in their drinking water due to the replacement, providing information about the health effects of lead, and describing actions consumers can take to minimize their exposure to lead in drinking water. If the lead service line undergoing partial replacement serves multi-family dwellings, the supplier may post the information at a conspicuous location instead of providing individual notice to each resident.

B) The supplier must inform consumers about service line flushing using the procedure in subsection (b)(5) requires before returning the affected service line to service.

C) The supplier must provide the consumer with a pitcher filter or point-of-use treatment device to reduce lead, six months of replacement cartridges, and use instructions before returning the affected service line to service. If the affected service line serves more than one residence or non-residential unit (e.g., a multi-unit building), the supplier must provide a filter, six months of replacement cartridges and use instructions to every unit in the building.

D) The supplier must offer to collect a follow up tap sample between three and six months after partially replacing a lead service line.

The supplier must provide the results from the follow up sample under Section 611.355(d).

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10513 2) Any supplier replacing the supplier-owned portion of a lead service line in the course of an emergency repair must notify and provide risk mitigation measures to the persons the affected service line serves as subsections (d)(1)(A) through (d)(1)(C) require before returning the line to service.
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10518 3) If a customer notifies a supplier that the customer plans to replace the customer's portion of the lead service line, the supplier must make a good faith effort to coordinate simultaneously replacing the supplier's portion. If simultaneously replacing the supplier- and customer-owned portions is not practicable, the supplier must replace the supplier-owned portion as soon as practicable but no later than 45 days after the customer replaces the customer-owned portion of the lead service line. The supplier must notify and provide risk mitigation measures as subsections (d)(1)(A) through (d)(1)(C) require. If the supplier fails to replace its portion of the lead service line within 45 days after the customer replaces the customer's portion of the lead service line, the supplier must notify the Agency under Section 611.360(e) within 30 days after failing to meet the deadline. The supplier must complete replacing the supplier-owned portion of the service line no later than 180 days after the customer replaces the customer-owned portion.
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10534 4) If a supplier receives notice or otherwise learns that a customer replaced the customer-owned portion of a lead service line within the previous six months leaving the system-owned portion in place, the supplier must replace its portion within 45 days after the supplier becomes aware the customer replaced the customer-owned portion. The supplier must notify and provide risk mitigation measures as subsections (d)(1)(A) through (d)(1)(C) require within 24 hours after the supplier becomes aware of the customer replacing the customer-owned portion. If the supplier fails to replace the supplier-owned portion of the service line within 45 days after becoming aware of the customer replacing the customer-owned portion, the supplier must notify the Agency under Section 611.360(e) within 30 days after failing to meet the deadline. The supplier must complete replacing the supplier-owned portion of the service line no later than 180 days after the customer replaces the customer-owned portion.
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10549 5) If a supplier receives notice or otherwise learns that a customer replaced the customer-owned portion of a lead service line more than six months in the past, the supplier needs not replace the supplier-owned portion of the lead service line under this subsection (d)(5). However, the supplier must
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10553 still include the system-owned portion when calculating a lead service line
10554 replacement rate under subsection (a)(7).

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10556 e) Conducting Full Lead Service Line Replacements. A supplier conducting a full
10557 lead service line replacement must notify the service line's owner, or the owner's
10558 authorized agent, and any non-owner residents the service line serves within 24
10559 hours after completing the replacement. The supplier needs not bear the cost of
10560 replacing the customer-owned portion of the lead service line.

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10562 1) The notice must comply with Section 611.355(a), explain that consumers
10563 may experience a temporary increase of lead levels in their drinking water
10564 due to the replacement, inform about the health effects of lead, and explain
10565 actions a consumer can take to minimize exposure to lead in drinking
10566 water. If the lead service line the supplier will replace serves a multi-
10567 family dwelling, the supplier may post the information at a conspicuous
10568 location instead of providing individual notice to all residents.

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10570 2) The supplier must inform about flushing the service line using the
10571 procedure the supplier developed under subsection (b)(5) before returning
10572 the replaced service line to service.

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10574 3) The supplier must provide the consumer with a pitcher filter or point-of-
10575 use treatment device to reduce lead, six months of replacement cartridges,
10576 and use instructions before returning the replaced service line to service.
10577 If the lead service line serves more than one residence or non-residential
10578 unit (e.g., a multi-unit building), the supplier must provide a filter and six
10579 months of replacement cartridges and use instructions to every unit in the
10580 building.

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10582 4) The supplier must offer to collect a follow up tap sample between three
10583 and six months after replacing a lead service line. The supplier must
10584 provide the results from the follow up sample under Section 611.355(d).

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10586 f) Goal-Based Full Lead Service Line Replacement for Suppliers Having a 90th
10587 Percentile Lead Concentration Exceeding the Lead Trigger Level But Not the
10588 Lead Action Level. A supplier serving more than 10,000 persons having a 90th
10589 percentile lead concentration under Section 611.356 exceeding the lead trigger
10590 level but not the lead action level must conduct goal-based full lead service line
10591 replacement at a rate approved in an Agency-issued SEP.

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10593 1) The supplier must annually calculate the number of full lead service line
10594 replacements it must conduct under subsection (a)(7).
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- 2) The supplier must replace lead service lines complying with subsection (d) or (e).
 - 3) Only a full lead service line replacement counts towards a supplier's annual replacement goal. A partial lead service line replacement does not count towards the goal.
 - 4) The supplier must inform customers having a lead, galvanized requiring replacement, or lead status unknown service line as Section 611.355(g) requires.
 - 5) A supplier failing to meet its lead service line replacement goal must take certain actions:
 - A) Conduct public outreach activities under Section 611.355(h) until either the supplier meets its replacement goal, or tap sampling shows the 90th percentile concentration does not exceed the lead trigger level for two continuous years of monitoring.
 - B) Resume its goal-based lead service line replacement program under this subsection (f) if its 90th percentile lead concentration anytime later exceeds the lead trigger level but not the lead action level.
 - 6) The first year of a supplier's lead service line replacement program begins on the first day after the end of the tap sampling period during which the supplier exceeded the lead trigger level. If the supplier samples annually or less frequently, the end of the tap monitoring cycle is September 30 of the calendar year during which the sampling occurs. If the Agency issues a SEP establishing an alternative tap monitoring cycle, the end of the supplier's tap monitoring cycle is the last day of that cycle.
 - g) Mandatory Full Lead Service Line Replacement for Suppliers Whose 90th Percentile Lead Concentration Exceeds the Lead Action Level. A supplier serving more than 10,000 persons exceeding the lead action level in tap sampling monitoring under Section 611.356 must replace full lead service lines on its distribution system at an annual rate of at least three percent on a two-year rolling average basis.
 - 1) The supplier must calculate its average annual number of full lead service line replacements under subsection (a)(7).
 - 2) The supplier must replace lead service lines under subsections (d) and (e).

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- 3) Only a full lead service line replacement counts towards a supplier’s mandatory annual replacement rate of at least three percent. A partial lead service line replacement does not count towards the supplier’s mandatory replacement rate.
- 4) A supplier must inform its customers having a lead, galvanized requiring replacement, or lead status unknown service line as Section 611.355(g) requires.
- 5) A CWS supplier serving 10,000 or fewer persons or a NTNCWS supplier for which the Agency issues a SEP approving or designating replacing lead service lines as a compliance option must replace lead service lines as Section 611.363(a)(1) describes. The supplier must replace lead service lines complying with subsections (d) and (e).
- 6) A supplier may stop replacing lead service lines after cumulatively replacing the required number. Unless the Agency issues a SEP under subsection (g)(9) requiring another percentage, the required number is at least three percent of the service lines subsection (a)(7) determines times the number of years between when the supplier most recently began mandatorily replacing lead service lines and when the supplier calculates its lead 90th percentile concentration under Section 611.360(c)(4) to be at or below the lead action level during each of four consecutive six-month tap monitoring cycles. If the supplier later exceeds the lead action level, it must restart mandatorily replacing lead service lines at the same rate on a two-year rolling average basis, unless the Agency issues a SEP under subsection (g)(9) requiring an alternative replacement rate.
- 7) A supplier may also cease mandatorily replacing lead service lines if the supplier has no remaining lead status unknown service lines in its inventory, and the supplier obtains refusals or non-responses to its offer to replace the customer-owned portion of the lead service line from every customer on its distribution system still served by a lead service line or a galvanized requiring replacement service line. For this subsection (g)(7) and under Section 611.360(e), a supplier must document customer refusals to the Agency, including any written refusals signed by the customers, any documents memorializing customers verbally refusing, and any documents memorializing no response from customers after the supplier made at least two good faith attempts to reach each offering to replace the full lead service line. If the supplier’s lead 90th percentile concentration later exceeds the lead action level, the supplier must offer to replace the customer-owned portion for every customer served through a full or

- 10682 partial lead service line or galvanized requiring replacement service line.
- 10683 The supplier needs not bear the cost of replacing the customer-owned
- 10684 portion of any lead service line.
- 10685
- 10686 8) The first year of lead service line replacement begins the first day after the
- 10687 end of the tap sampling period during which the supplier exceeded the
- 10688 lead action level.
- 10689
- 10690 9) If the Agency determines a shorter schedule is feasible, the Agency must
- 10691 issue a SEP requiring a supplier to replace lead service lines on a shorter
- 10692 schedule than that this Section otherwise requires, taking into account the
- 10693 number of lead service lines in the supplier's system. The Agency must
- 10694 issue this SEP within six months after the supplier must begin replacing
- 10695 lead service lines under subsection (g).
- 10696
- 10697 h) Reporting to Demonstrate Compliance to the Agency. To demonstrate that it
- 10698 complies with subsections (a) through (g), a supplier must report the information
- 10699 Section 611.360(e) specifies to the Agency.
- 10700
- 10701 a) Suppliers Required to Replace Lead Service Lines
- 10702
- 10703 1) If the results from tap samples taken under Section 611.356(d)(2) exceed
- 10704 the lead action level after the supplier has installed corrosion control or
- 10705 source water treatment (whichever sampling occurs later), the supplier
- 10706 must recommence replacing lead service lines in accordance with the
- 10707 requirements of subsection (b).
- 10708
- 10709 2) If a supplier is in violation of Section 611.351 or Section 611.353 for
- 10710 failure to install source water or corrosion control treatment, the Agency
- 10711 may, by a SEP, require the supplier to commence lead service line
- 10712 replacement under this Section after the date by which the supplier was
- 10713 required to conduct monitoring under Section 611.356(d)(2) has passed.
- 10714
- 10715 b) Annual Replacement of Lead Service Lines
- 10716
- 10717 1) Initiation of a Lead Service Line Replacement Program
- 10718
- 10719 A) A supplier that is required to commence lead service line
- 10720 replacement under subsection (a) must annually replace at least
- 10721 seven percent of the initial number of lead service lines in its
- 10722 distribution system.
- 10723
- 10724 B) The initial number of lead service lines is the number of lead lines

10725 in place at the time the replacement program begins.
10726

10727 C) The supplier must identify the initial number of lead service lines
10728 in its distribution system, including an identification of the portions
10729 of the system owned by the supplier, based on a materials
10730 evaluation, including the evaluation required under Section
10731 611.356(a) and relevant legal authorities (e.g., contracts, local
10732 ordinances) regarding the portion owned by the system.
10733

10734 D) The first year of lead service line replacement must begin on the
10735 first day following the end of the monitoring period in which the
10736 supplier exceeded the action level under subsection (a).
10737

10738 E) If monitoring is required annually or less frequently, the end of the
10739 monitoring period is September 30 of the calendar year in which
10740 the sampling occurs.
10741

10742 F) If the Agency has established an alternate monitoring period by a
10743 SEP, then the end of the monitoring period will be the last day of
10744 that period.
10745

10746 2) Resumption of a Lead Service Line Replacement Program after Cessation
10747

10748 A) A supplier that is resuming a program after cessation of its lead
10749 service line replacement program, as allowed under subsection (f),
10750 must update its inventory of lead service lines to include those sites
10751 that it had previously determined did not require replacement
10752 under the sampling provision of subsection (e).
10753

10754 B) The supplier will then divide the updated number of remaining
10755 lead service lines by the number of remaining years in the program
10756 to determine the number of lines that must be replaced per year
10757 (seven percent lead service line replacement is based on a 15-year
10758 replacement program, so that, for example, a supplier resuming
10759 lead service line replacement after previously conducting two years
10760 of replacement would divide the updated inventory by 13).
10761

10762 C) For a supplier that has completed a 15-year lead service line
10763 replacement program, the Agency must, by a SEP, determine a
10764 schedule for replacing or retesting lines that were previously tested
10765 out under the completed replacement program, whenever the
10766 supplier has re-exceeded the action level.
10767

- 10768 e) ~~Service Lines Not Needing Replacement. A supplier is not required to replace any~~
 10769 ~~individual lead service line for which the lead concentrations in all service line~~
 10770 ~~samples taken from that line under Section 611.356(b)(3) are less than or equal to~~
 10771 ~~0.015 mg/l.~~
- 10772
- 10773 d) ~~A water supplier must replace that portion of the lead service line that it owns. In~~
 10774 ~~cases where the supplier does not own the entire lead service line, the supplier~~
 10775 ~~must notify the owner of the line, or the owner's authorized agent, that the~~
 10776 ~~supplier will replace the portion of the service line that it owns and must offer to~~
 10777 ~~replace the owner's portion of the line. A supplier is not required to bear the cost~~
 10778 ~~of replacing the privately owned portion of the line, nor is it required to replace~~
 10779 ~~the privately owned portion where the owner chooses not to pay the cost of~~
 10780 ~~replacing the privately owned portion of the line, or where replacing the~~
 10781 ~~privately owned portion would be precluded by State, local, or common law. A~~
 10782 ~~water supplier that does not replace the entire length of the service line also must~~
 10783 ~~complete the following tasks:~~
- 10784
- 10785 1) ~~Notice Prior to Commencement of Work~~
- 10786
- 10787 A) ~~At least 45 days prior to commencing the partial replacement of a~~
 10788 ~~lead service line, the water supplier must provide notice to the~~
 10789 ~~residents of all buildings served by the line explaining that they~~
 10790 ~~may experience a temporary increase of lead levels in their~~
 10791 ~~drinking water, along with guidance on measures consumers can~~
 10792 ~~take to minimize their exposure to lead.~~
- 10793
- 10794 B) ~~The Agency, by issuing an appropriate SEP, may allow the water~~
 10795 ~~supplier to provide notice under the previous sentence less than 45~~
 10796 ~~days prior to commencing partial lead service line replacement~~
 10797 ~~where it determines that such replacement is in conjunction with~~
 10798 ~~emergency repairs.~~
- 10799
- 10800 C) ~~In addition, the water supplier must inform the residents served by~~
 10801 ~~the line that the supplier will, at the supplier's expense, collect a~~
 10802 ~~sample from each partially replaced lead service line that is~~
 10803 ~~representative of the water in the service line for analysis of lead~~
 10804 ~~content, as prescribed by Section 611.356(b)(3), within 72 hours~~
 10805 ~~after the completion of the partial replacement of the service line.~~
 10806 ~~The supplier must collect the sample and report the results of the~~
 10807 ~~analysis to the owner and the residents served by the line within~~
 10808 ~~three business days after receiving the results.~~
- 10809
- 10810 D) ~~Mailed notices post-marked within three business days after~~

receiving the results must be considered "on time".

- 2) ~~The water supplier must provide the information required by subsection (d)(1) to the residents of individual dwellings by mail or by other methods approved by the Agency by a SEP. In instances where multi-family dwellings are served by the service line, the water supplier must have the option to post the information at a conspicuous location.~~

e) ~~Agency Determination of Shorter Replacement Schedule~~

- 1) ~~The Agency must, by a SEP, require a supplier to replace lead service lines on a shorter schedule than that otherwise required by this Section if it determines, taking into account the number of lead service lines in the system, that such a shorter replacement schedule is feasible.~~
- 2) ~~The Agency must notify the supplier of its finding under subsection (e)(1) within six months after the supplier is triggered into lead service line replacement based on monitoring, as referenced in subsection (a).~~

f) ~~Cessation of Service Line Replacement~~

- 1) ~~Any supplier may cease replacing lead service lines whenever it fulfills both of the following conditions:~~
 - A) ~~First draw tap samples collected under Section 611.356(b)(2) meet the lead action level during each of two consecutive six-month monitoring periods; and~~
 - B) ~~The supplier has submitted those results to the Agency.~~
- 2) ~~If any of the supplier's first draw tap samples thereafter exceed the lead action level, the supplier must recommence replacing lead service lines under subsection (b)(2).~~

- g) ~~To demonstrate compliance with subsections (a) through (d), a supplier must report to the Agency the information specified in Section 611.360(e).~~

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.84.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.355 Public Education and Supplemental Monitoring and Mitigation

10854 A supplier ~~exceeding that exceeds~~ the lead action level based on tap water samples under
 10855 ~~collected in accordance with~~ Section 611.356 must deliver the public education materials
 10856 ~~required by~~ subsection (a) requires under in accordance with the requirements of subsection (b).
 10857 A supplier ~~exceeding that exceeds~~ the lead action level must sample the tap water of any
 10858 customer ~~requesting sampling under who requests it in accordance with~~ subsection (c). A small
 10859 CWS or NTNCWS supplier electing to implement POU devices as a small supplier compliance
 10860 flexibility option under Section 611.363 must provide public education materials as subsection
 10861 (j) requires to inform users how to properly use POU devices. A supplier must deliver a
 10862 consumer notice of lead tap water monitoring results to persons ~~who are served by~~ the supplier
 10863 ~~serves~~ at each site that the supplier ~~samples has tested~~, as ~~specified in~~ subsection (d) specifies. A
 10864 supplier with lead, galvanized requiring replacement, or lead status unknown service lines, as
 10865 defined in Section 611.384(a)(4), must deliver public education materials to persons served
 10866 through these service lines as subsections (e) through (g) specify. A CWS supplier must conduct
 10867 annual outreach to the Illinois Department of Public Health and local health agencies as
 10868 subsection (i) provides. A CWS supplier serving more than 10,000 persons failing to meet its
 10869 annual lead service line replacement goal under Section 611.354(f) must conduct outreach
 10870 activities as subsection (h) specifies.

10871
 10872 a) Content of Written Public Education Materials

10873
 10874 1) Community Water Systems and Non-Transient Non-Community Water
 10875 Systems. A CWS or NTNCWS supplier must include the following
 10876 elements in printed materials (e.g., brochures and pamphlets) in the same
 10877 order as listed in subsections (a)(1)(A) through (a)(1)(~~GF~~). In addition,
 10878 the supplier must ~~use include~~ the verbatim language ~~set forth in~~
 10879 subsections (a)(1)(A), (a)(1)(B), and (a)(1)(F) ~~in the materials, exactly as~~
 10880 written, except for replacing the text in brackets with the in these
 10881 subsections, for which the supplier must include system-specific
 10882 information. Any additional information ~~presented by~~ a supplier presents
 10883 must be consistent with the information ~~set forth in~~ subsections (a)(1)(A),
 10884 through (a)(1)(~~GF~~), and the supplier must present the additional
 10885 information in plain language that ~~can be understood by~~ the general public
 10886 can understand. The supplier must submit all written public education
 10887 materials to the Agency. A supplier may change the mandatory language
 10888 in subsections (a)(1)(A) and (a)(1)(B) only as the Agency approves in a
 10889 SEP.

10890
 10891 A) IMPORTANT INFORMATION ABOUT LEAD IN YOUR
 10892 DRINKING WATER. [INSERT NAME OF SUPPLIER] found
 10893 elevated levels of lead in drinking water in some homes/buildings.
 10894 Lead can cause serious health problems, especially for pregnant
 10895 women and young children. Please read this information closely to
 10896 see what you can do to reduce lead in your drinking water.

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~~BOARD NOTE: The supplier must use the verbatim text set forth in this subsection (a)(1)(A), with the exception that the supplier must insert its name in place of the bracketed text.~~

- B) Health Effects of Lead. Exposure to lead in drinking water ~~Lead can cause serious health effects in all age groups~~problems if too much enters your body from drinking water or other sources. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.~~It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.~~

~~BOARD NOTE: The supplier must use the verbatim text set forth in this subsection (a)(1)(B).~~

- C) Sources of Lead
- i) Explain what lead is.
 - ii) Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home and building plumbing materials and service lines that may contain lead.
 - iii) Discuss other important sources of lead exposure in addition to drinking water (e.g., paint).

BOARD NOTE: The supplier must use text providing that provides the information ~~described in~~ this subsection (a)(1)(C) describes.

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- D) Discuss the steps the consumer can take to reduce ~~his or her~~ exposure to lead in drinking water.
- i) Encourage running the water to flush out the lead.
 - ii) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.
 - iii) Explain that boiling water does not reduce lead levels.
 - iv) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or water ~~treatment-of water~~.
 - v) Suggest that parents have their child's blood tested for lead.

BOARD NOTE: The supplier must use text providing that provides the information ~~described in this subsection~~ (a)(1)(D) describes.

- E) Explain why there are elevated levels of lead in the supplier's drinking water (if known) and what the supplier is doing to reduce the lead levels in homes and buildings in this area.

BOARD NOTE: The supplier must use text providing that provides the information ~~described in this subsection~~ (a)(1)(E) describes.

- F) For more information, call us at [INSERT THE SUPPLIER'S NUMBER] [(IF APPLICABLE), or visit our Web site at [INSERT THE SUPPLIER'S WEB SITE HERE]]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit USEPA's Web site at www.epa.gov/lead or contact your health care provider.

~~BOARD NOTE: The supplier must use the verbatim text set forth in this subsection (a)(1)(F), with the exception that the supplier must insert its name in place of the first segment of bracketed text, and it must add the second segment of bracketed text and substitute its Web address for the internal bracketed text.~~

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G) Information on Lead Service Lines. A supplier having lead service lines must discuss opportunities to replace lead service lines and explain how a consumer may access the supplier’s lead service line inventory to determine whether the consumer has a lead service line. The supplier must include information on programs providing financing solutions to assist property owners in replacing their portion of a lead service line, with a statement that the water system must replace the supplier-owned portion of a lead service line when the property owner notifies the supplier that the consumer will replace the property owners portion of the lead service line.

2) Community Water Systems. In addition to including the elements ~~specified in~~ subsection (a)(1) specifies, a CWS supplier must include two information items~~do both of the following~~:

- A) The supplier ~~It~~ must tell consumers how to get their water tested; and
- B) The supplier ~~It~~ must discuss lead in plumbing components and the difference between low-lead and lead-free components.

BOARD NOTE: At corresponding 40 CFR 141.85(a)(1), USEPA allowed the State to require prior approval of written public information materials. Rather than require prior Agency approval, the Board chooses ~~has chosen~~ to allow the Agency to raise any deficiencies that it may perceive using its existing procedure for review of public education materials. The Agency outlines ~~has outlined~~ its standard practice for review of public information materials as follows: The Agency provides a comprehensive public education packet to the supplier together with the notice that the supplier exceeds ~~has exceeded~~ the lead action level. That packet includes guidance and templates for the supplier to use in preparing and distributing its public education materials. The supplier must send a copy of the public education materials that it distributes to the Agency, and the Agency reviews the copy of the materials after their distribution to the public. The Agency directly communicates to the supplier any perceived defects in the materials. When the Agency perceives minor defects, it ~~The Agency~~ will request correction when it perceives minor defects in future distributions of the public education materials. When the Agency perceives major defects in the materials, it ~~or the Agency~~ will request a redistribution of corrected public education materials the supplier ~~when it perceives major defects in the materials~~ already distributed.

b) Delivering ~~Delivery of~~ Public Education Materials

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- 1) The public education materials of a supplier servicing that serves a large proportion of non-English-speaking consumers must contain information in the appropriate languages regarding the importance of the notice, or the materials ~~it~~ must contain a telephone number or address where a water consumer person served may contact the supplier to obtain a translated copy of the public education materials or to request assistance in the appropriate language.

- 2) A CWS supplier exceeding that exceeds the lead action level on the basis of tap water samples under collected in accordance with Section 611.356 and which is not already conducting public education tasks under this Section must, within 60 days after the end of the monitoring period in which the exceedance occurred, complete the public education tasks within 60 days after the end of the tap sampling period in which the exceedance occurred according to the following requirements:
 - A) The CWS supplier must deliver printed materials complying with that meet the content requirements of subsection (a) to all of its bill-paying customers.

 - B) Methods of Delivery for a CWS Supplier
 - i) The CWS supplier must contact customers who are most at risk by delivering education materials complying with that meet the content requirements of subsection (a) to local public health agencies, even if those the agencies are not located within the supplier's service area, along with an informational notice encouraging that encourages distribution to all of the agencies' potentially affected customers or the supplier's consumersusers. The supplier must contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional community-based organizations servicing that serve the target populations, which may include organizations outside the service area of the supplier. If local health agencies provide such lists are provided, the supplier must deliver education materials that comply with meet the content requirements of subsection (a) to each of the organizations on the provided lists.

 - ii) The CWS supplier must contact customers who are most at risk by delivering materials complying with that meet the

11069 ~~content requirements of~~ subsection (a) to the organizations
11070 ~~listed in~~ subsections (b)(2)(H)(i) through (b)(2)(H)(vi) that
11071 are located within the supplier's service area, along with an
11072 informational notice ~~encouraging that encourages~~
11073 distribution to all the organization's potentially affected
11074 customers or supplier's users.

11075
11076 BOARD NOTE: The Board ~~moved found it necessary to~~
11077 ~~move~~ the text of 40 CFR 141.85(b)(2)(ii)(B)(1) through
11078 (b)(2)(ii)(B)(6); to appear as ~~subsections~~ subsection
11079 (b)(2)(H)(i) through ~~subsection~~ (b)(2)(H)(vi), ~~in order~~ to
11080 comport with ~~Illinois Administrative Code codification~~
11081 ~~requirements relating to~~ allowed indent levels ~~in rules~~.

11082
11083 ~~iii)~~ ~~The CWS supplier must make a good faith effort to locate~~
11084 ~~the organizations listed in subsections (b)(2)(I)(i) through~~
11085 ~~(b)(2)(I)(iii) that are located within the service area and~~
11086 ~~deliver materials that meet the content requirements of~~
11087 ~~subsection (a) to them, along with an informational notice~~
11088 ~~that encourages distribution to all potentially affected~~
11089 ~~customers or users. The good faith effort to contact at risk~~
11090 ~~customers may include requesting a specific contact list of~~
11091 ~~these organizations from the local public health agencies,~~
11092 ~~even if the agencies are not located within the supplier's~~
11093 ~~service area.~~

11094
11095 BOARD NOTE: The Board found it necessary to move the
11096 text of 40 CFR 141.85(b)(2)(ii)(C)(1) through
11097 (b)(2)(ii)(C)(3), to appear as subsection (b)(2)(I)(i) through
11098 subsection (b)(2)(I)(iii), in order to comport with Illinois
11099 Administrative Code codification requirements relating to
11100 allowed indent levels in rules.

11101
11102 C) No less often than quarterly, the CWS supplier must provide
11103 information on or in each water bill as long as the system exceeds
11104 the action level for lead. The message on the water bill must
11105 include the verbatim text of the paragraph below following
11106 statement exactly as written, except replacing for the text in
11107 brackets with for which the supplier must include system-specific
11108 information:

11109
11110 [INSERT NAME OF SUPPLIER] found high levels of lead
11111 in drinking water in some homes. Lead can cause serious

11112 health problems. For more information please call
11113 [INSERT NAME OF SUPPLIER] [or visit (INSERT
11114 SUPPLIER'S WEB SITE HERE)]. The message or
11115 delivery mechanism can be modified in consultation with
11116 the Illinois Environmental Protection Agency, Division of
11117 Public Water Supply; specifically, the Agency may allow a
11118 separate mailing of public education materials to customers
11119 if the water system cannot place the information on water
11120 bills.

11121
11122 D) The CWS supplier must post material complying with meeting the
11123 content requirements of subsection (a) on the supplier's Web site if
11124 the CWS supplier serves a population greater than 100,000.

11125
11126 E) The CWS supplier must submit a press release to newspaper,
11127 television, and radio stations.

11128
11129 F) In addition to subsections (b)(2)(A) through (b)(2)(E), the CWS
11130 supplier must implement at least three activities from one or more
11131 of the categories listed below. The supplier must consult with the
11132 Agency to determine the educational content and selection of these
11133 activities ~~must be determined in consultation with the Agency.~~

11134
11135 i) Public service announcements ~~Service Announcements~~.

11136
11137 ii) Paid advertisements.

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11139 iii) Public area information displays ~~Area Information~~
11140 Displays.

11141
11142 iv) E-mails to customers.

11143
11144 v) Public meetings ~~Meetings~~.

11145
11146 vi) Household deliveries ~~Deliveries~~.

11147
11148 vii) Targeted individual customer contact ~~Individual Customer~~
11149 Contact.

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11151 viii) Direct material distribution to all multi-family homes and
11152 institutions.

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11154 ix) Other Agency-approved methods ~~approved by the State~~.

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G) For a CWS supplier that must monitor ~~is required to conduct monitoring~~ annually or less frequently, the end of the tap sampling monitoring period is September 30 of the calendar year in which the sampling occurs, or on the last day of, ~~if the Agency has established an alternative tap sampling alternate monitoring~~ period the Agency sets in, by a SEP, ~~the last day of that period.~~

H) Organizations That ~~that~~ the CWS Supplier Must Contact When Required to Do So under Subsection (b)(2)(B)(iii)

- i) Schools, child care facilities, and Public and private schools ~~or~~ school boards.
- ii) Women, Infants and Children (WIC) and Head Start programs.
- iii) Public and private hospitals and medical clinics.
- vi) Pediatricians.
- v) Family planning clinics.
- vi) Local welfare agencies.
- vii) Obstetricians-gynecologists and midwives.

BOARD NOTE: This subsection (b)(2)(H) derives from ~~corresponds with~~ 40 CFR 141.85(b)(2)(ii)(B)(I) through (b)(2)(ii)(B)(~~76~~), moved here. ~~The Board found it necessary to move the text of those federal provisions to comport with Illinois Administrative Code codification requirements relating to allowed indent levels in rules.~~

~~I) Organizations that the CWS Supplier Must Contact When Required to Do So Under Subsection (b)(2)(B)(iii)~~

- ~~i) Licensed childcare centers.~~
- ~~ii) Public and private preschools.~~
- ~~iii) Obstetricians-gynecologists and midwives.~~

BOARD NOTE: This subsection (b)(2)(H) corresponds with 40 CFR 141.85(b)(2)(ii)(C)(1) through (b)(2)(ii)(C)(3). The Board found it necessary to move the text of those federal provisions to comport with Illinois Administrative Code codification requirements relating to allowed indent levels in rules.

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- 3) As long as a CWS supplier exceeds the action level, it must repeat the activities ~~described~~ in subsection (b)(2), as ~~described in~~ subsections (b)(3)(A) through (b)(3)(D) require.
- A) ~~The A-CWS~~ supplier must repeat the tasks ~~contained in~~ subsections (b)(2)(A), (b)(2)(B), and (b)(2)(D) every 12 months.
- B) ~~The A-CWS~~ supplier must repeat tasks ~~contained in~~ subsection (b)(2)(C) with each billing cycle.
- C) ~~The A-CWS~~ supplier serving a population greater than 100,000 must post and retain material on a publicly accessible ~~website~~Web site under subsection (b)(2)(D).
- D) The CWS supplier must repeat the task in subsection (b)(2)(E) twice every 12 months on a schedule agreed ~~by upon with~~ the Agency ~~in by~~ a SEP. The Agency must, on a case-by-case basis, ~~issue by~~ a SEP ~~extending, extend~~ the time for the supplier to complete the public education tasks ~~set forth~~ in subsection (b)(2) beyond the 60-day limit if ~~the Agency it~~ determines that the ~~supplier needs the~~ extended time ~~to implement the tasks is needed for implementation purposes~~; however, the Agency must issue the SEP granting any extension ~~before prior to expiration of~~ the 60-day deadline expires.
- 4) Within 60 days after the end of the ~~tap sampling monitoring~~ period in which a NTNCWS supplier exceeds the lead action level (unless it already is repeating public education tasks under subsection (b)(5)), ~~the supplier it~~ must deliver the public education materials ~~specified by~~ subsection (a) specifies.
- A) The supplier must deliver the public education materials by certain means must be delivered as follows:
- i) The NTNCWS supplier must post informational posters on lead in drinking water in a public place or common area in each of the buildings ~~served by~~ the supplier serves; and

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- ii) The NTNCWS supplier must distribute informational pamphlets or brochures on lead in drinking water to each person ~~served by~~ the NTNCWS supplier ~~serves~~. The Agency may ~~issue, by~~ a SEP ~~allowing, allow~~ the system to ~~use utilize~~ electronic transmission in lieu of or combined with printed materials as long as ~~the electronic transmission it~~ achieves ~~at least~~ the same ~~or better~~ coverage.
 - B) For a NTNCWS supplier that ~~must monitor is required to conduct monitoring~~ annually or less frequently, the end of the ~~tap sampling monitoring~~ period is September 30 of the calendar year in which the sampling occurs, or ~~on the last day of, if the Agency has established~~ an ~~alternative tap sampling alternate monitoring~~ period ~~the Agency sets in, by~~ a SEP, ~~the last day of that period~~.
- 5) A NTNCWS supplier must repeat the tasks ~~set forth~~ in subsection (b)(4) at least once during each calendar year in which the supplier exceeds the lead action level. The Agency must, on a case-by-case basis, ~~issue by~~ a SEP ~~extending, extend~~ the time for the supplier to complete the public education tasks ~~set forth~~ in subsection (b)(2) beyond the 60-day limit if ~~the Agency it~~ determines that the extended time is needed for implementation purposes; however, the Agency must issue ~~any the~~ SEP granting any extension ~~before prior to expiration of~~ the 60-day deadline ~~expires~~.
- 6) A supplier may ~~stop delivering discontinue delivery of~~ public education materials after ~~the supplier does not exceed it has met~~ the lead action level during the most recent six-month ~~tap monitoring cycle period conducted~~ under Section 611.356. ~~The Such a~~ supplier must begin public education anew ~~under in accordance with~~ this Section if ~~the supplier it~~ subsequently exceeds the lead action level during any ~~tap sampling six-month monitoring~~ period.
- 7) A CWS supplier may apply to the Agency, in writing, to use only the text ~~specified~~ in subsection (a)(1) in lieu of the text in subsections (a)(1) and (a)(2) and to perform the tasks ~~listed~~ in subsections (b)(4) and (b)(5) in lieu of the tasks in subsections (b)(2) and (b)(3) ~~under specific circumstances if the following are true~~:
- A) The supplier is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and

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- B) The ~~supplier system~~ provides water as part of the cost of services provided, ~~and it does not~~ separately charging charge for water consumption.

- 8) A CWS supplier serving that serves 3,300 or fewer people may limit certain aspects of its public education programs ~~as follows~~:
 - A) ~~For notice under With respect to the requirements of~~ subsection (b)(2)(F), a supplier serving that serves 3,300 or fewer people must implement at least one of the activities ~~listed~~ in that subsection.

 - B) ~~For notice under With respect to the requirements of~~ subsection (b)(2)(B), a supplier serving that serves 3,300 or fewer people may limit the distribution of the public education materials ~~required under that subsection~~ to facilities and organizations that ~~it serves which are most likely to be visited regularly by~~ pregnant women and children are most likely to visit.

 - C) ~~For notice under With respect to the requirements of~~ subsection (b)(2)(E), the Agency may ~~issue, by~~ a SEP waiving, waive this requirement for a supplier serving that serves 3,300 or fewer persons, as long as the supplier distributes notices to every household ~~the supplier that it~~ serves.

- c) Supplemental Monitoring and Notification of Results. A supplier ~~failing that fails~~ to meet the lead action level in on the basis of tap samples ~~under collected in accordance with~~ Section 611.356 must offer to sample the tap water of any customer requesting who requests it. The supplier ~~needs is not required to~~ pay for collecting or analyzing the sample, nor ~~must is~~ the supplier itself required to collect and analyze the sample ~~itself~~.

- d) Requirement for Consumer Notice of Tap Water Monitoring Results
 - 1) Consumer Notice Requirement. A supplier must provide a notice of the individual tap results from lead tap water monitoring ~~carried out under the requirements of~~ Section 611.356 to the persons ~~served by~~ the water system serves at the specific sampling site from which the supplier took the sample ~~was taken~~ (e.g., the occupants of the ~~building residence~~ where the supplier sampled the tap ~~was tested~~).

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- 2) Timing of Consumer Notice. The supplier must provide the consumer notice as soon as practicable ~~practical~~, but no later than the specified timeframe:
- A) For individual samples not exceeding 15 µg/l of lead, no later than 30 days after the supplier ~~it~~ learns of the tap monitoring results.
- B) For individual samples exceeding 15 µg/l of lead, as soon as practicable but no later than three calendar days after the supplier learns of the tap monitoring results. A supplier choosing to mail the notification must post those letters so they receive postmarks within the three days.
- 3) Content of Consumer Notice. The consumer notice must include the results of lead tap water monitoring for the tap the supplier ~~that was~~ tested, an explanation of the health effects of lead, a list of steps that consumers can take to reduce exposure to lead in drinking water, and contact information for the water utility. The notice must also provide the maximum contaminant level goal and the action level for lead and the definitions for these two terms from Section 611.883(c).
- 4) Delivery of Consumer Notice.
- A) For tap sampling lead results not exceeding 15 µg/l, the supplier must provide the ~~The~~ consumer notice ~~must be provided~~ to persons it ~~serves served~~ at the tap the supplier sampled ~~that was tested~~, ~~either~~ by mail or by another method approved by the Agency approves in, by a SEP. For example, upon Agency approval ~~by the Agency~~, a NTNCWS supplier could post the results on a bulletin board in the facility enabling ~~to allow~~ users to review the information. ~~The supplier must provide the notice to customers at sample taps tested, including consumers who do not receive water bills.~~
- B) For tap sampling lead results exceeding 15 µg/l, the supplier must provide consumer notice to persons it serves at the tap the supplier sampled; the supplier must provide this notice electronically or by phone, hand delivery, mail, or another method the Agency approves in a SEP.
- e) Notice of Known or Potential Service Line Containing Lead

- 11367 1) Notice requirements. A supplier having lead, galvanized requiring
11368 replacement, or lead status unknown service lines in their inventory under
11369 Section 611.354(a) must inform all persons the supplier serves through a
11370 lead, galvanized requiring replacement, or lead status unknown service
11371 line.
- 11372
- 11373 2) Timing of notice. A supplier must provide the initial notice within 30
11374 days after completing the lead service line inventory Section 611.354
11375 requires and annually repeat the notice to each person the supplier serves
11376 until the supplier's entire service connection is no longer a lead,
11377 galvanized requiring replacement, or lead status unknown service line.
11378 For each new customer, the supplier must also provide the notice when the
11379 supplier initiates service.
- 11380
- 11381 3) Notice Content
- 11382
- 11383 A) Persons the Supplier Serves Through a Confirmed Lead Service
11384 Line. The notice must state that the supplier serves the person
11385 through a lead service line; explain the health effects of lead in a
11386 way complying with subsection (a)(1)(B); give steps persons at the
11387 service connection can take to reduce exposure to lead in drinking
11388 water; inform about opportunities to replace lead service lines,
11389 including programs providing financing solutions to assist property
11390 owners to replace the customer-owned portion of a lead service
11391 line; and explain that the supplier must replace the supplier-owned
11392 portion of a lead service line when the property owner notifies the
11393 supplier that the owner will replace the customer-owned portion of
11394 the lead service line.
- 11395
- 11396 B) Persons the Supplier Serves Through a Galvanized Requiring
11397 Replacement Service Line. The notice must state that the supplier
11398 serves the person through a galvanized requiring replacement
11399 service line, explain the health effects of lead in a way complying
11400 with subsection (a)(1)(B), give steps persons at the service
11401 connection can take to reduce exposure to lead in drinking water,
11402 and inform about opportunities to replace the service line.
- 11403
- 11404 C) Persons the Supplier Serves Through a Lead Service Line. The
11405 notice must state that the supplier serves the person through a lead
11406 status unknown service line (a service line whose material is
11407 unknown but may be lead), explain the health effects of lead in a
11408 way complying with subsection (a)(1)(B), give steps persons at the
11409 service connection can take to reduce exposure to lead in drinking

11410 water, and inform about opportunities to verify the material of the
11411 service line.

11412
11413 4) Delivery. The supplier must provide notice to persons the supplier serves
11414 at the service connection with a lead, galvanized requiring replacement, or
11415 lead status unknown service line, by mail or using another method the
11416 Agency approves in a SEP.

11417
11418 f) Notice Due to Disturbing a Service Line Known to or Potentially Containing Lead
11419

11420 1) A supplier disturbing a lead, galvanized requiring replacement, or lead
11421 status unknown service line by a water shutoff or bypass to the service
11422 line, like operating a valve on the service line or meter setter, without
11423 partially or fully replacing the lead service line must inform the persons
11424 the supplier serves through the service connection about the potential for
11425 an elevated lead concentration in their drinking water due to the supplier
11426 disturbing the service line, including instructions for flushing to remove
11427 particulate lead. The supplier must comply with this subsection (f)(1)
11428 before returning the affected service line to service.

11429
11430 2) If a supplier disturbs a lead, galvanized requiring replacement, or lead
11431 status unknown service line while replacing an inline water meter, a water
11432 meter setter, or gooseneck, pigtail, or connector, the supplier must inform
11433 the persons the supplier serves through the service connection about the
11434 potential for an elevated lead concentration in their drinking water due to
11435 the supplier disturbing the service line, provide public education materials
11436 complying with subsection (a), a pitcher filter or point-of-use treatment
11437 device to reduce lead, use instructions, and six months of replacement
11438 filter cartridges. The supplier must comply with this subsection (f)(2)
11439 before returning the affected service line to service.

11440
11441 3) A supplier partially or fully replacing a lead service line must follow
11442 applicable procedures in Section 611.354(d)(1)(A) through (d)(1)(D) or
11443 (e)(1)(A) through (e)(1)(D).

11444
11445 g) Information for Persons the Supplier Serves Through a Service Line Known to or
11446 Potentially Containing Lead When the Supplier Exceeds the Lead Trigger Level
11447

11448 1) Content. A supplier having lead service lines and exceeding the lead
11449 trigger level of 10 µg/ℓ must inform persons the supplier serves through a
11450 lead, galvanized requiring replacement, or lead status unknown service
11451 line about the supplier's lead service line replacement program and
11452 opportunities for replacing the customer's lead service line.

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2) Timing. The supplier must inform persons it serves within 30 days after the end of the tap sampling period during which the supplier exceeded the lead trigger level. The supplier must continue to annually inform the persons it serves until the results of sampling under Section 611.356 do not exceed the lead trigger level.

3) Delivery. The supplier must inform the persons it serves through a lead, galvanized requiring replacement, or lead status unknown service line by mail or another method the Agency approves in a SEP.

h) Outreach Activities for Failing to Fulfill the Lead Service Line Replacement Goal

1) In the first year after a CWS supplier serving more than 10,000 persons does not fulfill its required annual lead service line replacement goal under Section 611.354(f), the supplier must conduct one outreach activity from among those in subsections (h)(1)(A) through (h)(1)(B). The supplier must annually conduct an outreach activity under this subsection (h)(1) until the supplier fulfills its replacement goal or until tap sampling shows that its 90th percentile lead concentration does not exceed the trigger level of 10 µg/ℓ for two consecutive tap monitoring cycles:

A) Send certified mail to customers the supplier serves through a lead or galvanized requiring replacement service line to inform them about the supplier’s goal-based program for replacing lead service lines and opportunities for replacing the customer’s service line.

B) Conduct a townhall meeting.

C) Participate in a community event providing information about the supplier’s program for replacing lead service lines and distribute public education materials whose content complies with subsection (a).

D) Contact customers by phone, text message, email, or door hanger.

E) Use another method the Agency approves in a SEP to discuss the supplier’s program for replacing lead service lines and opportunities for replacing the customer’s lead service line.

2) Following the first year after the supplier exceeds the lead trigger level, a supplier still failing to fulfill its goal for replacing lead service lines must conduct one activity from subsection (h)(1) and two additional outreach

11496 activities each year from among those in subsections (h)(2)(A) through
11497 (h)(2)(D):

- 11498
- 11499 A) Conduct social media campaign.
- 11500
- 11501 B) Conduct outreach via newspaper, television, or radio.
- 11502
- 11503 C) Contact organizations representing plumbers and contractors by
11504 mail providing information about lead in drinking water, including
11505 health effects, sources of lead, and the importance of using lead-
11506 free plumbing materials.
- 11507
- 11508 D) Visit targeted customers to discuss the supplier's program for
11509 replacing lead service lines and opportunities for replacing the
11510 customers' lead service lines.

11511

11512 3) The supplier may stop outreach activities when tap sampling shows that its
11513 90th percentile lead concentration no longer exceeds the trigger level of 10
11514 µg/l for two consecutive tap monitoring cycles or when all customers the
11515 supplier serves through lead or galvanized requiring replacement service
11516 lines refuse to participate in replacing the customer-owned portion under
11517 the supplier's program for replacing lead service lines. Under this
11518 subsection (h)(3), a refusal includes a customer-signed statement refusing
11519 to participate in replacing the customer-owned portion of the lead service
11520 line or supplier-generated documents memorializing the customer's verbal
11521 refusal or non-response after two good faith attempts by the supplier to
11522 reach the customer.

11523

11524 i) Public Education to Local and State Health Agencies

11525

11526 1) Find-and-Fix Results. A CWS supplier must inform the Department of
11527 Public Health and local health agencies about its find-and-fix activities
11528 under Section 611.352(j), including the location of the tap sample sites
11529 exceeding 15 µg/l, the results from initial tap samples, the results from
11530 follow-up tap samples, the results from water quality parameter
11531 monitoring, and any distribution system management actions or corrosion
11532 control treatment adjustments the supplier made.

11533

11534 2) Timing and Content. A CWS supplier must annually send copies of the
11535 public education materials the supplier provided under subsections (a) and
11536 (h)(1) during a calendar year no later than July 1 of the following year.

11537

11538 3) Delivery. The CWS supplier must send the public education materials and
11539 find-and-fix information to the Department of Public Health and local
11540 health agencies by mail or by another method the Agency approves in a
11541 SEP.

11542
11543 j) Public Education for Small Supplier Compliance Flexibility POU Devices
11544

11545 1) Content. A small CWS or NTNCWS supplier implementing the POU
11546 device option under Section 611.363 must provide public education
11547 materials to inform users how to properly use POU devices to maximize
11548 the units' effectiveness in reducing the lead concentration in drinking
11549 water.

11550
11551 2) Timing. The supplier must provide its public education materials when
11552 the supplier delivers the POU device.

11553
11554 3) Delivery. The supplier must provide its public education materials in
11555 person, by mail, or another method the Agency approves in a SEP, to
11556 persons at the locations where the supplier delivers the POU devices.
11557

11558 BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.85.

11559 (Source: Amended at 47 Ill. Reg. _____, effective _____)
11560

11561
11562 **Section 611.356 Tap Water Monitoring for Lead and Copper**
11563

11564 a) Sampling Site Location
11565

11566 1) Selecting a Pool of Targeted Sampling Sites
11567

11568 A) Before ~~By~~ the applicable date for beginning commencement of
11569 monitoring under subsection (d)(1), a each-supplier must complete
11570 a materials evaluation of its distribution system in order to identify
11571 a pool of targeted sampling sites complying with that meets the
11572 requirements of this Section based on the service line inventory the
11573 supplier developed under Section 611.354(a).

11574
11575 B) The pool of targeted sampling sites must be sufficiently large
11576 enough to ensure that the supplier can collect the number of lead
11577 and copper tap samples ~~required by~~ subsection (c) requires.
11578

11579 C) The supplier may not include among its sampling sites any with
11580 installed POE treatment devices, and the tap the supplier uses at a

11581 sampling site may not have a POU device designed to remove
11582 inorganic contaminants. The exceptions are that a supplier
11583 monitoring under Section 611.363(a)(3)(D) and a supplier using a
11584 POE or POU device for the primary drinking water tap to meet
11585 other primary and secondary drinking water standards may sample
11586 the connected tap if all service connections on the supplier's
11587 system have a POE or POU device to provide localized treatment
11588 to comply with those other drinking water standards, must select
11589 the sites for collection of first draw samples from this pool of
11590 targeted sampling sites.

11591
11592 D) A supplier monitoring under Section 611.363(a)(3)(D) may not use
11593 lead and copper sampling results to fulfill the criteria for reduced
11594 monitoring under subsection (d)(4). The supplier must not select as
11595 sampling sites any faucets that have point-of-use or point-of-entry
11596 treatment devices designed to remove or capable of removing
11597 inorganic contaminants.

11598
11599 2) Materials Evaluation. A supplier must use the information on lead,
11600 copper, and galvanized steel it identified under 40 CFR 141.42(d) when
11601 conducting a materials evaluation and the information on lead service lines
11602 that Section 611.354(a) requires the supplier to collect to identify potential
11603 lead service line sampling sites.

11604
11605 BOARD NOTE: Suppliers completed identifying and reporting
11606 construction materials in their distribution systems under 40 CFR
11607 141.42(d), so the Board omitted this requirement from the Illinois rules.

11608
11609 A) A supplier must use the information on lead, copper, and
11610 galvanized steel collected under 40 CFR 141.42(d) (special
11611 monitoring for corrosivity characteristics) when conducting a
11612 materials evaluation.

11613
11614 B) When an evaluation of the information collected under 40 CFR
11615 141.42(d) is insufficient to locate the requisite number of lead and
11616 copper sampling sites that meet the targeting criteria in subsection
11617 (a), the supplier must review the following sources of information
11618 in order to identify a sufficient number of sampling sites:

11619
11620 i) All plumbing codes, permits, and records in the files of the
11621 building departments that indicate the plumbing materials
11622 that are installed within publicly and privately owned
11623 structures connected to the distribution system;

- ii) ~~All inspections and records of the distribution system that indicate the material composition of the service connections which connect a structure to the distribution system;~~
- iii) ~~All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations; and~~
- iv) ~~The supplier must seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities).~~

3) ~~Tiers of Sampling Site Tiers Sites.~~ A supplier Suppliers must categorize the sampling sites within its their pool according to ~~the following~~ tiers:

A) CWS Tier 1 Sampling Sites. "CWS Tier 1 sampling sites" ~~must include the following~~ single-family structures the supplier serves through a lead service line. The supplier must not use sites with lead status unknown service lines as Tier 1 sampling sites.:

- i) ~~Those that contain copper pipes with lead solder installed after 1982 or which contain lead pipes; or~~
- ii) ~~Those that are served by a lead service line.~~

BOARD NOTE: ~~This subsection Subsection-(a)(3)(A) derives was derived from segments of 40 CFR 141.86(a)(3). This allows the pool of CWS tier 1 sampling sites to consist exclusively of structures served by lead service lines.~~

B) CWS Tier 2 Sampling Sites. "CWS Tier 2 sampling sites" ~~must include the following~~ buildings, including multiple-family structures, the supplier serves through a lead service line. The supplier must not use sites with lead status unknown service lines as Tier 2 sampling sites.:

- i) ~~Those that contain copper pipes with lead solder installed after 1982 or contain lead pipes; or~~

ii) ~~Those that are served by a lead service line.~~

BOARD NOTE: ~~This subsection Subsection (a)(3)(B) derives was derived from segments of 40 CFR 141.86(a)(4). This allows the pool of CWS tier 2 sampling sites to consist exclusively of structures served by lead service lines.~~

C) CWS Tier 3 Sampling Sites. "CWS Tier 3 sampling sites" ~~must include the following~~ single-family structures containing galvanized service lines the supplier identified as currently or formerly downstream of a lead service line or known to be downstream of a lead gooseneck, pigtail, or connector; those that contain copper pipes with lead solder installed before 1983. The supplier must not use sites with lead status unknown service lines as Tier 3 sampling sites.

BOARD NOTE: ~~This subsection Subsection (a)(3)(C) derives was derived from segments of 40 CFR 141.86(a)(5).~~

D) CWS Tier 4 Sampling Sites. "CWS Tier 4 sampling sites" include single-family structures or buildings containing copper pipes with lead solder installed before June 19, 1986.

BOARD NOTE: This subsection (a)(3)(D) derives from segments of 40 CFR 141.86(a)(6).

E) CWS Tier 5 Sampling Sites. "CWS Tier 5 sampling sites" include single-family structures, including multiple-family residences, representing sites throughout the supplier's distribution system. The supplier must not use sites with lead status unknown service lines as Tier 5 sampling sites. Under this subsection (a)(3)(E) and subsection (a)(4)(A)(vi), a site representing sites throughout the distribution system has plumbing materials commonly found at the other sites the supplier serves.

BOARD NOTE: This subsection (a)(3)(E) derives from segments of 40 CFR 141.86(a)(7).

~~F)~~ NTNCWS Tier 1 Sampling Sites. "NTNCWS Tier 1 sampling sites" ~~must include sites that the supplier serves through a lead service line. The supplier must not use sites with lead status unknown service lines as Tier 1 sampling sites.~~ the following

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buildings:

- i) ~~Those that contain copper pipes with lead solder installed after 1982 or which contain lead pipes; or~~
- ii) ~~Those that are served by a lead service line.~~

BOARD NOTE: ~~This subsection Subsection-(a)(3)(FD) derives was derived from segments of 40 CFR 141.86(a)(86). This allows the pool of NTNCWS tier 1 sampling sites to consist exclusively of buildings served by lead service lines.~~

GE) ~~Alternative NTNCWS Tier 3 Sampling Sites. "Alternative NTNCWS Tier 3 sampling sites" must include sites having galvanized lines the supplier identified as currently or formerly downstream of a lead service line or known to be downstream of a lead gooseneck, pigtail, or connector~~ the following buildings: those that contain copper pipes with lead solder installed before 1983. The supplier must not use sites with lead status unknown service lines as Tier 3 sampling sites.

BOARD NOTE: ~~This subsection Subsection-(a)(3)(GE) derives was derived from segments of 40 CFR 141.86(a)(97).~~

H) ~~NTNCWS Tier 5 Sampling Sites. "NTNCWS Tier 5 sampling sites" include sites representing sites throughout the supplier's distribution system. Under this subsection (a)(3)(H), a site representing sites throughout the distribution system has plumbing materials commonly found at the other sites the supplier serves.~~

BOARD NOTE: ~~This subsection (a)(3)(H) derives from segments of 40 CFR 141.86(a)(10).~~

4) ~~Selecting Selection of Sampling Sites. A supplier Suppliers must select sampling sites for its their sampling pool using specific criteriaas follows:~~

A) ~~CWS Suppliers. A CWS supplier suppliers must use CWS Tier tier-1 sampling sites, except that the supplier may include CWS Tier tier-2 or CWS Tier tier-3 sampling sites in its sampling pool under certain circumstances as follows:~~

- i) ~~If multiple-family residences comprise at least 20 percent of the structures the supplier serves served by a supplier,~~

11753 the supplier may use CWS ~~Tier tier-2~~ sampling sites in its
11754 Tier 1 sampling pool, if the supplier serves the sampling
11755 site through a lead service line.~~;~~~~or~~
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11757 BOARD NOTE: This subsection ~~Subsection~~-(a)(4)(A)(i)
11758 derives was derived from a segment of 40 CFR
11759 141.86(a)(3)(~~ii~~).

11760
11761 ii) If the CWS supplier does not have a sufficient ~~has an~~
11762 ~~insufficient~~ number of CWS Tier tier-1 sampling sites on its
11763 distribution system, the supplier may use CWS Tier tier-2
11764 sampling sites the supplier serves through a lead service
11765 line in its sampling pool; or
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11767 BOARD NOTE: This subsection ~~Subsection~~-(a)(4)(A)(ii)
11768 derives was derived from a segment of 40 CFR
11769 141.86(a)(4).

11770
11771 iii) If the CWS supplier does not have a sufficient ~~has an~~
11772 ~~insufficient~~ number of CWS Tier tier-1 and CWS Tier tier-2
11773 sampling sites on its distribution system, the supplier may
11774 complete its sampling pool with CWS Tier tier-3 sampling
11775 sites.
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11777 BOARD NOTE: This subsection ~~Subsection~~-(a)(4)(A)(iii)
11778 derives was derived from a segment of 40 CFR
11779 141.86(a)(5).

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11781 iv) If the CWS supplier does not have a sufficient ~~has an~~
11782 ~~insufficient~~ number of CWS Tier tier-1 sampling sites,
11783 CWS Tier tier-2 sampling sites, and CWS Tier tier-3
11784 sampling sites, the supplier must complete its sampling
11785 pool with CWS Tier 4 use those CWS tier 1 sampling sites,
11786 CWS tier 2 sampling sites, and CWS tier 3 sampling sites
11787 that it has and complete its sampling pool with
11788 representative sites throughout its distribution system for
11789 the balance of its sampling sites. ~~For the purpose of this~~
11790 ~~subsection (a)(4)(A)(iv), a representative site is a site in~~
11791 ~~which the plumbing materials used at that site would be~~
11792 ~~commonly found at other sites served by the water system.~~
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11794 BOARD NOTE: This subsection ~~Subsection~~-(a)(4)(A)(iv)
11795 derives was derived from segments of 40 CFR

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141.86(a)(~~65~~).

- v) If a CWS supplier does not have a sufficient number of CWS Tier 1, CWS Tier 2, CWS Tier 3, and CWS Tier 4 sampling sites, the CWS supplier must complete its sampling pool with CWS Tier 5 sampling sites.

BOARD NOTE: This subsection (a)(4)(A)(v) derives from a segment of 40 CFR 141.86(a)(7).

- vi) A supplier may use non-residential buildings representing sites throughout its distribution system only if there are an insufficient number of single-family or multiple-family residential Tier 5 sampling sites available.

BOARD NOTE: This subsection (a)(4)(A)(vi) derives from a segment of 40 CFR 141.86(a)(7).

B) NTNCWS Suppliers

- i) An NTNCWS supplier must select NTNCWS Tier tier-1 sampling sites for its sampling pool.

BOARD NOTE: This subsection ~~Subsection~~(a)(4)(B)(i) derives ~~was derived~~ from segments of 40 CFR 141.86(a)(~~86~~).

- ii) If the NTNCWS supplier has an insufficient number of NTNCWS Tier tier-1 sampling sites, the supplier must may complete its sampling pool with alternative-NTNCWS Tier 3 sampling sites.

BOARD NOTE: This subsection ~~Subsection~~(a)(4)(B)(ii) derives ~~was derived~~ from segments of 40 CFR 141.86(a)(~~97~~).

- iii) If the NTNCWS supplier has an insufficient number of NTNCWS Tier tier-1 and Tier 3 sampling sites and NTNCWS alternative sampling sites, the supplier must complete its sampling pool with Tier 5 NTNCWS sampling sites use representative sites throughout its distribution system. For the purpose of this subsection (a)(4)(B)(ii), a representative site is a site where in which the plumbing

11839 materials ~~are used at that site would be~~ commonly found at
11840 other sites ~~served by~~ the water system serves.

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11842 BOARD NOTE: ~~This subsection Subsection~~(a)(4)(B)(iii)
11843 ~~derives was derived~~ from segments of 40 CFR
11844 141.86(a)(~~107~~).
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11846 C) Suppliers with Lead Service Lines. Any supplier whose
11847 distribution system contains lead service lines must collect all
11848 samples for monitoring under this Section ~~draw samples during~~
11849 ~~each six-month monitoring period~~ from sampling sites the supplier
11850 serves through a lead service line. A supplier that cannot identify a
11851 sufficient number of sampling sites that it serves through lead
11852 service lines must still collect samples from every site the supplier
11853 serves though a lead service line and collect the remaining samples
11854 under subsections (a)(4)(A)(iii) through (a)(4)(A)(vi) or
11855 subsection (a)(4)(B)(ii) and (a)(4)(B)(iii).as follows:

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11857 i) ~~50 percent of the samples from sampling sites that contain~~
11858 ~~lead pipes or from sampling sites that have copper pipes~~
11859 ~~with lead solder; and~~
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11861 ii) ~~50 percent of those samples from sites served by a lead~~
11862 ~~service line.~~
11863
11864 iii) ~~A supplier that cannot identify a sufficient number of~~
11865 ~~sampling sites served by a lead service line must collect~~
11866 ~~first-draw samples from all of the sites identified as being~~
11867 ~~served by such lines.~~
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11869 BOARD NOTE: ~~This subsection Subsection~~(a)(4)(C) ~~derives was~~
11870 ~~derived~~ from segments of 40 CFR 141.86(a)(~~118~~). ~~This allows the~~
11871 ~~pool of sampling sites to consist exclusively of structures or~~
11872 ~~buildings served by lead service lines.~~
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11874 b) Sample-Collecting ~~Sample Collection~~ Methods

- 11875
11876 1) All tap samples a supplier collects for lead and copper under collected in
11877 ~~aeordance with~~ this Subpart G, with the exception of fifth-liter tap
11878 samples the supplier collects under subsection (b)(3) and samples the
11879 supplier collects under subsections (b)(5) and (h) ~~lead service line samples~~
11880 ~~collected under Section 611.354(c) and samples collected under~~
11881 ~~subsection (b)(5), must be first-draw~~ tap samples. The supplier must

analyze the first-draw tap sample for lead and copper during tap sampling periods when the supplier must monitor both contaminants. In tap sampling periods during which the supplier must monitor only lead, the supplier may analyze the first-draw tap sample for lead only.

2) First-Draw Tap Samples

A) A ~~Each~~ first-draw tap sample for lead and copper must be one liter in volume and have stood motionless at least six hours in the plumbing system of the each sampling site ~~for at least six hours~~.

B) The supplier must use wide-mouthed bottles to collect first-draw tap samples.

~~CB)~~ For residential housing, the supplier must collect first-draw tap First-draw samples from residential housing must be collected from the cold-water ~~cold-water~~ kitchen tap or bathroom sink tap.

~~DE)~~ For non-residential buildings, the supplier must collect first-draw tap First-draw samples one-liter in volume from a from a non-residential building must be one liter in volume and must be collected at an interior tap occupants from which water is typically use drawn for consuming waterconsumption.

~~ED)~~ The Agency-approved substitute non-first-draw tap Non-first-draw samples the supplier collects ~~collected~~ in lieu of first-draw tap samples under subsection (b)(5) must be one liter in volume from and must be collected at an interior tap occupants from which water is typically use drawn for consuming waterconsumption.

~~FE)~~ The supplier may collect first-draw tap First-draw samples ~~may be collected by the supplier or the supplier may~~ allow residents to collect first-draw tap samples after instructing the residents in of the sampling procedures ~~specified in~~ this subsection (b) specifies.

i) Sampling instructions the supplier provides to residents must not include instructions for removing the aerator and cleaning or flushing taps before the minimum six-hour stagnation period begins.

ii) To avoid problems of residents handling nitric acid, the supplier may acidify ~~acidification of~~ first-draw tap samples ~~may be done~~ up to 14 days after the supplier or a resident

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collects the sample ~~is collected~~.

~~iii)~~ After adding acid ~~acidification~~ to resolubilize the metals, a ~~the~~ sample must stand in its ~~the~~ original container for the time ~~specified in the~~ USEPA-approved ~~approved~~ USEPA method specifies before the laboratory analyzes the sample ~~can be analyzed~~.

GF) If a supplier allows residents to perform sampling under subsection (b)(2)(D), the supplier may not challenge the accuracy of sampling results based on alleged errors in sample collection.

3) Service Line Samples

A) A supplier must collect all tap samples for copper at sites it serves through a lead service line as a first-draw tap sample using the procedure in this subsection (b)(3). The supplier must collect and analyze tap samples for copper only during tap monitoring cycles when the supplier must monitor copper. Each service line sample must be one liter in volume and have stood motionless in the lead service line for at least six hours.

B) First-Draw and Fifth-Liter Tap Water Samples

i) A supplier must collect tap water samples in five consecutively numbered wide-mouthed bottles after the water has stood motionless in the sampling site's plumbing for at least six hours without flushing the tap prior to collecting the sample.

ii) The supplier must analyze first-draw tap samples for copper, when applicable, and fifth-liter tap samples for lead.

iii) The supplier must use wide-mouthed bottles to collect these samples. The supplier must collect the first-draw tap sample in the first numbered bottle, then sequentially fill each numbered bottle until the final bottle is full with the fifth-liter tap sample, constantly running the water while collecting the samples. The fifth-liter tap sample is the final sample collected in this sequence.

iv) The supplier must collect first-draw and fifth-liter tap

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samples from residential housing from the cold-water kitchen or bathroom sink tap. The supplier must collect first-draw and fifth-liter tap samples from a nonresidential building at an interior cold water tap typically used for consuming water.

- v) The supplier may itself collect first-draw and fifth-liter tap samples or allow residents to collect the samples after instructing the residents on the sampling procedures in this subsection (b)(3)(B). The sampling instructions the supplier provides to customers must not direct the customer to remove the aerator or clean or flush the taps before the minimum six-hour stagnation period begins. To avoid problems from residents handling nitric acid, the supplier may acidify first-draw tap samples up to 14 days after the resident collects the sample. After the supplier acidifies the sample to resolubilize the metals, the sample must stand in its original container for the time a USEPA-approved method provides before analysis. If the supplier allows residents to sample, the supplier may not challenge the accuracy of sampling results based on alleged errors collecting samples.

B) Lead service line samples must be collected in one of the following three ways:

- i) At the tap after flushing that volume of water calculated as being between the tap and the lead service line based on the interior diameter and length of the pipe between the tap and the lead service line;
- ii) Tapping directly into the lead service line; or
- iii) If the sampling site is a single family structure, allowing the water to run until there is a significant change in temperature that would be indicative of water that has been standing in the lead service line.

4) Follow-Up First-Draw Tap Samples

- A) A supplier must collect each follow-up first-draw tap sample from the same sampling site ~~where from which it collected~~ the previous samples originated. A supplier must collect each follow-up fifth-

liter tap sample from the same sampling site where the previous sample originated.

B) If, ~~for any reason,~~ the supplier cannot access gain entry to a sampling site ~~in order~~ to collect a follow-up tap sample for reasons beyond the control of the supplier, the supplier may collect the follow-up tap sample from another sampling site in its sampling pool, as long as the new site meets the same targeting criteria and is within reasonable proximity of the original site.

5) Substitute Non-First-Draw Tap Samples

A) A NTNCWS supplier or a CWS supplier meeting that meets the criteria ~~in of~~ Sections 611.355(b)(7)(A) and (b)(7)(B), ~~that does not having have~~ enough taps for that can supply first-draw tap samples or fifth-liter tap samples meeting the six-hour minimum stagnation time, as defined in Section 611.102, may apply to the Agency in writing for a SEP allowing the supplier to substitute non-first-draw, first-draw, or fifth-liter tap samples that do not meet the six-hour minimum stagnation time by a SEP.

B) A supplier approved to substitute non-first-draw tap samples must collect as many first-draw or fifth-liter tap samples from interior appropriate taps typically used for consuming water, as possible and must identify sampling times and locations that ~~would~~ likely give result in the longest standing time for the remaining sites.

C) The Agency may grant a SEP waiving that waives the requirement for prior Agency approval of ~~non first draw sampling sites not meeting selected by the~~ six-hour stagnation timesystem.

c) Number of Samples

1) A supplier Suppliers must collect at least one sample each from the number of sites ~~listed~~ in the first column of Table D (labelled "standard monitoring") during each six-month tap monitoring cycle period specified in subsection (d) specifies.

2) A supplier conducting reduced monitoring under subsection (d)(4) must collect one sample each from the number of sites specified in the second column of Table D (labelled "reduced monitoring") during each reduced tap monitoring cycle period specified in subsection (d)(4) specifies. The Such reduced monitoring sites must represent be representative of the sites

~~required for~~ standard monitoring requires. A supplier whose system has fewer than five drinking water taps capable of use ~~that can be used~~ for human consumption that and which can meet the sampling site criteria of subsection (a) ~~to reach the required number of sampling sites listed in this subsection (e)~~ must collect multiple samples from individual taps to reach the required number of sampling sites Table D requires. To accomplish this, the supplier must collect at least one sample from each tap, then ~~it must collect~~ additional samples from those ~~same~~ taps on different days during the tap sampling monitoring period, ~~in order~~ to collect a total number of samples meeting that meets the required number of sampling sites. Alternatively, the Agency ~~may issue~~ must, by a SEP allowing the; allow a supplier whose system has fewer than five drinking water taps to collect a number of samples that is fewer than the number of sites ~~specified in~~ this subsection (c) specifies if ~~the Agency~~ it determines that the supplier samples 100 percent of all taps capable of use ~~that can be used~~ for human consumption ~~are sampled~~ and that the reduced number of samples will produce the same results as collecting would the collection of multiple samples from some taps. ~~The Any~~ Agency must base any SEP approving a reduced approval of a reduction of the minimum number of samples ~~must be based~~ on a request from the supplier or Agency on on-site verification ~~by the Agency~~. The Agency may, ~~by a SEP~~, specify sampling locations in a SEP when a system conducts is conducting reduced monitoring.

d) Timing of Monitoring

1) Standard Monitoring. Standard monitoring is a six-month tap monitoring cycle beginning on January 1 or July 1 of a year during which the supplier monitors at the standard number of sites under subsection (c).

A) A supplier having lead service lines, including a supplier Section 611.351(b)(3) deems to have optimized or re-optimized OCCT or a supplier that did not monitor complying with this Section (i.e., selecting sites under subsection (a), collecting samples under subsection (b), etc.) before January 16, 2024, must begin its first standard tap monitoring cycle on January 1, 2025. After completing the first standard monitoring cycle, the supplier must monitor under subsection (d)(1)(B).

B) A supplier that completed monitoring complying with this Section (i.e., selecting sites under subsection (a), collecting samples under subsection (b), etc.) before January 16, 2024 or a supplier that completed monitoring under subsection (d)(1)(A), must continue

monitoring:

- i) A supplier not meeting the criteria in subsection (d)(4) must conduct standard monitoring.
- ii) A supplier meeting the criteria in subsection (d)(4) must continue to monitor under subsection (d)(4).
- iii) A supplier monitoring at a reduced frequency under subsection (d)(4) and exceeding the lead or copper action level must resume standard monitoring on January 1 immediately after the tap monitoring cycle during which the supplier exceeded the action level. The supplier must also monitor water quality parameters as Section 611.357(b), (c), or (d) require.
- iv) A supplier monitoring at a reduced frequency and exceeding the lead trigger level but not the copper action level must monitor no less frequently than annually and must collect samples from the standard number of sites that subsection (c) establishes. The supplier must begin this monitoring in the calendar year after the tap monitoring cycle during which the supplier exceeded the lead trigger level. The supplier must also monitor water quality parameters as Section 611.357(b), (c), or (d) require.
- v) A supplier failing to operate at or above the minimum value or within the range of values for the water quality parameters the Agency specifies under Section 611.352(f) for more than nine days in any water quality monitoring period Section 611.357 specifies must conduct standard tap water monitoring and resume sampling for water quality parameters under Section 611.357(d). The supplier must begin this standard monitoring no later than the six-month tap monitoring cycle beginning January 1 of the calendar year after the supplier fails to comply with the Agency-specified water quality parameters.
- vi) A supplier becoming a large supplier not applying corrosion control treatment or any large supplier not applying corrosion control treatment having a 90th percentile lead concentration exceeding the lead practical quantitation limit must conduct standard monitoring for at

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least two consecutive six-month tap monitoring cycles, then continue monitoring under this subsection (d)(1)(B)(vi).

- 1) Six Month Sampling Periods. Six month sampling periods begin on January 1 and July 1 of each year.
 - A) All large system suppliers must monitor during each consecutive six month period, except as provided in subsection (d)(4)(B).
 - B) All small and medium sized system suppliers must monitor during each consecutive six month monitoring period until the following is true:
 - i) The supplier exceeds the lead action level or the copper action level and is therefore required to implement the corrosion control treatment requirements under Section 611.351, in which case the supplier must continue monitoring in accordance with subsection (d)(2); or
 - ii) The supplier meets the lead action level and the copper action level during each of two consecutive six month monitoring periods, in which case the supplier may reduce monitoring in accordance with subsection (d)(4).
- 2) Monitoring after Installing Initial or Re-Optimized Installation of Corrosion Control Treatment, Installing and Source Water Treatment, Adding a New Source, or a Change in Treatment
 - A) A supplier installing or re-optimizing corrosion control treatment after exceeding the lead or copper action level must monitor for lead and copper every six months and comply with applicable Agency-designated water quality parameter values until the Agency issues a SEP specifying new water quality parameter values for optimal corrosion control.
 - B) A supplier reoptimizing corrosion control treatment after exceeding the lead trigger level but not exceeding the lead or copper action level must annually monitor for lead at the standard number of sites subsection (c) requires. The supplier must triennially analyze samples for copper. A small or mid-sized supplier not exceeding the lead trigger level in three annual tap monitoring cycles may reduce lead monitoring under subsection (d)(4).

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C) A supplier installing source water treatment under Section 611.353(a)(3) must monitor every six months until the supplier is at or below lead and copper action levels for two consecutive six-month tap sampling periods. A supplier not exceeding the lead or copper action level for two consecutive six-month tap monitoring cycles may reduce monitoring under subsection (d)(4).

D) If a supplier gives prior notice to the Agency under Section 611.360(a)(3) of adding a new source or making a long-term change in treatment, the supplier must monitor every six months at the standard number of sites subsection (c) requires until the supplier is at or below the lead and copper action levels for two consecutive six-month monitoring cycles, unless the Agency issues a SEP determining that adding the new source or making the long-term change in treatment is not significant and does not warrant more frequent monitoring. A supplier not exceeding the lead action level, copper action level, or lead trigger level for two consecutive six-month tap sampling periods may reduce monitoring under subsection (d)(4).

A) ~~Any large system supplier that installs optimal corrosion control treatment under Section 611.351(d)(4) must monitor during two consecutive six-month monitoring periods.~~

B) ~~Any small or medium sized system supplier that installs optimal corrosion control treatment under Section 611.351(e)(5) must monitor during two consecutive six-month monitoring periods before 36 months after the Agency approves optimal corrosion control treatment, as specified in Section 611.351(e)(6).~~

C) ~~Any supplier that installs source water treatment under Section 611.353(a)(3) must monitor during two consecutive six-month monitoring periods before 36 months after completion of step 2, as specified in Section 611.353(a)(4).~~

3) Monitoring after the Agency Specifies ~~Specification of~~ Water Quality Parameter Values for OCCT~~Optimal Corrosion Control~~.

A) After the Agency specifies the values for water quality control parameters under Section 611.352(f), the supplier must conduct standard monitoring for two consecutive ~~monitor during each subsequent six-month tap monitoring cycles period, with the first~~

12226 ~~six-month monitoring period to begin on the date the Agency~~
12227 ~~specifies the optimal values.~~

12228
12229 B) A supplier that must complete the re-optimization steps in Section
12230 611.351(d) after exceeding the lead trigger level but not exceeding
12231 the lead or copper action level must monitor for two consecutive
12232 six-month tap monitoring cycles. The supplier may then reduce
12233 monitoring under subsection (d)(4) after the Agency issues a SEP
12234 approving reduced monitoring.

12235
12236 4) Reduced Monitoring Based on 90th Percentile Concentrations. Reduced
12237 monitoring refers to an annual or triennial tap monitoring cycle. A
12238 supplier's 90th percentile concentration determines the reduced
12239 monitoring frequency.

12240
12241 A) ~~Reducing Reduction to Annual Monitoring for Small and~~
12242 ~~Medium-Sized System Suppliers Meeting the Criteria for Reduced~~
12243 ~~Monitoring Lead and Copper Action Levels. A small or medium-~~
12244 ~~sized system supplier meeting that meets the criteria for reduced~~
12245 ~~monitoring under subsection (d)(4) must collect these samples~~
12246 ~~from sampling sites the supplier identified under subsection (a). A~~
12247 ~~supplier monitoring annually or less frequently must conduct lead~~
12248 ~~and copper tap sampling during June, July, August, or September,~~
12249 ~~unless the Agency approves a different tap sampling period under~~
12250 ~~subsection (d)(4)(A)(i) lead and copper action levels during each~~
12251 ~~of two consecutive six-month monitoring periods may reduce the~~
12252 ~~number of samples in accordance with subsection (c), and reduce~~
12253 ~~the frequency of sampling to once per year. A small or medium-~~
12254 ~~sized system supplier that collects fewer than five samples as~~
12255 ~~specified in subsection (c) and which meets the lead and copper~~
12256 ~~action levels during each of two consecutive six-month monitoring~~
12257 ~~periods may reduce its frequency of sampling to once per year. In~~
12258 ~~no case can the supplier reduce the number of samples required~~
12259 ~~below the minimum of one sample per available tap. This reduced~~
12260 ~~sampling may only begin during the calendar year immediately~~
12261 ~~following the end of the second consecutive six-month monitoring~~
12262 ~~period.~~

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12264 B) ~~SEP Allowing Reduction to Annual for Suppliers Maintaining~~
12265 ~~Water Quality Control Parameters~~

12266
12267 i) ~~Any supplier that meets the lead action level and which~~
12268 ~~maintains the range of values for the water quality control~~

- 12269 parameters reflecting optimal corrosion control treatment
12270 specified by the Agency under Section 611.352(f) during
12271 each of two consecutive six-month monitoring periods may
12272 reduce the frequency of monitoring to once per year and the
12273 number of lead and copper samples to that specified by
12274 subsection (e) if it receives written approval from the
12275 Agency in the form of a SEP. This reduced sampling may
12276 only begin during the calendar year immediately following
12277 the end of the second consecutive six-month monitoring
12278 period.
- 12279
- 12280 ii) The Agency must review monitoring, treatment, and other
12281 relevant information submitted by the water system in
12282 accordance with Section 611.360, and must notify the
12283 system in writing by a SEP when it determines the system
12284 is eligible to reduce its monitoring frequency to once every
12285 three years under this subsection (d)(4).
- 12286
- 12287 iii) The Agency must review, and where appropriate, revise its
12288 determination under subsection (d)(4)(B)(i) when the
12289 supplier submits new monitoring or treatment data, or when
12290 other data relevant to the number and frequency of tap
12291 sampling becomes available to the Agency.
- 12292
- 12293 ~~E) Reduction to Triennial for Small and Medium-Sized System~~
12294 ~~Suppliers~~
- 12295
- 12296 i) ~~Small and Medium-Sized System Suppliers Meeting Lead~~
12297 ~~and Copper Action Levels. A small or medium-sized~~
12298 ~~system supplier that meets the lead action level and which~~
12299 ~~meets the lead and copper action levels during three~~
12300 ~~consecutive years of monitoring may reduce the frequency~~
12301 ~~of monitoring for lead and copper from annually to once~~
12302 ~~every three years.~~
- 12303
- 12304 ii) ~~SEP for Suppliers Meeting Optimal Corrosion Control~~
12305 ~~Treatment. Any supplier that maintains the range of values~~
12306 ~~for the water quality control parameters reflecting optimal~~
12307 ~~corrosion control treatment specified by the Agency under~~
12308 ~~Section 611.352(f) during three consecutive years of~~
12309 ~~monitoring may reduce its monitoring frequency from~~
12310 ~~annual to once every three years if it receives written~~
12311 ~~approval from the Agency in the form of a SEP. Samples~~

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~~collected once every three years must be collected no later than every third calendar year.~~

iii) ~~The Agency must review, and where appropriate, revise its determination under subsection (d)(4)(C)(ii) when the supplier submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available to the Agency.~~

D) ~~Sampling at a Reduced Frequency. A supplier that reduces the number and frequency of sampling must collect these samples from representative sites included in the pool of targeted sampling sites identified in subsection (a), preferentially selecting those sampling sites from the highest tier first. Suppliers sampling annually or less frequently must conduct the lead and copper tap sampling during the months of June, July, August, or September, unless the Agency has approved a different sampling period in accordance with subsection (d)(4)(D)(i).~~

i) ~~The Agency may grant a SEP approving that approves a different tap sampling period for a supplier to conduct ~~conducting the lead and copper tap sampling to a supplier for systems collecting samples at a reduced~~ frequency number of samples. ~~The duration of the~~ Such a period must ~~not exceed~~ be no longer than four consecutive months within one calendar year and must represent a time of normal operation ~~when where~~ the highest lead levels of ~~lead~~ are most likely to occur. For a NTNCWS supplier ~~that does not operating operate during any the months of June through September and whose normal operating for which the period when of normal operation where~~ the highest levels of lead are most likely to occur is not known, the Agency must designate a period that represents a time of normal operation for the system. This reduced monitoring sampling may only begin during the Agency-designated period ~~approved or designated by the Agency in the~~ calendar year immediately following the end of the second ~~consecutive six-month tap monitoring cycle, period for a~~ supplier systems initiating annual monitoring, or in and ~~during~~ the three-year period following the end of the third consecutive calendar year of annual monitoring, for a supplier initiating triennial monitoring.~~

12355 ii) A supplier monitoring annually ~~and that has been~~ collecting
 12356 samples during the months of June through September ~~that~~
 12357 ~~and which~~ receives Agency approval to alter its ~~tap~~
 12358 ~~sampling sample collection~~ period under subsection
 12359 (d)(4)(D)(i) must collect its next round of samples during a
 12360 time period ~~ending that ends~~ no later than 21 months after
 12361 ~~its the~~ previous round of sampling. A supplier monitoring
 12362 once every three years ~~and that has been~~ collecting samples
 12363 during the months of June through September ~~that and~~
 12364 ~~which~~ receives Agency approval to alter ~~its tap the~~
 12365 ~~sampling collection~~ period ~~under as provided in~~ subsection
 12366 ~~(d)(4)(A)(i) (d)(4)(D)(i)~~ must collect its next round of
 12367 samples during a time period ~~ending that ends~~ no later than
 12368 45 months after the previous ~~tap round of sampling period~~.
 12369 ~~The supplier must conduct subsequent monitoring~~
 12370 ~~Subsequent rounds of sampling must be collected~~ annually
 12371 or once every three years, as ~~required by~~ this Section
 12372 ~~requires~~.

12374 iii) A small ~~system~~ supplier ~~collecting samples during the~~
 12375 ~~months of June through September, receiving with a waiver~~
 12376 ~~granted under subsection (g) and receiving that has been~~
 12377 ~~collecting samples during the months of June through~~
 12378 ~~September and which receives~~ Agency approval to alter its
 12379 ~~tap sampling sample collection~~ period under subsection
 12380 (d)(4)(D)(i) must collect its next round of samples before
 12381 the end of the nine-year ~~tap monitoring compliance~~ cycle
 12382 (as ~~that term is defined in~~ Section 611.101 ~~defines the~~
 12383 ~~term~~).

12385 B) A supplier meeting the lead trigger level and copper action level
 12386 during two consecutive six-month tap monitoring cycles may
 12387 reduce its monitoring frequency to annually monitoring and must
 12388 sample at the standard number of sampling sites for lead and
 12389 reduced number of sites for copper that subsection (c) specifies. A
 12390 supplier operating OCCT must also maintain the range of OWQPs
 12391 the Agency set under Section 611.352(f) during the same period
 12392 and receive a SEP from the Agency approving annual monitoring
 12393 based on the Agency’s review of the supplier’s monitoring,
 12394 treatment, and other relevant information the supplier reports under
 12395 Section 611.360. The supplier must begin this sampling no later
 12396 than the calendar year immediately following the last calendar year
 12397 during which the supplier sampled.

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- C) A supplier exceeding the lead trigger level but neither the lead nor copper action level during two consecutive six-month tap monitoring cycles must monitor no less frequently than annually at the standard number of sampling sites for lead and copper subsection (c) specifies. A supplier operating OCCT must also maintain the range of OWQPs the Agency set under Section 611.352(f) during the same period and receive a SEP from the Agency approving annual monitoring based on the Agency’s review of monitoring, treatment, and other relevant information the supplier reports under Section 611.360. The supplier must begin this sampling no later than the calendar year immediately following the last calendar year during which the supplier sampled.

- D) A supplier exceeding the lead trigger level but neither the lead nor copper action level during three consecutive years of monitoring may increase the tap monitoring cycle (reduce its monitoring frequency) for copper to once every three years; however, the supplier may not increase the tap monitoring cycle (reduce its monitoring frequency) for lead. A supplier operating OCCT must also maintain the range of OWQPs the Agency set under Section 611.352(f) during the same period and receive a SEP from the Agency approving triennial monitoring based on the Agency’s review of monitoring, treatment, and other relevant information the supplier reports under Section 611.360. The supplier must begin this sampling no later than the third calendar year immediately following the last calendar year during which the supplier sampled.

- E) A small or mid-sized supplier not exceeding the lead trigger level or copper action level during three consecutive years of monitoring (completing standard monitoring during both six-month tap monitoring cycles of a calendar year constitutes one year of monitoring) may sample at the reduced number of sites for lead and copper that subsection (c) provides and reduce its monitoring frequency to triennially monitoring. A supplier operating OCCT must also maintain the range of OWQPs the Agency set under Section 611.352(f) during the same three-year period and receive a SEP from the Agency approving triennial monitoring based on the Agency’s review of monitoring, treatment, and other relevant information the supplier reports under Section 611.360. The supplier must begin this sampling no later than three calendar years after the last calendar year during which the supplier sampled.

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FE) A supplier demonstrating Any water system that demonstrates for two consecutive six-month tap monitoring cycles periods that its 90th percentile the tap water lead concentration, calculated level computed under Section 611.350(c)(43), is less than or equal to 0.005 mg/l and that its 90th percentile the tap water copper concentration, calculated level computed under Section 611.350(c)(43), is less than or equal to 0.65 mg/l may sample at reduce the reduced number of sites for lead and copper under samples in accordance with subsection (c) and reduce its monitoring the frequency of sampling to triennially once every three calendar years. A supplier applying corrosion control treatment must maintain the range of water quality parameter values reflecting OCCT the Agency specifies under Section 611.352(f) to qualify for reduced monitoring under this subsection (d)(4)(F).

F) Resumption of Standard Monitoring

i) Small or Medium-Sized Suppliers Exceeding Lead or Copper Action Level. A small or medium-sized system supplier subject to reduced monitoring that exceeds the lead action level or the copper action level must resume sampling in accordance subsection (d)(3) and collect the number of samples specified for standard monitoring under subsection (c). Such a supplier must also conduct water quality parameter monitoring in accordance with Section 611.357(b), (c), or (d) (as appropriate) during the six-month monitoring period in which it exceeded the action level. Any such supplier may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subsection (c) after it has completed two subsequent consecutive six-month rounds of monitoring that meet the criteria of subsection (d)(4)(A). Any such supplier may resume monitoring once every three years for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either subsection (d)(4)(C) or (d)(4)(E).

ii) Suppliers Failing to Operate within Water Quality Control Parameters. Any supplier subject to reduced monitoring frequency that fails to meet the lead action level during any four-month monitoring period or that fails to operate within

12484 the range of values for the water quality control parameters
12485 specified under Section 611.352(f) for more than nine days
12486 in any six-month period specified in Section 611.357(d)
12487 must conduct tap water sampling for lead and copper at the
12488 frequency specified in subsection (d)(3), must collect the
12489 number of samples specified for standard monitoring under
12490 subsection (c), and must resume monitoring for water
12491 quality parameters within the distribution system in
12492 accordance with Section 611.357(d). This standard tap
12493 water sampling must begin no later than the six-month
12494 period beginning January 1 of the calendar year following
12495 the lead action level exceedance or water quality parameter
12496 excursion. A supplier may resume reduced monitoring for
12497 lead and copper at the tap and for water quality parameters
12498 within the distribution system only if it fulfills the
12499 conditions set forth in subsection (d)(4)(H).
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12501 BOARD NOTE: The Board moved the material from the last
12502 sentence of 40 CFR 141.86(d)(4)(vi)(B) and 40 CFR
12503 141.86(d)(4)(vi)(B)(1) through (d)(4)(vi)(B)(3) to subsections
12504 (d)(4)(H) and (d)(4)(H)(i) through (d)(4)(H)(iii), since Illinois
12505 Administrative Code codification requirements allow subsections
12506 only to four indent levels.
12507

12508 G) Any water supplier subject to a reduced monitoring frequency
12509 under subsection (d)(4) must notify the Agency in writing in
12510 accordance with Section 611.360(a)(3) of any upcoming long-term
12511 change in treatment or addition of a new source as described in that
12512 Section. The Agency must review and approve the addition of a
12513 new source or long-term change in water treatment before it is
12514 implemented by the supplier. The Agency may, by a SEP, require
12515 the system to resume sampling in accordance with subsection
12516 (d)(3) and collect the number of samples specified for standard
12517 monitoring under subsection (c) or take other appropriate steps
12518 such as increased water quality parameter monitoring or re-
12519 evaluation of its corrosion control treatment given the potentially
12520 different water quality considerations.
12521

12522 H) A supplier required under subsection (d)(4)(F) to resume
12523 monitoring in accordance with Section 611.357(d) may resume
12524 reduced monitoring for lead and copper at the tap and for water
12525 quality parameters within the distribution system under the
12526 following conditions:

- i) ~~The supplier may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subsection (e) after it has completed two subsequent six-month rounds of monitoring that meet the criteria of subsection (d)(4)(B) and the supplier has received written approval from the Agency by a SEP that it is appropriate to resume reduced monitoring on an annual frequency. This sampling must begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.~~
- ii) ~~The supplier may resume monitoring for lead and copper once every three years at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either subsection (d)(4)(C) or (d)(4)(E) and the system has received a SEP from the Agency that it is appropriate to resume monitoring once every three years.~~
- iii) ~~The supplier may reduce the number of water quality parameter tap water samples required in accordance with Section 611.357(e)(1) and the frequency with which it collects such samples in accordance with Section 611.357(e)(2). Such a system may not resume monitoring once every three years for water quality parameters at the tap until it demonstrates, in accordance with the requirements of Section 611.357(e)(2), that it has re-qualified for monitoring once every three years.~~

~~BOARD NOTE: Subsections (d)(4)(H) and (d)(4)(H)(i) through (d)(4)(H)(iii) are derived from the last sentence of 40 CFR 141.86(d)(4)(vi)(B) and 40 CFR 141.86 (d)(4)(vi)(B)(1) through (d)(4)(vi)(B)(3), since Illinois Administrative Code codification requirements allow only four indent levels of subsections.~~

- e) Additional Monitoring. The supplier and the Agency must consider the results of any monitoring the supplier conducts conducted in addition to the minimum requirements in of this Section (such as customer-requested sampling) must be considered by the supplier and the Agency in making any determinations (i.e., calculating the 90th percentile lead concentration action level or the copper action level) under this Subpart G. A supplier serving through lead service lines that cannot collect the minimum number of samples from Tier 1 or Tier 2 sites must

calculate the 90th percentile concentration using data from all sites it serves through lead service lines (Tier 1 and Tier 2 sites) together with the highest lead and copper results from lower-tier sites to complete the minimum number of sampling sites subsection (c) requires. The supplier must submit data from additional Tier 3, Tier 4 or Tier 5 sites to the Agency but may not use these results in calculating the 90th percentile concentration. The supplier must include customer-requested samples from sites the supplier knows it serves through lead service lines in calculating its 90th percentile concentration if the samples comply with this Section.

- f) Invalidation of Lead ~~and or~~ Copper Tap ~~Water~~ Samples Used in Calculating the 90th Percentile Concentration. A sample the Agency invalidates ~~invalidated~~ under this subsection (f) does not count toward determining lead or copper 90th percentile concentrations ~~levels~~ under Section 611.350(c)(~~43~~) or toward complying with ~~meeting the minimum monitoring requirements of~~ subsection (c).
- 1) The Agency must invalidate a lead or copper tap water sample if it determines that any one of certain the following conditions exists:
 - A) The laboratory establishes that improper sample analysis caused erroneous results;
 - B) The supplier took the sample ~~was taken~~ from a site that did not meet the site selection criteria in of this Section;
 - C) The sample container sustained damage ~~was damaged~~ in transit; or
 - D) There is substantial reason to believe that someone tampered with the sample ~~was subject to tampering~~.
 - 2) The supplier must report the results from of all samples to the Agency and submit all supporting documentation for samples the supplier believes the Agency should invalidate ~~be invalidated~~.
 - 3) To invalidate a sample under subsection (f)(1), the Agency must document its decision and ~~the~~ rationale for the decision must be documented in writing. The Agency may not invalidate a sample solely because on the grounds that a follow-up sample result is higher or lower than that of the original sample.
 - 4) The ~~water~~ supplier must collect replacement samples for any samples the Agency invalidates ~~invalidated~~ under this Section if, ~~after the invalidation of one or more samples,~~ the supplier has too few samples to meet the

12613 minimum requirements of subsection (c) after the Agency invalidates
 12614 samples. The supplier must take any ~~Any such~~ replacement samples ~~must~~
 12615 ~~be taken~~ as soon as possible, but no later than the latter of 20 days after the
 12616 ~~date~~ the Agency invalidates the original sample or before ~~by~~ the end of the
 12617 applicable tap sampling monitoring period, ~~whichever occurs later. The~~
 12618 supplier must not use replacement ~~Replacement~~ samples it takes taken
 12619 after the end of the applicable tap sampling monitoring period ~~must not~~
 12620 ~~also be used~~ to meet the monitoring requirements of a subsequent tap
 12621 sampling monitoring period. The supplier must take replacement samples
 12622 ~~must be taken~~ at the same locations where it took as the invalidated
 12623 samples or, if that is not possible, at other locations the supplier did not
 12624 use other than those already used for sampling during the tap sampling
 12625 monitoring period.

12627 g) Monitoring Waivers for Small System Suppliers Serving 3,300 or Fewer Persons.
 12628 Any small system supplier serving 3,300 or fewer persons complying with that
 12629 ~~meets~~ the criteria in ~~of~~ this subsection (g) may apply to the Agency for a SEP
 12630 reducing its to reduce the frequency of monitoring for lead and copper monitoring
 12631 frequency under this Section to once every nine years (i.e., a "full waiver") if the
 12632 supplier complies with it meets all of the materials criteria specified in subsection
 12633 (g)(1) specifies and all of the monitoring criteria specified in subsection (g)(2)
 12634 specifies. Any small system supplier serving 3,300 or fewer persons complying
 12635 with that meets the criteria in subsections (g)(1) and (g)(2) only for lead, or only
 12636 for copper, may apply to the Agency State for a SEP reducing its tap water
 12637 monitoring waiver to reduce the frequency of tap water monitoring to once every
 12638 nine years for that contaminant only (i.e., a "partial waiver").

12640 1) Materials Criteria. The supplier must demonstrate that its distribution
 12641 system, ~~and~~ service lines, and all drinking water supply plumbing,
 12642 including plumbing conveying drinking water within all residences and
 12643 buildings connected to the system, are free of lead-containing materials or
 12644 copper-containing materials, as those terms are defined in this subsection
 12645 (g)(1) defines these terms, as follows:

12647 A) Lead. To qualify for a SEP granting a full waiver, or a partial
 12648 waiver of the tap water monitoring requirements for lead (i.e., a
 12649 "lead waiver"), the ~~water~~ supplier must provide certification and
 12650 supporting documentation to the Agency demonstrating that its the
 12651 system is free of all lead-containing materials, ~~as follows:~~

12653 i) The system has It contains no plastic pipes that contain lead
 12654 plasticizers, or plastic service lines containing that contain
 12655 lead plasticizers; and

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- ii) The system ~~It~~ is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded ~~brass- brass- or bronze-alloy bronze-alloy~~ fittings and fixtures, unless ~~those such~~ fittings and fixtures comply with ~~meet the requirements of~~ Section 611.126(b).

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BOARD NOTE: Corresponding 40 CFR 141.86(g)(1)(i)(B) specifies "any standard established pursuant to 42 USC 300g-6(e) (SDWA section 1417(e))". Congress changed the lead standards for fittings and fixtures in ~~for~~ the Reduction of Lead in Drinking Water Act, P.L. Pub. L.-111-380, section 2(a)(2) and (b), 124 Stat. 4131 (Jan. 4, 2011). The Board incorporated the statutory changes into this Section by referencing Section 611.126(b).

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- B) Copper. To qualify for a SEP granting a full waiver, or a partial waiver of the tap water monitoring requirements for copper (i.e., a "copper waiver"), the ~~water~~ supplier must provide certification and supporting documentation to the Agency demonstrating that ~~its the~~ system contains no copper pipes or copper service lines.

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- 2) Monitoring Criteria for Waiver Issuance. The supplier must have completed at least one six-month round of standard tap water monitoring for lead and copper at Agency-approved sites ~~approved by the Agency~~ and from the number of sites ~~required by~~ subsection (c) requires and demonstrate to the Agency that the 90th percentile concentrations levels for any and all rounds of monitoring conducted since the system became free of all lead-containing or copper-containing materials, as appropriate, meet certain~~the following~~ criteria:

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- A) Lead Levels. To qualify for a full waiver, or a lead partial waiver, the supplier must demonstrate that ~~its the~~ 90th percentile lead concentration level does not exceed 0.005 mg/ℓ.

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- B) Copper Levels. To qualify for a full waiver, or a copper partial waiver, the supplier must demonstrate that ~~its the~~ 90th percentile copper concentration level does not exceed 0.65 mg/ℓ.

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- 3) Agency State Approval of Waiver Application. The Agency must notify the supplier of its waiver determination in by a SEP stating, in writing, setting forth the basis of its decision and any condition on of the waiver.

12699 As a condition ~~on of~~ the waiver, the Agency may require the supplier to
 12700 perform specific activities (e.g., limited monitoring, periodic outreach to
 12701 customers to remind them to avoid installation of materials that might void
 12702 the waiver, ~~etc.~~) to avoid the risk of lead or copper concentration of
 12703 concern in tap water. The ~~small-system~~ supplier must continue monitoring
 12704 for lead and copper at the tap as ~~required by~~ subsections (d)(1) through
 12705 (d)(4) ~~require~~, as appropriate, until ~~the supplier it~~ receives written
 12706 notification from the Agency ~~approving that~~ the waiver ~~has been~~
 12707 ~~approved~~.

12709 4) Monitoring Frequency for Suppliers with Waivers

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 12711 A) A supplier with a full waiver must conduct tap water monitoring
 12712 for lead and copper ~~under in accordance with~~ subsection (d)(4)(D)
 12713 at the reduced number of sampling sites ~~identified in~~ subsection (c)
 12714 ~~identifies~~ at least once every nine years and provide ~~to the Agency~~
 12715 the materials certification ~~specified in~~ subsection (g)(1) ~~specifies~~
 12716 for both lead and copper ~~together to the Agency along~~ with the
 12717 monitoring results. ~~The supplier must collect samples~~ Samples
 12718 ~~collected~~ every nine years ~~must be collected~~ no later than ~~the every~~
 12719 ninth calendar year.

12720
 12721 B) A supplier with a partial waiver must conduct tap water monitoring
 12722 for the waived contaminant ~~under in accordance with~~ subsection
 12723 (d)(4)(D) at the reduced number of sampling sites ~~specified in~~
 12724 subsection (c) ~~specifies~~ at least once every nine years and provide
 12725 ~~to the Agency~~ the materials certification ~~specified in~~ subsection
 12726 (g)(1) ~~specifies~~ pertaining to the waived contaminant ~~together~~
 12727 ~~along~~ with the monitoring results. Such a supplier also must
 12728 continue to monitor for the non-waived contaminant in ~~under the~~
 12729 ~~applicable of accordance with requirements of~~ subsections (d)(1)
 12730 through (d)(4), ~~as appropriate~~.

12731
 12732 C) ~~A Any~~ supplier with a full or partial waiver must notify the
 12733 Agency in writing ~~under in accordance with~~ Section 611.360(a)(3)
 12734 of any upcoming long-term change in treatment or ~~adding addition~~
 12735 ~~of~~ a new source, as ~~described in~~ that ~~rule describes~~ Section. The
 12736 Agency must review and approve ~~adding the addition of~~ a new
 12737 source or long-term change in water treatment before ~~the supplier~~
 12738 ~~implements it is implemented by the supplier~~. The Agency ~~may~~
 12739 ~~has the authority to require the supplier to~~ add or modify waiver
 12740 conditions (e.g., require recertification that the supplier's system is
 12741 free of lead-containing or copper-containing materials, require

additional rounds of monitoring, ~~etc.~~); if the Agency determines that the ~~it deems such~~ modifications are necessary to address system treatment or source water changes ~~at the system~~.

D) If a supplier with a full or partial waiver becomes aware that its ~~system~~ ~~it~~ is no longer free of lead- ~~lead-containing~~ or copper-containing materials, as appropriate (e.g., as a result of new construction or repairs), the supplier must notify the Agency in writing no later than 60 days after becoming aware of the ~~such a~~ change.

5) Continued Eligibility. If the supplier continues to comply with ~~satisfy the requirements of~~ subsection (g)(4), the waiver will renew ~~be renewed~~ automatically, unless any of the conditions listed in subsections (g)(5)(A) through (g)(5)(C) occur. A supplier whose waiver the Agency revokes ~~has been revoked~~ may re-apply for a waiver when the supplier ~~at such time as it~~ again meets the appropriate materials and monitoring criteria of subsections (g)(1) and (g)(2).

A) A supplier with a full waiver or a lead partial waiver does not renew if the supplier no longer satisfies the materials criteria of subsection (g)(1)(A) or has a 90th percentile lead concentration level greater than 0.005 mg/ℓ.

B) A supplier with a full waiver or a copper partial waiver does not renew if the supplier no longer satisfies the materials criteria of subsection (g)(1)(B) or has a 90th percentile copper concentration level greater than 0.65 mg/ℓ.

C) A waiver terminates when the Agency ~~The State~~ notifies the supplier, ~~in writing~~, that the Agency revokes the waiver ~~has been revoked, in writing and describing setting forth~~ the basis of its decision.

6) Requirements Following Waiver Revocation. A supplier whose full or partial waiver the Agency revokes must comply with specific ~~has been revoked by the Agency is subject to the~~ corrosion control treatment and lead and copper tap water monitoring requirements, ~~as follows~~:

A) If the supplier exceeds the lead or copper action level, the supplier must implement corrosion control treatment within ~~in accordance with~~ the deadlines ~~specified in~~ Section 611.351(e) specifies; and any other applicable requirements under ~~of~~ this Subpart G.

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- B) If the supplier meets both the lead and the copper action ~~levels~~level, the supplier must monitor for lead and copper at the tap no less frequently than once every three years using the reduced number of sampling sites ~~specified in~~ subsection (c) specifies.

- 7) Pre-Existing Waivers. A waiver~~Small system supplier waivers approved by the Agency~~ granted a supplier in writing prior to April 11, 2000 remains ~~must remain~~ in effect under certain ~~the following~~ conditions:
 - A) If the supplier demonstrates ~~has demonstrated~~ that its system ~~it is~~ both free of both lead-containing ~~lead-containing~~ and copper-containing materials, as required by subsection (g)(1) requires, and that its 90th percentile lead levels ~~and~~ 90th percentile copper concentrations comply with levels ~~meet the criteria of~~ subsection (g)(2), the waiver remains in effect so long as the supplier continues eligible for a ~~to meet the~~ waiver under eligibility criteria ~~of~~ subsection (g)(5). The supplier must complete its first round of tap water monitoring conducted under subsection (g)(4) must be completed no later than nine years after the last time the supplier last monitored for lead and copper at the tap.

 - B) If the supplier complies with ~~has met~~ the materials criteria of subsection (g)(1) but has not complied with ~~met~~ the monitoring criteria of subsection (g)(2), the supplier must conduct a round of monitoring for lead and copper at the tap demonstrating that it complied with ~~met the criteria of~~ subsection (g)(2). Thereafter, the waiver remains ~~must remain~~ in effect as long as the supplier complies with ~~meets~~ the continued eligibility criteria in ~~of~~ subsection (g)(5). The supplier must complete its first round of tap water monitoring conducted under subsection (g)(4) must be completed no later than nine years after the supplier conducts the round of monitoring conducted under subsection (g)(2).

- h) Follow-Up Samples for “Find-and-Fix” Under Section 611.352(j). A supplier must collect a follow-up sample at any site exceeding the lead action level within 30 days after receiving the sample results. For these follow-up samples, the supplier may use different sample volumes or different sample collection procedures to assess the source of elevated lead. A supplier must submit the results from samples it collects under this Section to the Agency but must not include those results in calculating its 90th percentile concentration.

- i) Public Availability of Tap Monitoring Results the Supplier Used in Calculating its

12828 90th Percentile Concentration. A supplier must make the results of its compliance
12829 tap water monitoring data, including data the supplier used in calculating its 90th
12830 percentile concentration under Section 611.350(c)(4), available to the public
12831 within 60 days after the end of the applicable tap sampling period. This Section
12832 does not require a supplier to make publicly available the addresses of the sites
12833 where the supplier collected tap samples. A large supplier must make available
12834 the monitoring results in a digital format. A small or mid-sized supplier must
12835 make available the monitoring results in either a written or digital format. A
12836 supplier must retain tap sampling monitoring data under Section 611.361.

12837
12838 BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.86.

12839
12840 (Source: Amended at 47 Ill. Reg. _____, effective _____)

12841
12842 **Section 611.357 Monitoring for Water Quality Parameters**

12843
12844 A All large supplier or any small or mid-sized supplier exceeding system suppliers, and all
12845 small and medium sized system suppliers that exceed the lead action level or the copper action
12846 level or a small or mid-sized supplier applying corrosion control treatment and exceeding the
12847 lead trigger level; must monitor water quality parameters in addition to lead and copper under in
12848 accordance with this Section. The requirements of this Section are summarized in Table G.

12849
12850 a) General Requirements

12851
12852 1) Sample Collection Methods

12853
12854 A) Using Use of Tap Samples. In The ~~totality, of~~ all tap samples a
12855 supplier collects collected by a supplier must represent be
12856 representative of water quality throughout the supplier's
12857 distribution system, considering taking into account the number of
12858 persons served, the different sources of water, the different
12859 treatment methods employed by the supplier employs, and
12860 seasonal variability. Although a supplier may conveniently
12861 conduct tap sampling for water quality parameters at sites it uses
12862 used for coliform sampling performed under Subpart L, the
12863 supplies needs it is not required to do so, and the a supplier needs
12864 is not required to perform tap sampling under this Section at taps it
12865 targeted for lead and copper sampling under Section 611.356(a).
12866 The supplier must include sites it selects for tap samples under this
12867 Section in the site sample plan under Section 611.356(a)(1). The
12868 supplier must update site sample plan before changing sampling
12869 locations.
12870

12871 B) Using ~~Use of~~ Entry Point Samples. ~~A Each~~ supplier must collect
12872 samples at entry points to the distribution system from locations
12873 representing ~~representative of~~ each source after treatment. If a
12874 supplier draws water from more than one source and ~~combines~~ the
12875 sources ~~are combined~~ before distribution, the supplier must sample
12876 at an entry point to the distribution system during ~~periods of~~
12877 normal operating conditions (i.e., when ~~the supplier uses~~ water
12878 ~~representing is representative of~~ all sources ~~being used~~).

12880 2) Number of Samples

12881 A) Tap Samples. ~~A Each~~ supplier must collect two tap samples for
12882 applicable water quality parameters during each six-month ~~water~~
12883 quality monitoring period ~~specified~~ under subsections (b) through
12884 (e) from the ~~minimum~~ number of sites ~~indicated in~~ the first column
12885 of Table F (labelled “standard monitoring”) indicates. ~~A supplier~~
12886 adding sites under Section 611.352(j) (“find-and-fix”
12887 requirements) ~~must collect tap samples for applicable water quality~~
12888 parameters during each water quality monitoring period under
12889 subsections (b) through (e) and must sample from that adjusted
12890 minimum number of sites. ~~A supplier needs not add sites if it~~
12891 monitors at least twice the minimum number of sites the first
12892 column of Table F indicates~~E~~.

12894 B) Entry Point Samples

12895 i) Initial Monitoring. Except as ~~provided in~~ subsection
12896 (c)(23) ~~provides otherwise, a each~~ supplier ~~not applying~~
12897 corrosion control treatment must collect two samples for
12898 each applicable water quality parameter at each entry point
12899 to ~~its the~~ distribution system during each six-month ~~water~~
12900 quality monitoring period ~~specified in~~ subsection (b)
12901 specifies.

12902 ii) Subsequent Monitoring. ~~A Each~~ supplier must collect one
12903 sample for each applicable water quality parameter at each
12904 entry point to ~~its the~~ distribution system during each six-
12905 month ~~water quality~~ monitoring period ~~specified in~~
12906 subsections (c) through (e) ~~specify~~. ~~During each water~~
12907 quality monitoring period subsections (c) through (e)
12908 specify, a supplier applying corrosion control treatment
12909 must continue collecting one sample for each applicable
12910 water quality parameter at each entry point to its
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distribution system at least once every two weeks.

b) Initial Sampling for Suppliers

1) Large Suppliers Systems. A Each large system-supplier not applying corrosion control treatment must begin monitoring for measure the applicable water quality parameters specified in subsection (b)(3) specifies at taps and at each entry point to the distribution system during the first two each six-month tap monitoring cycles no later than January 1 after the supplier either becomes a large supplier or fails to maintain its 90th percentile lead concentration below the PQL for lead monitoring period specified in Section 611.356(d)(1).

2) Small Small- and Mid-Sized Suppliers Medium-Sized Systems. A small or mid-sized Each small and medium-sized system-supplier exceeding the lead or copper action level or a supplier applying corrosion control treatment for which the Agency did not designate OWQPs and exceeding the lead trigger level must begin monitoring for measure the applicable water quality parameters subsection (b)(3) specifies for two consecutive six-month water quality monitoring periods in the month immediately after the tap sampling period during which the exceedance occurred specified in subsection (b)(3) at the locations specified in this subsection during each six month monitoring period specified in Section 611.356(d)(1) during which the supplier exceeds the lead action level or the copper action level.

3) Water Quality Parameters

A) Tap Water Samples. The supplier must collect two samples each for specific parameters:

i) pH; and

ii) Alkalinity.

A) pH;

B) Entry Point Samples. The supplier must collect a sample from each entry point to its distribution system for analyses for the parameters in subsection (b)(3)(A);

B) Alkalinity;

- i) pH;
- ii) If the supplier adjusts alkalinity as part of optimal corrosion control, a reading of the chemical dosage rate the supplier uses to adjust alkalinity and the alkalinity concentration; and
- iii) If the supplier uses a corrosion inhibitor as part of optimal corrosion control, a reading of the inhibitor dosage rate the supplier uses and the orthophosphate or silica concentration.

2) ~~Small and Medium Sized Systems. Each small or medium sized system that installs optimal corrosion control treatment under Section 611.351(e)(5) must measure the water quality parameters at the locations and frequencies specified in subsections (c)(4) and (c)(5) during each six-month monitoring period specified in Section 611.356(d)(2)(B) in which the supplier exceeds the lead action level or the copper action level.~~

~~C3) Groundwater Systems. A Any groundwater system supplier can limit entry point sampling under described in subsection (c)(12)(B) to those entry points representing that are representative of water quality and treatment conditions throughout the system. If water from untreated groundwater sources mixes with water from treated groundwater sources, the system must monitor for water quality parameters both at both representative entry points receiving treatment and representative entry points not receiving no treatment. Before starting Prior to the start of any monitoring under this subsection (c)(1)(C), the supplier system must provide to the Agency written information to the Agency identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites represent are representative of water quality and treatment conditions throughout the system, including information on seasonal variability.~~

2) Upon determining that doing so is necessary, the Agency may issue a SEP requiring a small or mid-sized supplier applying corrosion control treatment for which the Agency has not designated OWQPs that exceeds the lead trigger level but not the lead or copper action level to conduct water quality parameter monitoring under subsection (c)(1). Alternatively, the Board may require an alternative scheme for monitoring water quality

control parameters, by rule, variance, or adjusted standard.

4) ~~Tap water samples, two samples at each tap for each of the following water quality parameters:~~

A) ~~pH;~~

B) ~~Alkalinity;~~

C) ~~Orthophosphate, when an inhibitor containing a phosphate compound is used;~~

D) ~~Silica, when an inhibitor containing a silicate compound is used; and~~

E) ~~Calcium, when calcium-carbonate stabilization is used as part of corrosion control.~~

5) ~~Entry point samples, except as provided in subsection (c)(3), one sample at each entry point to the distribution system every two weeks (bi-weekly) for each of the following water quality parameters:~~

A) ~~pH;~~

B) ~~When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and~~

C) ~~When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or silica (whichever is applicable).~~

d) Monitoring after the Agency Specifies Water Quality Parameter Values for Optimal Corrosion Control

1) After the Agency specifies the values for water quality control parameters reflecting OCCT under Section 611.352(f), a supplier must monitor for the specified OWQPs during six-month water quality monitoring periods beginning on January 1 or July 1. The supplier must space this monitoring evenly throughout the six-month water quality monitoring period to reflect seasonal variability and be consistent with subsections (c)(1)(A) through (c)(1)(C).

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- A1) ~~Large-System Suppliers. A After the Agency has specified the values for applicable water quality control parameters reflecting optimal corrosion control treatment under Section 611.352(f), each large system-supplier must measure the applicable water quality parameters the Agency specifies in accordance with subsection (e) and determine whether the supplier complies compliance with the requirements of Section 611.352(g) every six months, with the first water quality monitoring six-month period to begin on the sooner of either January 1 or July 1, whichever comes first, after the Agency specifies the optimal values under Section 611.352(f).~~

- B2) ~~Small Small and Mid-Sized Medium-Sized System Suppliers. A Each small or mid-sized medium-sized system-supplier must exceeding an action level must begin conduct such monitoring during the each six-month water quality monitoring period immediately following the tap monitoring cycle during specified in this subsection (d) in which the exceedance occurs and continue monitoring until the supplier no longer exceeds the lead action level or the copper action level and meets the OWQPs in two consecutive six-month tap monitoring cycles under Section 611.356(d)(3). For a small or mid-sized supplier any such small and medium-size system that is subject to a reduced water quality monitoring cycle frequency under Section 611.356(d)(4) at the time it exceeds of the action level-exceedance, the start of the applicable six-month water quality monitoring cycle period under this subsection (d) coincides must coincide with the start of the applicable tap monitoring cycle period under Section 611.356(d)(4).~~

- C3) ~~A supplier must determine whether it complies Compliance with Agency-designated OWQPs optimal water quality parameter values must be determined as specified under Section 611.352(g) specifies.~~

- 2) A small or mid-sized supplier exceeding the lead trigger level but not the lead or copper action level for which the Agency has set OWQPs must monitor every six months as subsection (d)(1) specifies, until the supplier no longer exceeds the lead trigger level in two consecutive tap monitoring cycles.

- 3) The Agency may issue a SEP requiring a supplier of this section to continue monitoring OWQPs under subsection (d)(2) if the Agency determines this necessary to demonstrate that the supplier will continue to

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comply.

e) Reduced Monitoring

1) ~~Reduced Reduction in~~ Tap Monitoring. A large supplier maintaining that has maintained the range of values for the water quality parameters reflecting OCCT the Agency specifies under Section 611.352(f) and not exceeding the lead trigger level optimal corrosion control treatment during each of two consecutive six-month water quality monitoring cycles periods under subsection (d) must continue monitoring at the entry points to the distribution system as ~~specified in~~ subsection (c)(1)(B)(e)(4) specifies. ~~The Such a~~ supplier may collect two samples from each tap for applicable water quality parameters from the reduced number of sites ~~indicated in~~ the second column of Table F (Standard Monitoring) indicates E during each subsequent six-month water quality monitoring cycle period. The supplier must collect these samples evenly throughout the six-month water quality monitoring cycle to reflect seasonal variability.

2) ~~Reduced Reduction in~~ Monitoring Frequency

A) Annual Monitoring. A supplier maintaining the range of values for the water quality parameters reflecting OCCT under Section 611.352(f) exceeding the lead trigger level or copper action level during three consecutive years of monitoring may reduce its tap sampling frequency for applicable water quality parameters subsection (e)(1) specifies from every six months to annually. The supplier must begin this reduced sampling during the calendar year immediately following the end of the water quality monitoring cycle in which the third consecutive year of six-month monitoring occurs.~~Staged Reductions in Monitoring Frequency~~

i) ~~Annual Monitoring. A supplier that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified under Section 611.352(f) during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subsection (e)(1) from every six months to annually. This reduced sampling may only begin during the calendar year immediately following the end of the monitoring period in which the third consecutive year of six-month monitoring occurs.~~

13172 ii) ~~Triennial Monitoring. A supplier that maintains the range~~
13173 ~~of values for the water quality parameters reflecting~~
13174 ~~optimal corrosion control treatment specified under Section~~
13175 ~~611.352(f) during three consecutive years of annual~~
13176 ~~monitoring under subsection (e)(2)(A)(i) may reduce the~~
13177 ~~frequency with which it collects the number of tap samples~~
13178 ~~for applicable water quality parameters specified in~~
13179 ~~subsection (e)(1) from annually to once every three years.~~
13180 ~~This reduced sampling may only begin no later than the~~
13181 ~~third calendar year following the end of the monitoring~~
13182 ~~period in which the third consecutive year of monitoring~~
13183 ~~occurs.~~

13184
13185 B) A supplier may reduce its tap sampling ~~the frequency with which it~~
13186 ~~collects tap samples~~ for applicable water quality parameters
13187 ~~specified in subsection (e)(1) to~~ once every year ~~three years if the~~
13188 ~~supplier it demonstrates that it complies with has fulfilled the~~
13189 ~~conditions set forth in~~ subsections (e)(2)(B)(i) through
13190 (e)(2)(B)(iii) during two consecutive water quality monitoring
13191 cycles~~periods~~, subject to ~~the limitation of~~ subsection (e)(2)(B)(iv).

13192
13193 i) The supplier must demonstrate that its tap water 90th
13194 percentile concentration for lead level at the 90th percentile
13195 is less than or equal to the PQL for lead of 0.005 mg/l
13196 ~~specified in Section 611.359(a)(1)(B).~~

13197
13198 ii) The supplier must demonstrate that its tap water 90th
13199 percentile concentration for copper level at the 90th
13200 percentile is less than or equal to 0.65 mg/l ~~for copper in~~
13201 Section 611.350(c)(~~3~~2).

13202
13203 iii) The supplier must demonstrate that it maintains also has
13204 ~~maintained~~ the range of values for the water quality
13205 parameters reflecting OCCT ~~optimal corrosion control~~
13206 ~~treatment specified by~~ the Agency specified under Section
13207 611.352(f).

13208
13209 iv) ~~Monitoring conducted every three years must be done no~~
13210 ~~later than every third calendar year.~~

13211
13212 3) A supplier ~~that conducts~~ sampling annually or triennially every three years
13213 must collect these samples evenly throughout the calendar year ~~so as to~~
13214 reflect seasonal variability.

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4) ~~A Any~~ supplier ~~on subject to~~ a reduced monitoring frequency under this subsection (e) ~~failing that fails~~ to operate at or above the minimum value or within the range of values for the water quality parameters ~~the Agency specifies specified~~ under Section 611.352(f) for more than nine days in any six-month period ~~for determining compliance under specified in~~ Section 611.352(g) must resume tap water sampling ~~complying in accordance~~ with the number and frequency ~~requirements of samples~~ subsection (d) ~~requires~~. ~~A supplier thus ceasing reduced monitoring Such a system~~ may resume annual monitoring for water quality parameters at the tap at the reduced number of sites ~~specified in~~ subsection (e)(1) ~~specifies~~ after ~~completing it has completed~~ two subsequent consecutive six-month rounds of monitoring ~~complying with that meet the criteria of that~~ subsection (e)(1). ~~The supplier or~~ may resume ~~annual~~ monitoring ~~once every three years~~ for water quality parameters ~~at the tap~~ at the reduced number of sites after ~~demonstrating it demonstrates~~ through subsequent rounds of monitoring that ~~the supplier complies with it meets the criteria of either~~ subsection (e)(2)(A) or (e)(2)(B).

f) Additional Monitoring by Suppliers. The ~~supplier and the Agency must consider any monitoring results and what of any monitoring conducted in addition to the minimum requirements of this Section requires must be considered by the supplier and the Agency~~ in making any determinations (i.e., determining concentrations of water quality parameters) under this Section or Section 611.352.

g) ~~Sites Added During Find-and-Fix. A supplier conducting water quality parameter monitoring at additional sites during a “find-and-fix” assessment under Section 611.352(j) must add those sites to the minimum number of sites subsections (a) through (e) specify, unless the supplier monitors at least twice the required minimum number of sites.~~

BOARD NOTE: ~~This Section derives Derived~~ from 40 CFR 141.87.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.358 Monitoring for Lead and Copper in Source Water

a) ~~SamplingSample~~ Location, Collection Methods, and Number of Samples

1) A supplier ~~failingthat fails~~ to meet the lead ~~action level~~ or ~~the~~ copper action level on the basis of tap samples ~~underecollected in accordance with~~ Section 611.356 must collect lead and copper source water samples ~~under specificin accordance with the following~~ requirements ~~forregarding~~

sample location, number of samples, and collection methods:

- A) A groundwater supplier must take a minimum of one sample at every entry point to the distribution system after the supplier applies any treatment or in the distribution system at a point representing that is representative of each source well after treatment (~~hereafter called a "sampling point"~~). The supplier must take one sample at the same sampling point unless conditions make another sampling point more closely represent arepresentative of each source or treatment plant.

- B) A surface water supplier must take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a sampling point that is representative of each source after treatment (hereafter called a sampling point). The suppliersystem must take each sample at the same sampling point unless conditions make another sampling point more closely represent arepresentative of each source or treatment plant.

BOARD NOTE: For ~~the purposes of~~ this subsection (a)(1)(B), a system using a combination of surface water and groundwater sources is a surface water systemsystems include systems with a combination of surface and ground sources.

- C) If a supplier draws water from more than one source and combines the sources ~~are combined~~ before distribution, the supplier must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water representsis representative of all sources being used).

- D) The Agency may ~~issue, by~~ a SEP reducing, reduce the total number of samples a supplier that must analyzebe analyzed by allowing the supplier to composite samplesuse of compositing. Certified laboratory personnel must composite theCompositing of samples must be done by certified laboratory personnel. A composite sample may includeComposite samples from a maximum of five samples. ~~However are allowed, provided that~~ if the lead concentration in the composite sample is greater than or equal to 0.001 mg/l or the copper concentration is greater than or equal to 0.160 mg/l, ~~then~~ the supplier must do either of two thingsthe following:

- 13301 i) The supplier must take and analyze a follow-up sample
 13302 within 14 days at each sampling point included in the
 13303 composite sample; or
 13304
 13305 ii) If ~~duplicate samples~~duplicates of or sufficient volumes
 13306 ~~of quantities from~~ the original samples are available from
 13307 each sampling point the certified laboratory used in the
 13308 composite ~~sample are available~~, the supplier may use
 13309 ~~those~~these instead of resampling.
 13310
 13311 2) SEP Requiring an Additional Sample
 13312
 13313 A) ~~Upon determining~~When the Agency determines that ~~the results of~~
 13314 sampling ~~indicates~~indicate an exceedance of the lead or copper
 13315 MPC ~~established~~ under Section 611.353(b)(4), the Agency~~it~~ must
 13316 ~~issue, by~~ a SEP requiring, ~~require~~ the supplier to collect one
 13317 additional sample as soon as possible after the initial sample at the
 13318 same sampling point, but ~~before~~no later than two weeks after the
 13319 supplier took the initial sample.
 13320
 13321 B) If a supplier takes an Agency-required confirmation sample for
 13322 lead or copper, the supplier must average the results obtained from
 13323 the initial sample with ~~those~~the results obtained from the
 13324 confirmation sample to determine whether it complies~~in~~
 13325 ~~determining compliance~~ with the Agency-specified lead and
 13326 copper MPCs.
 13327
 13328 i) For averaging, consider any~~Any~~ analytical result below the
 13329 MDL ~~must be considered~~ as zero ~~for the purposes of~~
 13330 averaging.
 13331
 13332 ii) Consider any~~Any~~ value above the MDL but below the PQL
 13333 ~~must either be considered~~ as the measured value or ~~be~~
 13334 ~~considered~~ one-half the PQL.
 13335
 13336 b) Monitoring Frequency after System Exceeds Tap Water Action Level. A supplier
 13337 ~~exceeding that exceeds~~ the lead action level or ~~the~~ copper action level in tap for
 13338 the first time or for the first time after adding a new source or installing source
 13339 water treatment under Section 611.353(b)(2) sampling must collect one source
 13340 water sample from each entry point to ~~its~~the distribution system no later than six
 13341 months after the end of the tap sampling~~monitoring~~ period during which the
 13342 supplier exceeds the lead or copper action level ~~was exceeded~~. For annual or less
 13343 frequent tap monitoring ~~cycles~~periods that are annual or less frequent, the end of

13344 the ~~tap sampling monitoring~~ period is September 30 of the calendar year ~~during~~
 13345 which the sampling occurs, or the last day of any alternative tap sampling period if
 13346 the Agency establishes in ~~has established an alternate monitoring period by a~~
 13347 SEP, ~~the last day of that period.~~ If the Agency determines under Section
 13348 611.353(b)(2) that source water treatment is not necessary, the Agency may issue
 13349 a SEP waiving source water monitoring for the supplier subsequently exceeding
 13350 the lead or copper action level at the tap under subsections (b)(1)(A) through
 13351 (b)(1)(C).

13352
 13353 1) The Agency may issue a SEP waiving source water monitoring for the
 13354 supplier exceeding the lead or copper action level at the tap under specific
 13355 conditions:

13356
 13357 A) The supplier already conducted source water monitoring after
 13358 previously exceeding the lead or copper action level;

13359
 13360 B) The Agency issued a SEP determining that source water treatment
 13361 is not necessary; and

13362
 13363 C) The supplier has not added any new water sources.

13364
 13365 2) This subsection (b)(2) corresponds with 40 CFR 141.88(b)(2), which
 13366 USEPA marked "[reserved]". This statement maintains structural
 13367 consistency with USEPA's rule.

13368
 13369 c) Monitoring Frequency after ~~Installing~~Installation of Source Water Treatment or
 13370 Adding a New Source-

13371
 13372 1) A supplier ~~installing~~that installs source water treatment under Section
 13373 611.353(a)(3) must collect ~~one an additional~~ source water sample from
 13374 each entry point to ~~its~~the distribution system during each of two
 13375 consecutive six-month source water monitoring periods on or before 36
 13376 months after ~~completing~~completion of step 2, as ~~specified in~~
 13377 611.353(a)(4) specifies.

13378
 13379 2) A supplier adding a new source must collect one source water sample
 13380 from each entry point to its distribution system during each six-month
 13381 source water monitoring period until the supplier demonstrates that the
 13382 supplier has maintained finished drinking water entering the distribution
 13383 system below the MPCs for lead and copper the Agency specifies under
 13384 Section 611.353(b)(4), or the Agency issues a SEP determining that the
 13385 supplier does not need source water treatment.

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- d) Monitoring Frequency after the Agency ~~Specifies~~~~Has Specified~~ the Lead and Copper MPCs ~~or Has Determined That Source Water Treatment Is Not Needed~~
- 1) A supplier must monitor at the frequency ~~subsections (d)(1) and (d)(2) specify if specified by subsection (d)(1)(A) or (d)(1)(B) where~~ the Agency ~~specifies~~~~has specified~~ the MPCs under Section 611.353(b)(4) ~~or has determined that the supplier is not required to install source water treatment under Section 611.353(b)(2).~~
- A) GWS Suppliers
- i) A GWS supplier ~~sampling under~~~~required to sample by~~ subsection (d)(1) must collect samples once during the three-year compliance period (as ~~that term is defined in~~ Section 611.101 ~~defines the term~~) during which the Agency makes its determination under Section 611.353(b)(4) or 611.353(b)(2).
- ii) A GWS supplier ~~sampling under~~~~required to sample by~~ subsection (d)(1) must ~~sample~~~~collect samples~~ once during each subsequent compliance period.
- iii) ~~A supplier must triennially collect~~~~Triennial~~ samples ~~must be collected~~ every third calendar year.
- B) A SWS or mixed system supplier must collect samples once during each calendar year, the first annual ~~source water~~ monitoring period to begin during the year in which the Agency makes its determination under Section 611.353(b)(4) or 611.353(b)(2).
- 2) A supplier ~~needs~~~~is~~ not ~~sample~~~~required to conduct~~ source water ~~sampling~~ for lead or copper if the supplier meets the action level for the specific contaminant in all tap water samples ~~collected~~ during the entire source water ~~monitoring~~~~sampling~~ period ~~applicable~~ under subsection (d)(1)(A) or (d)(1)(B).
- e) Reduced Monitoring Frequency
- 1) A GWS supplier may reduce ~~its source water~~~~the~~ monitoring frequency for lead and copper ~~in source water~~ to once during each nine-year compliance cycle (as ~~that term is defined in~~ Section 611.101 ~~defines the term~~), provided ~~the supplier collects~~~~that~~ the samples ~~are collected~~ no later than every ninth calendar year, and only if the supplier meets ~~certain~~ ~~one of the~~

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following criteria:

A) The supplier demonstrates that finished drinking water entering the distribution system ~~remainshas been maintained~~ below the MPCs for maximum permissible lead and copper the Agency specifies under concentrations specified by the State in Section 611.353(b)(4) during at least three consecutive monitoring compliance periods under subsection (d)(1) ~~;~~ ~~or~~

B) This subsection (e)(1)(B) corresponds with 40 CFR 141.88(e)(1)(ii), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule. The Agency has determined, by a SEP, that source water treatment is not needed and the system demonstrates that, during at least three consecutive compliance periods in which sampling was conducted under subsection (d)(1), the concentration of lead in source water was less than or equal to 0.005 mg/l and the concentration of copper in source water was less than or equal to 0.65 mg/l.

2) A SWS or mixed system supplier may reduce ~~its~~the monitoring frequency ~~in~~subsection (d)(1) requires to once during each nine-year compliance cycle (as ~~that term is defined in~~ Section 611.101 defines the term) if the supplier collects, provided that the samples ~~are collected~~no later than every ninth calendar year, and only if the supplier meets certain one of the following criteria:

A) The supplier demonstrates that finished drinking water entering ~~its~~the distribution system ~~remainshas been maintained~~ below the MPCs for maximum permissible lead and copper the Agency specifies under concentrations specified by the Agency under Section 611.353(b)(4) for at least three consecutive years ~~;~~ ~~or~~

B) This subsection (e)(1)(B) corresponds with 40 CFR 141.88(e)(1)(ii), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule. The Agency has determined, by a SEP, that source water treatment is not needed and the supplier demonstrates that, during at least three consecutive years, the concentration of lead in source water was less than or equal to 0.005 mg/l and the concentration of copper in source water was less than or equal to 0.65 mg/l.

3) A supplier ~~using that uses~~ a new source of water may is not reduce ~~its~~eligible for ~~reduced~~ monitoring for lead or copper until after the

13473 ~~supplier#~~ demonstrates by samples it collected from the new source during
13474 three consecutive source water monitoring periods, ~~of the appropriate~~
13475 ~~duration provided by~~ subsection (d)(1) ~~provides,~~ that lead or copper
13476 ~~level concentrations~~ are below the MPC ~~as specified by~~ the Agency
13477 ~~specifies~~ under Section 611.353(a)(4).

13478
13479 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.88.

13480
13481 (Source: Amended at 47 Ill. Reg. _____, effective _____)

13482
13483 **Section 611.359 Analytical Methods**

13484
13485 ~~The supplier must conduct analyses~~Analyses for lead, copper, pH, ~~conductivity, calcium,~~
13486 alkalinity, orthophosphate, ~~and~~ silica, ~~and temperature must be conducted~~ using the methods ~~set~~
13487 ~~forth~~ in Section 611.611(a).

- 13488
13489 a) ~~Only a certified laboratory in one of the categories in Section 611.490(a) may~~
13490 ~~conduct analyses~~Analyses for lead and copper ~~to demonstrate that a supplier~~
13491 ~~complies~~performed for the purposes of compliance with this Subpart G ~~must only~~
13492 ~~be conducted by a certified laboratory in one of the categories listed in Section~~
13493 ~~611.490(a)~~. To obtain certification ~~for conducting to conduct~~ analyses for lead
13494 and copper, ~~a laboratory~~laboratories must ~~fulfill specific conditions~~do the
13495 following:
- 13496
13497 1) ~~The laboratory must analyze lead- and copper-containing~~Analyze
13498 performance evaluation samples ~~that include lead and copper~~ provided by
13499 USEPA ~~Environmental Monitoring and Support Laboratory~~ or ~~equivalent~~
13500 ~~samples provided by~~ the Agency;
- 13501
13502 2) ~~The laboratory must achieve certain~~Achieve quantitative acceptance limits
13503 ~~as follows:~~
- 13504
13505 A) For lead: ± 30 percent of the actual amount in the performance
13506 evaluation sample when the actual amount is greater than or equal
13507 to 0.005 mg/l (the PQL for lead is 0.005 mg/l);
- 13508
13509 B) For copper: ± 10 percent of the actual amount in the performance
13510 evaluation sample when the actual amount is greater than or equal
13511 to 0.050 mg/l (the PQL for copper is 0.050 mg/l);
- 13512
13513 3) ~~The laboratory must achieve~~Achieve the method detection limit (MDL)
13514 for lead ~~of~~ (0.001 mg/l ~~using, as defined in Section 611.350(a))~~ according
13515 ~~to~~ the procedures in 35 Ill. Adm. Code 186 and appendix B to 40 CFR

13516 136: "Definition and Procedure for the Determination of the Method
13517 Detection Limit – Revision 1.11", incorporated by reference in Section
13518 611.102(c). ~~This need only be accomplished if the laboratory will be~~
13519 ~~processing source water composite samples under Section~~
13520 ~~611.358(a)(1)(D)~~; and

- 13521
13522 4) ~~The laboratory must have current certification~~ ~~Be currently certified~~ to
13523 perform analyses ~~under~~ the specifications ~~this described in~~ subsection
13524 (a)(1) ~~describes~~.

13525
13526 BOARD NOTE: ~~This subsection~~ Subsection (a) ~~derivesis derived~~ from 40 CFR
13527 141.89(a) and (a)(1).

- 13528
13529 b) The Agency must ~~issue, by~~ a SEP ~~allowing, allow~~ a supplier to use previously
13530 collected monitoring data ~~for the purposes of monitoring~~ under this Subpart G if
13531 the ~~supplier data were~~ collected and analyzed ~~the data complying in accordance~~
13532 with ~~the requirements of~~ this Subpart G.

13533
13534 BOARD NOTE: ~~This subsection~~ Subsection (b) ~~derivesis derived~~ from 40 CFR
13535 141.89(a)(2).

- 13536
13537 c) Reporting Lead and Copper Levels

- 13538
13539 1) ~~The supplier must report all~~ All lead and copper levels greater than or
13540 equal to the lead and copper PQL ($Pb \geq 0.005 \text{ mg/l}$ and $Cu \geq 0.050 \text{ mg/l}$)
13541 ~~must be reported~~ as measured.

- 13542
13543 2) ~~The supplier must report all~~ All lead and copper levels ~~measured~~ less than
13544 the PQL ~~but and~~ greater than the MDL ($0.005 \text{ mg/l} > Pb > MDL$ and
13545 $0.050 \text{ mg/l} > Cu > MDL$) ~~must be~~ either ~~reported~~ as measured or as one-
13546 half the PQL ~~set forth~~ in subsection (a) (i.e., ~~reported as~~ 0.0025 mg/l for
13547 lead or 0.025 mg/l for copper).

- 13548
13549 3) ~~The supplier must report all~~ All lead and copper levels below the lead and
13550 copper MDL ($MDL > Pb$) ~~must be reported~~ as zero.

13551
13552 BOARD NOTE: ~~This subsection~~ Subsection (c) ~~derivesis derived~~ from 40 CFR
13553 141.89(a)(3) and (a)(4).

13554
13555 (Source: Amended at 47 Ill. Reg. _____, effective _____)

13556
13557 **Section 611.360 Reporting**
13558

A supplier must report ~~specificall of the following~~ information to the Agency ~~asin accordance with~~ this Section ~~provides~~.

a) Reporting for Tap, Lead, and Copper, and Water Quality Parameter Monitoring

1) ~~Notwithstanding Section 611.840(a) and except~~~~Except~~ as ~~provided in~~ subsection (a)(1)(H) ~~provides otherwise~~, a supplier must report the ~~following~~ information ~~subsections (a)(1)(A) through (a)(1)(I) specify~~ for all samples ~~specified in Section 611.356~~ and for all water quality parameter samples ~~specified in~~ Section 611.357 ~~specifies~~ within ten days after the end of each applicable ~~tap~~ sampling period ~~specified in~~ Sections 611.356 and 611.357 ~~specify~~ (i.e., every six months, annually, ~~triennially~~~~every three years~~, or every nine years). For a ~~tap~~ monitoring ~~cycle shorter period with a duration less~~ than six months, the end of the ~~tap~~ monitoring ~~cycle period~~ is the last date on which ~~the supplier may collect~~ samples ~~can be collected~~ during that ~~tap sampling~~ period, as ~~specified in~~ Sections 611.356 and 611.357 ~~specify~~.

A) The results of all tap samples for lead and copper, including the location of each site and the criteria under Section 611.356(a)(3) through (a)(~~107~~) ~~the supplier used as the basis for selecting under~~ ~~which~~ the site ~~was selected for its the supplier's~~ sampling pool, ~~accounting for Section 611.356(a)(11)~~;

B) ~~Supporting documents~~~~Documentation~~ for each tap water lead or copper sample ~~for which~~ the ~~water~~ supplier requests ~~the Agency~~ ~~invalidate~~~~invalidation~~ under Section 611.356(f)(2);

C) ~~A supplier having lead, galvanized requiring replacement, or lead status unknown service lines in its lead service line inventory under Section 611.354(a) must re-evaluate the tap sampling locations the supplier uses in its sampling pool prior to the compliance date Section 611.350(a) specifies, then the more frequent of annually or prior to the each subsequent round of tap sampling the supplier conducts, whichever is more frequent;~~ ~~This subsection (a)(1)(C) corresponds with 40 CFR 141.90(a)(1)(iii), a provision that USEPA removed and marked "reserved". This statement preserves structural parity with the federal rules;~~

i) ~~Before the first applicable tap monitoring cycle under Section 611.356(d), the supplier must submit a site sample plan to the Agency under Section 611.356, including a list of tap sample site locations~~

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identified in the inventory under Section 611.354(a), and a list a tap sampling WQP sites the supplier selected under Section 611.357(a)(1). The supplier must update and submit the site sample plan to the Agency before changing any sample site locations. The Agency may issue a SEP requiring the supplier to modify its site sample plan as necessary.

ii) For a supplier having lead service line sites but an insufficient number to meet the minimum number Section 611.356 requires, the supplier must document support for its conclusion that it has an insufficient number of lead service line sites complying with the applicable of Section 141.86(a)(3) or (a)(4) (for a CWS supplier) or Section 141.86(a)(8) (for an NTNCWS supplier);

- D) The 90th percentile lead and copper concentrations the supplier measures~~measured~~ from among all lead and copper tap samples the supplier collect~~seollected~~ during each tap sampling period (calculated under~~in accordance with~~ Section 611.350(c)(3)), unless the Agency calculates the supplier's system's 90th percentile lead and copper concentrations~~levels~~ under subsection (h);
- E) With the exception of initial tap sampling ~~conducted~~ under Section 611.356(d)(1), the supplier must identify~~designate~~ any site it~~did that was~~ not sample~~sampled~~ during previous tap sampling periods; and explain~~include an explanation of~~ why sampling sites have changed;
- F) The results of all water quality parameter tap samples the supplier must collect~~for pH, and where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected~~ under Section 611.357(b) through (e);
- G) The results of all samples the supplier collect~~seollected~~ at entry points for applicable water quality parameters under Section 611.357(b) through (e); ~~and~~
- H) A ~~water~~-supplier must report the results of all water quality parameter samples the supplier collect~~seollected~~ under Section 611.357(c) through (f) during each six-month water quality

13645 monitoring period ~~specified in~~ Section 611.357(d) specifies within
 13646 the first ten days following the end of the water quality monitoring
 13647 period, unless the Agency ~~specifies~~ has specified, by a SEP, a more
 13648 frequent reporting requirement in a SEP; and-
 13649

13650 I) Before the first applicable tap sampling period under Section
 13651 611.356(d), the supplier must submit to the Agency, a copy of the
 13652 tap sampling protocol the supplier provides to persons sampling.
 13653 The Agency must verify that the supplier uses wide-mouth
 13654 collection bottles and the supplier does not recommend pre-
 13655 stagnation flushing or aerator cleaning or removal before collecting
 13656 samples under Section 611.356(b). The tap sampling protocol
 13657 must contain instructions for correctly collecting a first draw
 13658 sample at a site without a lead service line and a first draw and a
 13659 fifth liter sample at a site with a lead service line, as applicable. If
 13660 the supplier seeks to modify the tap sampling protocol it submitted
 13661 this subsection (a)(1)(I), the supplier must submit the updated
 13662 version of the protocol to the Agency for review and approval at
 13663 least 60 days before using it.
 13664

13665 2) For ~~an~~ NTNCWS supplier, or a CWS supplier complying with Section
 13666 611.355(b)(5) meeting the criteria of Sections 611.355(b)(7)(A) and
 13667 (b)(7)(B), that does not ~~having~~ have enough taps ~~for which can provide~~
 13668 first-draw ~~or fifth liter tap~~ samples, the supplier must do ~~one~~ either of ~~two~~
 13669 things the following:
 13670

13671 A) The supplier must identify ~~Provide written documentation~~ to the
 13672 Agency ~~in writing that identifies~~ standing times and locations for
 13673 enough non-first-draw ~~and fifth liter tap~~ samples to make up its
 13674 sampling pool under Section 611.356(b)(5), unless the Agency
 13675 ~~waives~~ ~~has waived~~ prior Agency approval of non-first-draw ~~and~~
 13676 ~~fifth liter tap~~ sampling sites ~~selected by~~ the supplier selects under
 13677 Section 611.356(b)(5); or
 13678

13679 B) If the Agency ~~waives~~ ~~has waived~~ prior approval of non-first-draw
 13680 sampling sites ~~selected by~~ the supplier selects, the supplier must
 13681 identify, ~~in writing,~~ each site that did not meet the six-hour
 13682 minimum standing time and the length of standing time for that
 13683 particular substitute sample collected under Section 611.356(b)(5)
 13684 ~~in writing~~ and include this information with the lead and copper
 13685 tap sample results ~~the supplier must submit~~ ~~required to be~~
 13686 ~~submitted~~ under subsection (a)(1)(A).
 13687

13688 3) At a time ~~specified by the Agency~~ specifies in, by a SEP, ~~or if no specific~~
 13689 ~~time is designated by the Agency, then as early as possible prior to the~~
 13690 ~~addition of a new source or any change in water treatment,~~ a water
 13691 ~~supplier deemed to have optimized corrosion control under Section~~
 13692 ~~611.351(b)(3), a water supplier subject to reduced monitoring under~~
 13693 ~~Section 611.356(d)(4), or a water supplier subject to a monitoring waiver~~
 13694 ~~under Section 611.356(g),~~ must document adding a new source or any
 13695 change in water treatments ~~submit written documentation~~ to the Agency
 13696 describing the ~~change or addition or change.~~ If the Agency does not
 13697 specify a time in a SEP, the supplier must document the changes to the
 13698 Agency as early as possible but no later than six months before adding a
 13699 new source or any change in water treatment. The Agency may issue a
 13700 SEP requiring a supplier to take actions before or after adding a new
 13701 source or making a long-term change in treatment to ensure the supplier
 13702 will operate and maintain OCCT, like additional water quality parameter
 13703 monitoring, additional lead or copper tap sampling, and re-evaluating
 13704 corrosion control treatment.

13705
 13706 BOARD NOTE: USEPA gives examples of long-term changes in
 13707 treatment as including adding a new treatment process or modifying an
 13708 existing treatment process. USEPA gives examples of modifying
 13709 treatment as including switching secondary disinfectants, coagulants (e.g.,
 13710 alum to ferric chloride), or corrosion inhibitor (e.g., orthophosphate to
 13711 blended phosphate). USEPA said that long-term changes can also include
 13712 dose changes to existing chemicals if the supplier plans long-term changes
 13713 to its finished water pH or residual inhibitor concentration. USEPA said
 13714 that long-term treatment changes would not include chemical dose
 13715 fluctuations associated with daily raw water quality changes where the
 13716 supplier does not add a new source.

13717
 13718 4) ~~Any~~ small ~~system~~ supplier applying for a monitoring waiver under
 13719 Section 611.356(g), or subject to a waiver granted under Section
 13720 611.356(g)(3), must provide ~~certain~~ the following information to the
 13721 Agency in writing ~~before~~ by the ~~applicable~~ specified deadline:

13722
 13723 A) ~~Before~~ By the start of the first applicable tap monitoring
 13724 ~~cycle period~~ in Section 611.356(d), ~~any~~ small ~~water system~~
 13725 supplier applying for a monitoring waiver must provide the
 13726 ~~documents demonstrating~~ documentation required to demonstrate
 13727 that the supplier qualifies for it meets the waiver under
 13728 Section ~~criteria of Sections~~ 611.356(g)(1) and (g)(2).

13729
 13730 B) No later than nine years after the monitoring the supplier

previously conducted under Section 611.356(g)(2) or Section 611.356(g)(4)(A), ~~each~~ small ~~system~~-supplier ~~wanting~~~~desiring~~ to maintain its monitoring waiver must provide the information ~~Section required by Sections~~ 611.356(g)(4)(A) and (g)(4)(B) ~~requires~~.

C) No later than 60 days after ~~the small supplier~~ becomes aware that it is no longer free of lead-containing or copper-containing material, ~~as appropriate, each~~ small ~~system~~-supplier ~~having~~~~with~~ a monitoring waiver must ~~notify~~~~provide written notification to~~ the Agency ~~in writing, stating~~~~setting forth~~ the circumstances ~~introducing lead resulting in the lead-containing~~ or copper-containing materials ~~being introduced~~ into the system and ~~describing any~~~~what~~ corrective action, ~~if any~~, the supplier plans to remove these materials.

~~D) Any small system supplier with a waiver granted prior to April 11, 2000 and that had not previously met the requirements of Section 611.356(g)(2) must have provided the information required by that Section.~~

5) ~~A~~~~Each~~ GWS supplier ~~limiting its~~~~that limits~~ water quality parameter monitoring to a subset of entry points under Section 611.357(c)(3) must ~~identify its selected entry points~~~~provide, by the commencement of such monitoring, written correspondence~~ to the Agency ~~in writing, including that identifies the selected entry points and includes~~ information ~~sufficiently demonstrating sufficient to demonstrate~~ that the sites ~~represent~~~~are representative of~~ water quality and treatment conditions throughout the ~~supplier's~~ system.

b) Reporting for Source Water Monitoring

1) A supplier must report ~~its~~~~the~~ sampling results for all source water samples ~~it collects under~~~~collected in accordance with~~ Section 611.358 within ten days after the end of each source water ~~monitoring~~~~sampling~~ period (~~i.e., annually, per compliance period, per compliance cycle~~) specified in Section 611.358 ~~specifies~~.

2) With the exception of the first round of source water sampling ~~a supplier~~~~conduct~~~~conducted~~ under Section 611.358(b), a supplier must specify any site ~~it did~~~~that was~~ not ~~sample~~~~sampled~~ during ~~source water~~~~monitoring~~~~previous sampling~~ periods, ~~explaining and include an explanation of~~ why ~~the supplier~~ ~~changed~~ the sampling point ~~has~~~~changed~~.

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- c) Reporting for Corrosion Control Treatment. ~~Before~~By the applicable dates under Section 611.351, a supplier must report ~~certain~~the following information:
- 1) ~~A~~For a supplier demonstrating that it ~~has~~ already optimized corrosion control ~~must provide~~; the information ~~required by~~ Section ~~611.351(b)(1) through 611.352(b)(2) or (b)(3)~~ requires.
 - 2) ~~A~~For a supplier ~~that must~~required to optimize corrosion control ~~must provide~~; its recommendation regarding ~~OCCT~~optimal corrosion control treatment under Section 611.352(a).
 - 3) ~~A~~For a supplier ~~that must~~required to evaluate the effectiveness of corrosion control treatments under Section 611.352(c) ~~must provide~~; the information ~~required by~~ Section 611.352(c) requires.
 - 4) ~~A~~For a supplier ~~that must~~required to install optimal corrosion control ~~approved by~~ the Agency approves under Section 611.352(d) ~~must provide~~; a copy of the Agency permit letter, which acts as certification that the supplier ~~has~~ completed installing the permitted treatment.
- d) Reporting for Source Water Treatment. ~~Before~~On or before the applicable dates in Section 611.353, a supplier must provide ~~certain~~the following information to the Agency:
- 1) If ~~required by~~ Section 611.353(b)(1) requires, the supplier must provide its recommendation ~~on~~regarding source water treatment; or
 - 2) A supplier that must~~For suppliers required to~~ install source water treatment under Section 611.353(b)(2) ~~must provide~~; a copy of the Agency permit letter, which acts as certification that the supplier ~~has~~ completed installing the Agency-approved treatment ~~approved by the Agency~~ within 24 months after ~~the Agency approval~~approved the treatment.
- e) Reporting for Lead Service Line Inventory and Replacement. A supplier must report ~~certain~~the following information to the Agency demonstrating it complies to demonstrate compliance with ~~Section~~the requirements of Section 611.354 and 611.355:
- 1) No later than October 16, 2024, the supplier must submit an inventory of service lines to the Agency, as Section 611.354(a) requires.

- 13816 2) No later than October 16, 2024, a supplier that inventoried a lead,
13817 galvanized requiring replacement, or lead status unknown service line in
13818 its distribution system must submit a lead service line replacement plan to
13819 the Agency, as Section 141.84(b) requires.
13820
- 13821 3) The supplier must provide the Agency with an updated version of its
13822 inventory under Section 611.354(a) consistent with its tap monitoring
13823 cycle schedule under Section 611.356(d), but no more frequently than
13824 annually. The supplier must submit its updated inventory within 30 days
13825 after the end of each tap monitoring cycle.
13826
- 13827 A) If the supplier demonstrates that it has no lead, galvanized
13828 requiring replacement, or lead status unknown service lines in its
13829 inventory, the supplier needs no longer submit inventory updates to
13830 the Agency, except as subsection (e)(3)(B) requires.
13831
- 13832 B) If a supplier complying with subsection (e)(3)(A) subsequently
13833 discovers that it must replace any service lines in its distribution
13834 system, the supplier must notify the Agency within 30 days after
13835 identifying the service lines and prepare an updated inventory
13836 under Section 611.354(a) on a schedule the Agency establishes in a
13837 SEP.
13838
- 13839 4) Within 30 days after the end of each tap monitoring cycle, the supplier
13840 must certify replacing any encountered lead goosenecks, pigtails, and
13841 connectors under Section 611.354(c).
13842
- 13843 5) Within 30 days after the end of each tap monitoring cycle, the supplier
13844 must certify to the Agency that the supplier made any partial and full lead
13845 service line replacements under Section 611.354(d) and (e).
13846
- 13847 6) If it fails to meet the 45-day deadline for completing a customer-initiated
13848 lead service line replacement under Section 611.354(d)(4), a supplier must
13849 notify the Agency within 30 days after the deadline to request that the
13850 Agency extend the deadline up to 180 days for completing the customer-
13851 initiated lead service line replacement. The supplier must annually certify
13852 that it has completed all customer-initiated lead service line replacements
13853 under Section 611.354(d)(4).
13854
- 13855 7) No later than 30 days after the end of the supplier's annual period for
13856 replacing lead service lines under Section 611.354(f) or (g), the supplier
13857 must submit certain information to the Agency and continue submitting

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the information each year the supplier conducts lead service line replacements under Section 611.354(f) or (g):

- A) The number of lead service lines, as Section 611.354(a)(4) defines the term, in its inventory at the beginning of the annual period;
- B) The number of galvanized requiring replacement service lines in its inventory at the beginning of the annual period;
- C) The number of lead status unknown service lines, as Section 611.354(a)(4) defines the term, in its inventory at the beginning of the annual period;
- D) The number of full lead service line replacements the supplier has made and the street address for each service line the supplier replaced;
- E) The number of galvanized requiring replacement service lines the supplier replaced and the street address for each service line the supplier replaced;
- F) The number of lead status unknown service lines, as Section 611.354(a)(4) defines the term, remaining in its inventory;
- G) The total number of lead status unknown service lines the supplier determines are non-lead, as Section 611.354(a)(4) defines the terms; and
- H) The total number of service lines the supplier initially inventoried as non-lead later and later discovered are lead or galvanized requiring replacement service lines.

- 8) No later than 30 days after the end of each tap sampling period, a supplier that received a customer refusal for a lead service line replacement or no customer response after the supplier makes a minimum of two good-faith efforts to contact customers regarding a full lead service line replacement under Section 611.354(g)(7) must certify to the Agency the number of customer refusals or non-responses it received from customers the supplier serves through a lead or galvanized requiring replacement service line. The supplier must maintain these documents.
- 9) No later than 12 months after the end of a tap sampling monitoring period during which a supplier exceeds the lead action level in sampling

13901 ~~underreferred to in~~ Section ~~611.356~~611.354(a), the supplier must provide
13902 to the Agency its schedule for annually replacing at least the number of
13903 service lines in its distribution system that Section 611.254(g)
13904 requires.~~submit each of the following to the Agency in writing:~~

13905
13906 A) ~~The material evaluation conducted as required by Section~~
13907 ~~611.356(a);~~

13908
13909 B) ~~Identify the initial number of lead service lines in its distribution~~
13910 ~~system at the time the supplier exceeds the lead action level; and~~

13911
13912 C) ~~Provide the Agency with the supplier's schedule for annually~~
13913 ~~replacing at least seven percent of the initial number of lead~~
13914 ~~service lines in its distribution system.~~

13915
13916 102) No later than 12 months after the end of a sampling~~monitoring~~ period
13917 during~~in~~ which a supplier exceeds the lead trigger~~action~~ level in
13918 monitoring ~~undersampling referred to in~~ Section ~~611.356~~611.354(a), and
13919 every 12 months after that~~thereafter~~, the supplier must certify~~demonstrate~~
13920 to the Agency in writing~~that the supplier has done either of the following:~~

13921
13922 A) That the supplier conducted consumer notification, as Sections
13923 611.354(f)(4) and 611.355(g) require; and~~has replaced, in the~~
13924 previous 12 months, at least seven percent of the initial number of
13925 lead service lines in its distribution system (or any greater number
13926 of lines specified by the Agency under Section 611.354(e)); or

13927
13928 B) That the supplier delivered public education materials to the
13929 affected consumers, as specified in Section 611.355(a).~~has~~
13930 conducted sampling that demonstrates that the lead concentration
13931 in all service line samples from individual lines, taken under
13932 Section 611.356(b)(3), is less than or equal to 0.015 mg/l. This
13933 demonstration requires that the total number of lines that the
13934 supplier has replaced, combined with the total number that meet
13935 the criteria of Section 611.354(e), must equal at least seven percent
13936 of the initial number of lead lines identified under subsection (e)(1)
13937 (or the percentage specified by the Agency under Section
13938 611.354(e)).

13939
13940 C) If a supplier does not fulfill its annual service line replacement
13941 goal under Section 611.354(f), it must certify to the Agency in
13942 writing that the supplier conducted public outreach, as Section

141.85(h) requires. The supplier must also submit the outreach materials it used to the Agency.

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13945
13946 113) The annual certification the supplier submits~~letter submitted~~ to the Agency
13947 under subsection (e)~~(102)~~ must certify that the supplier provided the
13948 results from samples it collected between three months and six months
13949 after fully or partially replacing a lead service line to the resident within
13950 the timeframe Section 611.355(d)(2) requires. A mailed notice
13951 postmarked within three business days after receiving the results is
13952 timely.~~contain the following information:~~

13953
13954 A) ~~The number of lead service lines originally scheduled to be~~
13955 ~~replaced during the previous year of the supplier's replacement~~
13956 ~~schedule;~~

13957
13958 B) ~~The number and location of each lead service line actually replaced~~
13959 ~~during the previous year of the supplier's replacement schedule;~~
13960 ~~and~~

13961
13962 C) ~~If measured, the water lead concentration from each lead service~~
13963 ~~line sampled under Section 611.356(b)(3) and the location of each~~
13964 ~~lead service line sampled, the sampling method used, and the date~~
13965 ~~of sampling.~~

13966
13967 124) Any supplier collecting~~that collects lead service line~~ samples following
13968 partial lead service line replacement required by Section 611.354 requires
13969 must report the results to the Agency before the tenth day of~~within the first~~
13970 ~~ten days after~~ the next month after following the month in which the
13971 supplier receives the laboratory results, or as specified by the Agency
13972 specifies in a SEP. The Agency may issue, by a SEP waiving the supplier
13973 reporting, ~~eliminate this requirement to report~~ these monitoring results, but
13974 the supplier must retain these records. A supplier must also report any
13975 additional information as specified by the Agency specifies, ~~and~~ in a time
13976 and manner prescribed by the Agency prescribes, to verify that the
13977 supplier completed all partial lead service line replacement activities ~~have~~
13978 taken place.

13979
13980 13) A supplier having lead service lines in its inventory must certify on an
13981 annual basis that the supplier complied with consumer notification of
13982 service line containing lead under Section 611.355(e).

13983
13984 f) Reporting for Public Education Program
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- 1) ~~Any water~~ supplier ~~that is~~ subject to ~~the public education requirements in~~ Section 611.355 must send documents to the Agency containing certain items; within ten days after the end of each period in which the supplier ~~mustis required to~~ perform public education ~~underin accordance with~~ Section 611.355(b); ~~send written documentation to the Agency that contains the following:~~
 - A) The public education materials the supplier delivered, and documents showingA demonstration that the supplier ~~has~~ delivered the public education materials complying withthat meet the content requirements in Sections 611.355(a) and the delivery requirements in Section 611.355(b); and
 - B) A list of all ~~the~~ newspapers, radio stations, television stations, and facilities and organizations to which the supplier delivered public education materials when this Subpart Gduring the period in which the supplier was required the supplier to perform public education tasks.

- 2) Unless ~~required by~~ the Agency ~~issues, by~~ a SEP requiring a supplier to do so, a supplier that previously ~~has~~ submitted the information ~~required by~~ subsection (f)(1)(B) requires need not resubmit the information ~~required by~~ subsection (f)(1)(B) requires, as long as ~~there have been~~ no changes in the distribution list occurred, and the supplier certifies that it distributed the public education materials ~~were distributed~~ to the same list the supplier previously submitted ~~previously~~.

- 3) No later than three months ~~afterfollowing~~ the end of the tap samplingmonitoring period, each supplier must mail a sample copy of the consumer notification of tap water monitoring results to the Agency, ~~certifyingalong with a certification~~ that the supplier distributed the notification ~~has been distributed~~ in a manner complyingconsistent with ~~the requirements of~~ Section 611.355(d).

- 4) The supplier must demonstrate to the Agency before July 1 of each year that the supplier delivered annual consumer notice and lead service line information materials under Section 611.355(e) to affected consumers the supplier serves through a lead, galvanized requiring replacement, or lead status unknown service line during the previous calendar year. The supplier must also provide a copy of the consumer notice and information materials to the Agency.

- 14028 5) The supplier must demonstrate to the Agency before July 1 of each year
14029 that the supplier conducted an outreach activity under Section 611.355(h)
14030 if the supplier failed to meet the lead service line replacement goal under
14031 Section 611.354(f) during the previous calendar year. The supplier must
14032 also submit a copy to the Agency of the outreach it provided to customers.
14033
- 14034 6) The supplier must certify to the Agency before July 1 of each year that the
14035 supplier delivered notice to affected customers under Section 611.355(f)
14036 after any lead service line disturbance during the previous calendar year.
14037 The supplier must also submit a copy of the notice to the Agency.
14038
- 14039 7) The supplier must certify to the Agency before July 1 of each year that the
14040 supplier delivered the required find-and-fix information to the Agency and
14041 local health departments under Section 611.356(i) during the previous
14042 calendar year.
14043
- 14044 g) Reporting ~~of~~ Additional Monitoring Data. Any supplier collecting more samples
14045 than the required minimum that collects sampling data in addition to that required
14046 by this Subpart G must report those sampling data the results of that sampling to
14047 the Agency within the first ten days following the end of the applicable sampling
14048 periods specified by Sections 611.356 through 611.358 specify during which the
14049 supplier collected the samples are collected. This includes the monitoring data for
14050 “find-and-fix” under Sections 611.356(h) and 611.357(g). The supplier must
14051 certify to the Agency the number of customer refusals or nonresponses for follow-
14052 up sampling it received under Section 611.352(j) with information supporting the
14053 accuracy of the refusals or non-responses. The supplier must certify within the
14054 first ten days after the end of the applicable tap sampling period during which any
14055 individual sample exceeded the lead action level.
14056
- 14057 h) Reporting ~~of~~ 90th Percentile Lead and Copper Concentrations If Where the Agency
14058 Calculates a Supplier's System's 90th Percentile Concentrations. A water supplier
14059 needs is not required to report its the 90th percentile lead and copper concentrations
14060 measured from among all lead and copper tap water samples collected during
14061 each tap monitoring cycle period, as required by subsection (a)(1)(D) requires,
14062 under certain circumstances if the following is true:
14063
- 14064 1) The Agency has previously notified the water supplier that the Agency
14065 will calculate the supplier's water system's 90th percentile lead and copper
14066 concentrations; based on the lead and copper tap results the supplier
14067 submitted under subsection (h)(2)(A), and has specified a date before the
14068 end of the applicable monitoring period by which the supplier
14069 provides must provide the results from of lead and copper tap water
14070 samples no later than ten days after the end of the applicable tap

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monitoring cycle;

2) The supplier ~~provides~~has provided the ~~specific~~following information to the Agency ~~before~~by the date ~~specified in~~ subsection (h)(1) specifies:

A) The results ~~from~~of all tap water samples for lead and copper, including the location of each site and the ~~criteria under~~ Section 611.356(a)(3) ~~through (a)(10) criteria, (a)(4), (a)(5), (a)(6), or (a)(7)~~ under which the supplier selected the site ~~was selected for its~~the system's sampling pool, ~~under subsection (a)(1)(A);~~ and

B) ~~The supplier must identify~~An identification of sampling sites it used~~utilized~~ during the current tap monitoring ~~cycle~~period that it did~~were~~ not sampled~~sampled~~ during previous tap monitoring ~~cycles~~periods, ~~explaining and an explanation~~ why the supplier changed sampling sites ~~have changed~~; and

3) The Agency ~~provides~~has provided the written results of calculating the 90th percentile lead and copper ~~concentration~~calculations, in writing, to the ~~water~~ supplier within 15 days after~~before~~ the end of the tap sampling~~monitoring~~ period.

i) Reporting Requirements for CWS Public Education and Sampling in Schools and Child Care Facilities

1) A CWS supplier must report to the Agency before July 1 of each year the previous calendar year's activity. The report must include certain information:

A) The supplier must certify that it made a good faith effort to identify schools and child care facilities under Section 611.362(e). The good faith effort may include reviewing customer records and requesting lists of schools and child care facilities from the Agency, the Department of Children and Family Services, the State Board of Education, or other pertinent local agency. A supplier certifying that it serves no schools or child care facilities needs not include the information subsections (i)(1)(B) through (i)(1)(D) require in the report. If changes occur to schools and child care facilities a supplier serves, the supplier must submit an updated list at least once every five years under Section 611.362(e).

14|113 BOARD NOTE: The Department of Children and Family Services
14|114 regulates daycare facilities in Illinois, and the State Board of
14|115 Education regulates primary and secondary schools. Local
14|116 agencies may play a role, and many facilities and schools are not
14|117 regulated under Illinois law. E.g., 225 ILCS 10 and 105 ILCS 5.

14|118
14|119 B) The supplier must certify that it delivered information about health
14|120 risks from lead in drinking water to the school and child care
14|121 facilities it serves under Section 611.362(a)(2) and (g)(1).

14|122
14|123 C) The supplier must certify that it completed notifying and sampling
14|124 under Section 611.362 and subsections (i)(1)(C)(i) through
14|125 (i)(1)(C)(v) at a minimum of 20 percent of elementary schools and
14|126 20 percent of child care facilities the supplier serves. The supplier
14|127 must certify that it completed notifying and sampling under
14|128 Section 611.362(g) and subsections (i)(1)(C)(i), (i)(1)(C)(ii), and
14|129 (i)(1)(C)(v) for secondary schools the supplier sampled. After a
14|130 supplier completes one cycle of required sampling in all
14|131 elementary schools and child care facilities it identified under
14|132 Section 611.362(a)(1), the supplier must subsequently certify that
14|133 it completed notifying and sampling under Section 611.362(g) and
14|134 subsections (i)(1)(C)(i), (i)(1)(C)(ii), and (i)(1)(C)(v) for all
14|135 sampling the supplier later completes in any school or child care
14|136 facility.

14|137
14|138 i) The number of schools and child care facilities the supplier
14|139 serves;

14|140
14|141 ii) The number of schools and child care facilities the supplier
14|142 sampled in the calendar year;

14|143
14|144 iii) The number of schools and child care facilities that refused
14|145 sampling;

14|146
14|147 iv) Information about outreach attempts for sampling that a
14|148 school or child care facility declined; and

14|149
14|150 v) The analytical results for all schools and child care
14|151 facilities the supplier sampled in the calendar year.

14|152
14|153 D) The supplier must certify that it provided its sampling results to
14|154 schools, child care facilities, and the Illinois Department of Public
14|155 Health and local health agencies.

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- 2) This subsection (i)(2) corresponds with 40 CFR 141.90(i)(2), which USEPA marked "reserved". This statement maintains structural consistency with the corresponding USEPA rules.

- j) Reporting Requirements for Small Supplier Compliance Flexibility Options. Before the times subsections (j)(1) and (j)(2) provide, a supplier implementing a small supplier compliance option under Section 611.363 must provide certain information to the Agency:
 - 1) Point-of-Use Device Option. A small CWS or NTNCWS supplier implementing the point-of-use device option under Section 611.363(a)(3), must report the results from tap sampling under Section 611.363 no later than ten days after the end of the tap monitoring cycle. If results exceed the lead trigger level, the supplier must reach out to the homeowner or building management within 24 hours after receiving the tap sample results. The supplier must complete corrective action within 30 days. If the supplier does not complete corrective action within 30 days, the supplier must document to the Agency within 30 days of the failure explaining why the supplier was unable to correct the issue. A supplier selecting the point-of-use device option under Section 611.363(a)(3) must document to the Agency certifying that the supplier maintains the point-of-use devices, unless the Agency issues a SEP waiving this requirement.

 - 2) Replacing Lead-Bearing Plumbing Option. A small CWS or NTNCWS supplier implementing the option of replacing all lead-bearing plumbing under Section 611.363(a)(4) must certify to the Agency that the supplier replaced all lead-bearing material on the schedule the Agency establishes in a SEP within one year after designating the option under Section 611.363(a)(4).

BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.90.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.361 Recordkeeping

Any supplier subject to ~~the requirements of~~ this Subpart G must retain ~~on its premises~~ original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Agency determinations, and any other information ~~required by~~ Sections 611.351 through ~~Section~~ 611.360, 611.362, and 611.363 require. Each supplier must retain the records ~~required by~~ this Section requires on its premises for at least 12 years.

14199 BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.91-(2002).

14200 (Source: Amended at 47 Ill. Reg. _____, effective _____)

14201
14202
14203 Section 611.362 Monitoring for Lead in Schools and Child Care Facilities

14204
14205 A CWS supplier must conduct directed public education and lead monitoring at those schools
14206 and child care facilities it serves that were constructed prior to January 1, 2014. A supplier
14207 must sample for lead at elementary schools and child care facilities it serves once and
14208 afterwards on request of the school or facility. The supplier must also sample for lead at
14209 secondary schools it serves on request. This Section does not apply to a school or child care
14210 facility that is a regulated PWS. This subsection (a) applies until the supplier samples all the
14211 elementary schools and child care facilities it serves once under subsection (c). After
14212 sampling all elementary schools and child care facilities, the supplier must comply with
14213 subsection (g).

14214
14215 a) Public Education to Schools and Child Care Facilities

14216
14217 1) Before the compliance date Section 611.350(a)(3) specifies, a supplier
14218 must compile a list of schools and child care facilities the supplier
14219 serves.

14220
14221 2) A supplier must contact elementary schools and child care facilities the
14222 supplier listed under subsection (a)(1):

14223
14224 A) The supplier must annually or more frequently provide
14225 information about health risks from lead in drinking water that
14226 complies with Section 611.355(a);

14227
14228 B) Notice that the supplier must sample for lead at elementary
14229 schools and child care facilities, including certain information:

14230
14231 i) A proposed schedule for sampling at the facility;

14232
14233 ii) Information about sampling for lead in schools and child
14234 care facilities; and

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14236 BOARD NOTE: USEPA has guidance available from
14237 USEPA, National Center for Environmental Publications:
14238 "3Ts for Reducing Lead in Drinking Water in Schools and
14239 Child Care Facilities: A Training, Testing, and Taking
14240 Action Approach, Revised Manual" (October 2018),
14241 USEPA, Office of Water, doc. no. EPA 815-B-18-007

14242 [\(search: "815B18007"\) and "U.S. EPA 3Ts Program](#)
14243 [Training, Testing & Taking Action: Lead Sample](#)
14244 [Collection Field Guide for Schools and Child Care](#)
14245 [Facilities" \(July 2022\), USEPA, Office of Water, doc. no.](#)
14246 [EPA 815-F-22-009 \(search: "815F22009"\).](#)

14247
14248 [iii\) Instructions for identifying sampling outlets and preparing](#)
14249 [for a sampling event 30 days prior to the event.](#)

14250
14251 [3\) The supplier must document under Section 611.360\(i\) if an elementary](#)
14252 [school or child care facility fails to respond or otherwise declines to](#)
14253 [participate in monitoring or education under this Section. Under this](#)
14254 [Section, a school or child care facility fails to respond after the supplier](#)
14255 [makes at least two separate good faith attempts to contact the facility to](#)
14256 [schedule sampling and receives no response.](#)

14257
14258 [4\) The supplier must annually or more frequently contact all secondary](#)
14259 [schools it listed under subsection \(a\)\(1\) to provide information on health](#)
14260 [risks from lead in drinking water and how to request lead sampling under](#)
14261 [subsection \(g\)\(1\).](#)

14262
14263 [b\) Lead Sampling in Schools and Child Care Facilities](#)

14264
14265 [1\) The supplier must collect five samples per school and two samples per](#)
14266 [child care facility at outlets typically used for consumption. Except as](#)
14267 [subsections \(b\)\(1\)\(A\) through \(b\)\(1\)\(D\) provide otherwise, the outlets](#)
14268 [must not have a POU device. The supplier must sample at specific](#)
14269 [locations:](#)

14270
14271 [A\) For schools: two drinking water fountains, one kitchen faucet](#)
14272 [persons use for preparing food or drink, one classroom faucet or](#)
14273 [other outlet persons use for drinking, and one nurse's office](#)
14274 [faucet, as available.](#)

14275
14276 [B\) For child care facilities: one drinking water fountain and one of](#)
14277 [either a kitchen faucet persons use for preparing food or drink or](#)
14278 [one classroom faucet or other outlet persons use for drinking.](#)

14279
14280 [C\) If any school or facility has fewer than the required number of](#)
14281 [outlets, the supplier must sample all outlets persons use for](#)
14282 [consumption.](#)

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- D) The supplier may sample at outlets having POU devices if the school or facility has POU devices installed on all outlets persons typically use for consumption.

- E) If any school or facility does not contain the type of faucet listed above, the supplier must collect a sample from another outlet the school or facility identifies as one persons typically use for consumption.

- F) The supplier must collect all samples from cold water taps fulfilling specific additional requirements:
 - i) All samples for lead must be first-draw samples;

 - ii) All samples must be 250 ml in volume;

 - iii) The water must remain stationary in the sampling site's (building's) plumbing system for at least eight but no more than 18 hours before sampling; and

 - iv) The supplier must acidify samples and analyze them using the analytical methods in Section 611.359.

2) Appropriately trained personnel of the water system, school, or child care facility or another appropriately trained person may collect samples under subsection (b)(1).

c) Sampling Frequency at Elementary Schools and Child Care Facilities

- 1) Annually, or on an alternative Agency-approved schedule, the supplier must collect samples from no fewer than 20 percent of elementary schools and 20 percent of child care facilities the supplier serves, until the supplier samples all schools and child care facilities it listed under subsection (a)(1) that did not decline to participate. Under this Section, a supplier may count an elementary school or child care facility failing to respond or otherwise declining to participate as part of its annual 20 percent minimum.

- 2) A supplier must sample all elementary schools and child care facilities it serves at least once in the five years following the compliance date under Section 611.360(a)(3).

- 14326 3) After a supplier completes one required cycle of sampling in all
- 14327 elementary schools and child care facilities it serves, the supplier must
- 14328 sample at the request of any elementary school or child care facility
- 14329 under subsection (g).
- 14330
- 14331 4) A supplier must sample at the request of a secondary school under
- 14332 subsection (g). If a supplier receives requests from more than 20 percent
- 14333 of secondary schools it listed under subsection (a)(1) in any of the five
- 14334 years following the compliance date under Section 141.80(a)(3), the
- 14335 supplier may schedule the requests exceeding 20 percent for the
- 14336 following year, and the supplier needs not sample an individual
- 14337 secondary school more than once during the five-years.
- 14338
- 14339 d) Alternative School and Child Care Lead Sampling Programs
- 14340
- 14341 1) If a CWS supplier conducts mandatory sampling for lead in drinking
- 14342 water for schools and child care facilities the supplier serves under
- 14343 another State or local law or program, the Agency may issue a SEP
- 14344 exempting the supplier from duplicative requirements under this Section:
- 14345
- 14346 A) If the sampling under that State or local law or program is
- 14347 consistent with subsections (b) and (c);
- 14348
- 14349 B) If the sampling under that State or local law or program is
- 14350 consistent with subsections (b)(1)(A) through (b)(1)(vi) and (c)
- 14351 and the sampling is coupled with certain remediation actions:
- 14352
- 14353 i) Disconnecting affected fixtures;
- 14354
- 14355 ii) Replacing affected fixtures with fixtures certified lead-
- 14356 free as Section 611.126(j) requires; or
- 14357
- 14358 iii) Installing POU devices;
- 14359
- 14360 C) If the sampling under that State or local law or program occurs in
- 14361 schools and child care facilities the supplier serves less frequently
- 14362 than once every five years, and the sampling is coupled with any
- 14363 of the remediation actions in subsection (d)(1)(B); or
- 14364
- 14365 D) If the sampling is conducted under a voluntary school and child
- 14366 care program lead testing grant awarded under section 1464(d) of
- 14367 SDWA (42 USC 300j-24(d)), consistent with the requirements of
- 14368 the grant.

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- 2) The term of the waiver may not exceed the duration of the mandatory or voluntary sampling, and the waiver must automatically expire at the end of any 12-month period during which sampling does not occur at the required number of schools or child care facilities.
- 3) The Agency may issue a SEP granting the supplier a partial waiver if the sampling covers only a subset of the schools or child care facilities the supplier serves as it listed under subsection (a)(1).
- 4) The Agency may issue a SEP granting a waiver applicable to more than one supplier (e.g., one waiver for all suppliers subject to a statewide sampling program complying with subsection (d)).
- e) Confirming or Revising Schools and Child Care Facilities in Inventory. At least once every five years, a supplier must either confirm that the list it assembled under subsection (a)(1) of schools and child care facilities it serves has not changed or submit a revised list.
- f) Notice of results.
 - 1) A supplier must provide analytical results to the school or child care facility as soon as practicable but no later than 30 days after receiving them with information about remediation options.
 - 2) A water system must annually provide analytical results:
 - A) To the local and State health departments; and
 - B) To the Agency under Section 611.360(i).
- g) Lead Sampling in Schools and Child Care Facilities on Request
 - 1) A supplier must contact schools and child care facilities the supplier identified under subsection (a)(1) at least annually to provide:
 - A) Information about health risks from lead in drinking water;
 - B) Information about how to request sampling for lead at the facility; and
 - C) Information about sampling for lead in schools and child care facilities.

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BOARD NOTE: USEPA has guidance available from USEPA, National Center for Environmental Publications: "3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities: A Training, Testing, and Taking Action Approach, Revised Manual" (October 2018), USEPA, Office of Water, doc. no. EPA 815-B-18-007 (search: "815B18007") and "U.S. EPA 3Ts Program Training, Testing & Taking Action: Lead Sample Collection Field Guide for Schools and Child Care Facilities" (July 2022), USEPA, Office of Water, doc. no. EPA 815-F-22-009 (search: "815F22009").

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- 2) A supplier must conduct sampling under subsection (b) when the school or facility requests, and the supplier must provide information to the facility:
 - A) Instructions for identifying outlets for sampling and preparing for sampling at least 30 days before it occurs; and
 - B) Results as subsection (f) requires.
 - 3) If a supplier receives requests from more than 20 percent of the schools and child care facilities the supplier listed under subsection (a)(1) in a given year, the supplier may schedule sampling for those exceeding 20 percent for the following year. A supplier needs not sample an individual school or child care facility more than once every five years.
 - 4) The Agency may issue a SEP exempting a CWS supplier from this Section by issuing a written waiver under subsection (d) if the supplier conducts voluntary sampling for lead in drinking water complying with this Section at schools and child care facilities the supplier serves.

14444 (Source: Added at 47 Ill. Reg. _____, effective _____)

14445
14446 **Section 611.363 Small Supplier Compliance Flexibility**

14447
14448 This section gives compliance flexibility options applying to a small CWS supplier serving
14449 10,000 or fewer persons or an NTNCWS supplier. A CWS or NTNCWS supplier having
14450 corrosion control treatment in place must continue operating and maintaining OCCT until the
14451 Agency issues a SEP determining this no longer necessary, and the supplier must comply with
14452 any conditions the Agency are appropriate before implementing an Agency-approved
14453 compliance flexibility option under this Section.
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- a) A small CWS or NTNCWS supplier exceeding the lead trigger level but neither the lead nor copper action level must collect samples for water quality parameters under Section 611.357(b), evaluate compliance flexibility options under subsections (a)(1) through (a)(4), and recommend a compliance flexibility option to the Agency within six months of the end of the tap sampling period in which the exceedance occurred. When recommending to the Agency, the supplier must comply with Section 611.382(a)(1). The Agency must either approve the supplier’s recommended compliance flexibility option or designate an alternative under subsections (a)(1) through (a)(4) within six months after the supplier recommends an option. If the supplier subsequently exceeds the lead action level, the supplier must implement the Agency-approved compliance flexibility option under subsection (b). A supplier must select one from among specific compliance flexibility options:
- 1) Replacing Lead Service Lines. A supplier must implement a program for full lead service line replacement on an Agency-approved schedule not exceeding 15 years. The supplier must begin replacing lead service lines within one year after the Agency approves or designates this compliance flexibility option.
 - A) The supplier must replace lead service lines complying with Section 611.354(e) and (g)(4), (g)(8), and (g)(9).
 - B) The supplier must continue replacing lead service lines even if the supplier’s 90th percentile lead concentration is at or below the lead action level in future tap monitoring cycles.
 - C) The supplier must have no lead, galvanized requiring replacement, or lead status unknown service lines in its inventory before ending its lead service line replacement program.
 - 2) Corrosion Control Treatment. A supplier must install and maintain OCCT under Sections 611.351 and 611.352, even if its 90th percentile concentration is at or below the lead action level in future tap monitoring cycles. A supplier having installed corrosion control treatment must re-optimize its corrosion control treatment under Section 611.351(d). A supplier the Agency requires to optimize or re-optimize corrosion control treatment must follow the appropriate schedule in Section 611.351(d) or (e), beginning with Step 3 in Section 611.351(d)(3) or (e)(3), unless the Agency specifies OCCT under the applicable of Section 611.351(d)(2)(B) or (e)(2).

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- 3) Point-of-Use Devices. A supplier must continue installing, maintaining, and monitoring POU devices in each household or building it serves even if its 90th percentile lead concentration is at or below the action level in future tap monitoring cycles.
- A) Schedule for Installing POU Devices
 - i) A CWS supplier must install a minimum of one POU device (at one tap) in every household and at every tap persons use for cooking or drinking in every non-residential building the supplier serves on a schedule not exceeding one year the Agency specifies in a SEP.
 - ii) An NTNCWS supplier must provide a POU device to every tap persons use for cooking or drinking on a schedule not exceeding three months the Agency specifies in a SEP.
- B) A third party must independently certify the POU device to meet the American National Standards Institute standard applying to the specific type of POU unit for reducing lead in drinking water.
- C) The supplier must maintain each POU device according to its manufacturer’s recommendations to ensure the POU device continues effectively filtering, including changing filter cartridges and resolving any operational issues. The POU devices must have mechanical warnings ensuring automatic notice to customers of operational problems. The supplier must certify to the Agency under Section 611.360(j)(1) that it maintains the POU devices, unless the Agency issues a SEP waiving this requirement.
- D) The supplier must monitor one-third of the POU devices each year and all POU devices within a three-year cycle. The supplier must collect first draw tap samples under this Section after water passes through the POU device to assess its performance. Samples must be one-liter in volume and have had a minimum six-hour stagnation time. Results from all samples must not exceed the lead trigger level. The supplier must report its tap sampling results no later than 10 days after the end of the tap monitoring cycle under Section 611.360(j)(1). The supplier must document the problem and take corrective action at any site exceeding the lead trigger level. If a site exceeds the lead trigger level, the supplier must reach out to the homeowner or building manager no later than 24 hours after receiving the tap sample results. The supplier must

14540 complete the corrective action within 30 days. If the supplier does
14541 not complete the corrective action within 30 days, the supplier
14542 must document to the Agency within 30 days explaining why the
14543 supplier was unable to correct the issue.

14544
14545 E) The supplier must provide public education to consumers under
14546 Section 611.355(j) informing them how to properly use POU
14547 devices to maximize their effectiveness in reducing lead
14548 concentrations.

14549
14550 F) The supplier must operate and maintain the POU devices until the
14551 Agency approves another compliance flexibility option, and
14552 supplier implements it.

14553
14554 4) Replacing Lead-Bearing Plumbing. A supplier controlling all plumbing in
14555 buildings the supplier serves and having no lead status unknown,
14556 galvanized requiring replacement, or lead service lines must replace all
14557 plumbing that is not lead free as Section 611.126(c) defines the term when
14558 the supplier replaces it. Replacing all lead-bearing plumbing must occur
14559 on a schedule not exceeding one year as established by the Agency in a
14560 SEP. The supplier must certify to the Agency that it has replaced all lead-
14561 bearing material under Section 611.360(j)(2).

14562
14563 b) Implementing a Compliance Option after Exceeding an Action Level

14564
14565 1) A supplier exceeding the lead action level after exceeding the lead trigger
14566 level but not exceeding the copper action level must implement the
14567 compliance option the Agency approved under subsection (a).

14568
14569 2) A supplier exceeding the lead action level but not the copper action level
14570 and not previously exceeding the lead trigger level must comply with
14571 subsection (a) and implement the compliance option the Agency approved
14572 under subsection (a).

14573
14574 3) A supplier exceeding the lead trigger level after implementing a
14575 compliance option the Agency approved under subsection (a) must
14576 complete the steps in subsection (a). If the supplier later exceeds the lead
14577 action level, the supplier must implement the compliance option the
14578 Agency approved under subsection (a).

14579
14580 (Source: Added at 47 Ill. Reg. _____, effective _____)

14581
14582 SUBPART I: DISINFECTANT RESIDUALS, DISINFECTION

BYPRODUCTS, AND DISINFECTION BYPRODUCT PRECURSORS

Section 611.380 General Requirements

- a) ~~The Requirements of~~ This Subpart I ~~Constitutes~~ Constitute NPDWRs
 - 1) ~~This The regulations in this~~ Subpart I ~~establishes~~ establish standards for ~~under which~~ a CWS supplier or an NTNCWS supplier adding that adds a chemical disinfectant to ~~its the~~ water in any part of the drinking water treatment process modifying must modify its practices to comply with ~~meet~~ MCLs and MRDLs in Sections 611.312 and 611.313, respectively, and complying with must meet the treatment technique requirements for DBP precursors in Section 611.385.
 - 2) ~~This The regulations in this~~ Subpart I ~~establishes~~ establish standards for ~~under which~~ a transient non-CWS supplier using that uses chlorine dioxide as a disinfectant or oxidant modifying must modify its practices to comply with meet the MRDL for chlorine dioxide in Section 611.313.
 - 3) ~~The Board has established~~ MCLs for TTHM and HAA5 and treatment technique requirements for DBP precursors ~~to~~ limit the levels of known and unknown DBPs that may have adverse health effects. These DBPs may include chloroform, bromodichloromethane, dibromochloromethane, bromoform, dichloroacetic acid, and trichloroacetic acid.
- b) This subsection (b) corresponds with 40 CFR 141.130(b), which recites past implementation deadlines. This statement maintains structural consistency with the corresponding federal rules.
- c) Qualified personnel complying with 35 Ill. Adm. Code 681 must operate the water system for each ~~Each~~ CWS or NTNCWS supplier subject to regulated ~~under~~ subsection (a) ~~must be operated by qualified personnel who meet the requirements specified in 35 Ill. Adm. Code 680.~~
- d) Controlling ~~Control of~~ Disinfectant Residuals. Notwithstanding the MRDLs in Section 611.313, a supplier may increase residual disinfectant levels of chlorine or chloramines (but not chlorine dioxide) in ~~its the~~ distribution system ~~of chlorine or chloramines (but not chlorine dioxide)~~ to a level and for a time necessary to protect public health, to address specific microbiological contamination problems that caused by circumstances like such as, but not limited to, distribution line breaks, storm run-off events, source water contamination events, or cross-connection events caused.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.130.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.381 Analytical Requirements

a) A supplier must use only the analytical methods specified in this Section specifies, each ~~of which is~~ incorporated by reference in Section 611.102, or alternative methods that approved by the Agency approved under Section 611.480 to demonstrate that it complies ~~compliance~~ with ~~the requirements of~~ this Subpart I and ~~with the requirements of~~ Subparts W and Y.

b) Disinfection Byproducts (DBPs)

1) Methods for Disinfection Byproducts ~~A supplier must measure disinfection byproducts (DBPs) by the appropriate of the following methods:~~

A) TTHM

i) By Purge and Trap, Gas Chromatography, Electrolytic Conductivity Detector, and Photoionization Detector. USEPA 502.2 (95). If TTHMs are the only analytes the laboratory measures ~~being measured~~ in the sample, it needs not use then a photoionization detector ~~is not required~~.

ii) By Purge and Trap, Gas Chromatography-Mass Spectrometer. USEPA 524.2 (95) or USEPA 524.3 (09), or USEPA 524.4 (13).

iii) By Liquid-Liquid Extraction, Gas Chromatography, Electron Capture Detector. USEPA 551.1 (95).

B) HAA5

i) Liquid-Liquid Extraction (Diazomethane), Gas Chromatography, Electron Capture Detector. SM 6251 B (94) or SM 6251 B (07).

ii) Solid Phase Extractor (Acidic Methanol), Gas Chromatography, Electron Capture Detector. USEPA 552.1 (92).

- 14668 iii) Liquid-Liquid Extraction (Acidic Methanol), Gas
- 14669 Chromatography, Electron Capture Detector. USEPA
- 14670 552.2 (95) or 552.3 (03).
- 14671
- 14672 iv) Ion Chromatography, Electrospray Ionization, Tandem
- 14673 Mass Spectrometry. USEPA 557 (09).
- 14674
- 14675 v) Two-Dimensional Ion Chromatography (IC) with
- 14676 Suppressed Conductivity Detection. Thermo-Fisher 557.1
- 14677 (17).
- 14678

C) Bromate

- 14680
- 14681 i) Ion Chromatography. ASTM D6581-00 or USEPA 300.1
- 14682 (97).
- 14683
- 14684 ii) Ion Chromatography and Post-Column Reaction. USEPA
- 14685 317.0 (01) or USEPA 326.0 (02).
- 14686
- 14687 iii) Inductively Coupled Plasma-Mass Spectrometer. USEPA
- 14688 321.8 (97).
- 14689
- 14690 iv) Two-Dimensional Ion Chromatography. USEPA 302.0
- 14691 (09).
- 14692
- 14693 v) Ion Chromatography, Electrospray Ionization, Tandem
- 14694 Mass Spectrometry. USEPA 557 (09).
- 14695
- 14696 vi) Chemically Suppressed Chromatography. ASTM D6581-
- 14697 08 A.
- 14698
- 14699 vii) Electrolytically Suppressed Chromatography. ASTM
- 14700 D6581-08 B.
- 14701

14702 BOARD NOTE: The supplier must use ion chromatography
 14703 and post column reaction or inductively coupled plasma-mass
 14704 spectrometry to monitor bromate to
 14705 demonstrate for purposes of demonstrating eligibility for of
 14706 reduced monitoring under , as prescribed in Section
 14707 611.382(b)(3)(B). For inductively coupled plasma-mass
 14708 spectrometry, the supplier must preserve samples
 14709 preserved at the time of sampling with 50 mg ethylenediamine
 14710 (EDA) per liter of sample, and the supplier must analyze the
 14711 samples must be analyzed within 28 days.

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- D) Chlorite
 - i) Amperometric Titration for Daily Monitoring Under Section 611.382(b)(2)(A)(i). SM 4500-ClO₂ E (93) or 4500-ClO₂ E (00).
 - ii) Amperometric Sensor for Daily Monitoring Under Section 611.382(b)(2)(A)(i). Palintest ChlordioX Plus (13) or Palintest ChlordioX Plus (20).
 - iii) Spectrophotometry. USEPA 327.0 (05).
 - iv) Ion Chromatography. USEPA 300.0 (09), USEPA 300.1 (97), USEPA 317.0 (01), USEPA 326.0 (02), or ASTM D6581-00.
 - v) Chemically Suppressed Chromatography. ASTM D6581-08 A.
 - vi) Electrolytically Suppressed Chromatography. ASTM D6581-08 B.

BOARD NOTE: The supplier may use amperometric Amperometric titration or spectrophotometry ~~may be used~~ for routine daily monitoring of chlorite at the entrance to the distribution system ~~under, as prescribed in~~ Section 611.382(b)(2)(A)(i). The supplier must use ion ion chromatography ~~must be used~~ for routine monthly chlorite monitoring ~~of chlorite~~ and additional chlorite monitoring ~~of chlorite~~ in the distribution system, as ~~prescribed in~~ Section 611.382(b)(2)(A)(ii) and (b)(2)(B) require.

- 2) Only a certified laboratory in one of the categories in Section 611.490(a) may conduct analyses ~~Analyses under this Section~~ for DBPs under this Section must be conducted by a certified laboratory in one of the categories listed in Section 611.490(a) except as ~~specified under~~ subsection (b)(3) specifies otherwise. To receive certification to conduct analyses for the DBP contaminants ~~listed~~ in Sections 611.312 and 611.381 and Subparts W and Y, the laboratory must fulfill the specific conditions in fulfill the requirements of subsections (b)(2)(A), (b)(2)(C), and (b)(2)(D).

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- A) The laboratory must analyze performance evaluation (PE) samples ~~that are~~ acceptable to USEPA ~~or~~ the Agency at least once during each consecutive 12-month period by each method for which the laboratory ~~seeks~~ ~~desires~~ certification.

 - B) This subsection corresponds with 40 CFR 141.131(b)(2)(ii), which has expired by its own terms. This statement maintains structural consistency with the corresponding federal rule.

 - C) The laboratory must achieve quantitative results on the PE sample analyses ~~that are~~ within the acceptance limits ~~set forth~~ in subsections (b)(2)(C)(i) through (b)(2)(B)(xi), subject to ~~the conditions of~~ subsections (b)(2)(C)(xii) and (b)(2)(C)(xiii):
 - i) Chloroform (a THM): $\pm 20\%$ of true value;
 - ii) Bromodichloromethane (a THM): $\pm 20\%$ of true value;
 - iii) Dibromochloromethane (a THM): $\pm 20\%$ of true value;
 - iv) Bromoform (a THM): $\pm 20\%$ of true value;
 - v) Monochloroacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - vi) Dichloroacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - vii) Trichloroacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - viii) Monobromoacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - ix) Dibromoacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - x) Chlorite: $\pm 30\%$ of true value; and
 - xi) Bromate: $\pm 30\%$ of true value.
 - xii) The laboratory must meet all four of the individual THM acceptance limits ~~set forth~~ in subsections (b)(2)(B)(i) through (b)(2)(B)(iv) ~~in order~~ to successfully pass a PE sample for TTHM.
 - xiii) The laboratory must meet the acceptance limits for four out of the five HAA5 compounds ~~set forth~~ in subsections

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(b)(2)(B)(v) through (b)(2)(B)(ix) ~~in order~~ to successfully pass a PE sample for HAA5.

- D) The laboratory must report quantitative data for concentrations at least as low as the minimum reporting levels (MRLs) ~~listed in~~ subsections (b)(2)(D)(i) through (b)(2)(D)(xi), subject to ~~the limitations of~~ subsections (b)(2)(D)(xii) and (b)(2)(D)(xiii), for all DBP samples ~~it analyzes to comply analyzed for compliance~~ with Sections 611.312 and 611.385 and Subparts W and Y:
- i) Chloroform (a THM): 0.0010 mg/ℓ;
 - ii) Bromodichloromethane (a THM): 0.0010 mg/ℓ;
 - iii) Dibromochloromethane (a THM): 0.0010 mg/ℓ;
 - iv) Bromoform (a THM): 0.0010 mg/ℓ;
 - v) Monochloroacetic Acid (an HAA5): 0.0020 mg/ℓ;
 - vi) Dichloroacetic Acid (an HAA5): 0.0010 mg/ℓ;
 - vii) Trichloroacetic Acid (an HAA5): 0.0010 mg/ℓ;
 - viii) Monobromoacetic Acid (an HAA5): 0.0010 mg/ℓ;
 - ix) Dibromoacetic Acid (an HAA5): 0.0010 mg/ℓ;
 - x) Chlorite: 0.020 mg/ℓ, applicable to monitoring as required by Section 611.382(b)(2)(A)(ii) and (b)(2)(B); and
 - xi) Bromate: 0.0050, or 0.0010 mg/ℓ if the laboratory uses USEPA 317.0 (01), USEPA 321.8 (97), or USEPA 326.0 (02).
 - xii) The calibration curve must encompass the regulatory MRL concentration. ~~Data may be reported~~ The laboratory may report data for concentrations lower than the regulatory MRL ~~if the laboratory meets as long as~~ Data may be reported the precision and accuracy criteria ~~are met~~ if the laboratory meets as long as by analyzing an MRL check standard at the lowest reporting limit ~~chosen by~~ if the laboratory meets as long as the laboratory chooses. The laboratory must verify the accuracy of the calibration curve at the MRL concentration

14840 by analyzing an MRL check standard with a concentration
 14841 less than or equal to 110% of the MRL with each batch of
 14842 samples. The measured concentration for the MRL check
 14843 standard must be $\pm 50\%$ of the expected value; if any field
 14844 sample in the batch has a concentration less than five times
 14845 the regulatory MRL. The laboratory must Method
 14846 requirements to analyze higher concentration check
 14847 standards and meet tighter acceptance criteria for them
 14848 must be met in addition to the MRL check standard
 14849 requirement.

14850
 14851 xiii) When adding the individual trihalomethane or haloacetic
 14852 acid concentrations; for the compounds listed in
 14853 subsections (b)(2)(D)(v) through (b)(2)(D)(ix); to calculate
 14854 the TTHM or HAA5 concentrations, respectively, a zero is
 14855 used for any analytical result that is less than the MRL
 14856 concentration for that DBP, unless the Agency specifies
 14857 otherwise specified by the Agency.

14858
 14859 3) A party approved by USEPA or the Agency must measure daily chlorite
 14860 samples at the entrance to the distribution system as the Agency requires.

14861
 14862 c) Disinfectant Residuals

14863
 14864 1) A supplier must measure residual disinfectant concentrations for free
 14865 chlorine, combined chlorine (chloramines), and chlorine dioxide using by
 14866 the appropriate of the methods listed in subsections (c)(1)(A) through
 14867 (c)(1)(D), subject to the provisions of subsection (c)(1)(E):

14868
 14869 A) Free Chlorine

14870
 14871 i) Amperometric Titration. ASTM D1253-86, ASTM D1253-
 14872 96, ASTM D1253-03, ASTM D1253-08, ASTM D1253-
 14873 14, SM 4500-Cl D (93), or SM 4500- Cl D (00).

14874
 14875 ii) DPD Ferrous Titration. SM 4500-Cl F (93) or SM 4500-Cl
 14876 F (00).

14877
 14878 iii) DPD Colorimetric. Hach 10260 (13), SM 4500-Cl G (93),
 14879 or SM 4500-Cl G (00).

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 14881 iv) Syringaldazine (FACTS). SM 4500-Cl H (93) or SM 4500-
 14882 Cl H (00).
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- v) Test Strips. ITS D99-003 (03) if approved by the Agency under subsection (c)(2).
 - vi) Amperometric Sensor. Palintest ChloroSense (09) or Palintest ChloroSense (20).
 - vii) On-Line Chlorine Analyzer. USEPA 334.0 (09).
 - viii) Indenophenol Colorimetric. Hach 10241 (15).
- B) Combined Chlorine
- i) Amperometric Titration. ASTM D1253-86, ASTM D1253-96, ASTM D1253-03, ASTM D1253-08, or ASTM D1253-14, SM 4500-Cl D (93), or SM 4500-CL D (00).
 - ii) DPD Ferrous Titration. SM 4500-Cl F (93) or SM 4500-Cl F (00).
 - iii) DPD Colorimetric. Hach 10260 (13), SM 4500-Cl G (93), or SM 4500-Cl G (00).
- C) Total Chlorine
- i) Amperometric Titration. ASTM D1253-86, ASTM D1253-96, ASTM D1253-03, ASTM D1253-08, or ASTM D1253-14, SM 4500-Cl D (93), or SM 4500-Cl D (00).
 - ii) Low-Level Amperometric Titration. SM 4500-Cl E (93) or SM 4500-Cl E (00).
 - iii) DPD Ferrous Titration. SM 4500-Cl F (93) or SM 4500-Cl F (00).
 - iv) DPD Colorimetric. Hach 10260 (13), SM 4500-Cl G (93), or SM 4500-Cl G (00).
 - v) Iodometric Electrode. SM 4500-Cl I (93) or SM 4500-Cl I (00).
 - vi) Amperometric Sensor. Palintest ChloroSense (09) or Palintest ChloroSense (20).

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- vii) On-Line Chlorine Analyzer. USEPA 334.0 (09).
 - D) Chlorine Dioxide
 - i) DPD. SM 4500-ClO₂ D (93) or SM 4500-ClO₂ D (00).
 - ii) Amperometric Method II. SM 4500-ClO₂ E (93) or SM 4500-ClO₂ E (00).
 - iii) Amperometric Sensor. Palintest ChlordioX Plus (13) or Palintest ChlordioX Plus (20).
 - iv) Lissamine Green Spectrophotometric. USEPA 327.0 (05).
 - E) USEPA approved these ~~The methods listed are approved~~ for measuring the specified disinfectant residual. The supplier may measure free chlorine or total chlorine for ~~demonstrating compliance with~~ the chlorine MRDL and combined chlorine. The supplier may measure, or total chlorine may be measured for ~~demonstrating compliance with~~ the chloramine MRDL.
 - 2) Alternative Methods Available Only upon Specific Agency Approval ~~by the Agency~~
 - A) Test Strips. ITS Method D99-003 (03).

BOARD NOTE: USEPA added ITS Method D99-003 (03) as an approved alternative method, contingent upon specific State approval. The Board has opted to provide that the Agency may issue a SEP approving this method ~~can grant such approvals~~ on a case-by-case basis ~~using the SEP mechanism~~.
 - B) If ~~approved by~~ the Agency approves in, ~~by~~ a SEP, a supplier may also measure residual disinfectant concentrations for chlorine, chloramines, and chlorine dioxide ~~by~~ using DPD colorimetric test kits.
 - 3) An Agency-approved A party ~~approved by USEPA or the Agency~~ must measure residual disinfectant concentration.
 - d) A supplier ~~that must required to~~ analyze parameters not included in subsections (b) and (c) must use the methods ~~listed~~ in this subsection (d). An Agency-approved A

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party ~~approved by USEPA or the Agency~~ must measure certain the following parameters:

- 1) Alkalinity. All methods ~~allowed~~ in Section 611.611(a)(21) for ~~measuring~~ alkalinity.
- 2) Bromide. Ion Chromatography. ASTM D6581-00, USEPA 300.0 (93), USEPA 300.1 (97), USEPA 317.0 (01), or USEPA 326.0 (02).
- 3) Total Organic Carbon (TOC), by any of the methods ~~listed~~ in subsection (d)(3)(A), subject to ~~the limitations of~~ subsection (d)(3)(B).
 - A) Analytical Methods
 - i) High-Temperature Combustion. SM 5310 B (92), SM 5310 B (96), SM 5310 B (00), SM 5310 B (14), USEPA 415.3 (05), or USEPA 415.3 (09).
 - ii) Persulfate-Ultraviolet or Heated-Persulfate Oxidation. Hach 10267 (15), SM 5310 C (92), SM 5310 C (96), SM 5310 C (00), SM 5310 C (14), USEPA 415.3 (05), or USEPA 415.3 (09).
 - iii) Wet Oxidation Method. SM 5310 D (92), SM 5310 D (96), SM 5310 D (00), SM 5310 D (14), USEPA 415.3 (05), or USEPA 415.3 (09).
 - iv) Ozone Oxidation. Hach 10261 (15).
 - B) The supplier must remove inorganic ~~Inorganic~~ carbon ~~must be removed~~ from the samples prior to analysis. The supplier and supplier must not filter TOC samples ~~may not be filtered~~ prior to analysis. The supplier must acidify TOC samples ~~must be acidified~~ at the time of sample collection to achieve pH less than or equal to 2 with minimal addition of the acid ~~specified in the~~ method specifies or ~~by the~~ instrument manufacturer recommends. The supplier must analyze acidified ~~Acidified~~ TOC samples ~~must be analyzed~~ within 28 days.
- 4) Specific Ultraviolet Absorbance (SUVA). SUVA is equal to the UV absorption at 254 nm (UV_{254}) (measured in m^{-1}) divided by the dissolved organic carbon (DOC) concentration (measured as mg/l). ~~To In order to~~ determine SUVA, the supplier must ~~it is necessary to~~ separately measure

15012 UV₂₅₄ and DOC. When determining SUVA, a supplier must use the
 15013 methods ~~stipulated~~ in subsection (d)(4)(A) ~~for to measure~~ DOC and the
 15014 method ~~stipulated~~ in subsection (d)(4)(B) ~~for to measure~~ UV₂₅₄. The
 15015 supplier must determine SUVA ~~must be determined~~ on water prior to the
 15016 supplier adding disinfectants or oxidants~~the addition of~~
 15017 ~~disinfectants/oxidants by the supplier.~~ The supplier must take DOC and
 15018 UV₂₅₄ samples ~~for used to determine~~ a SUVA value ~~must be taken~~ at the
 15019 same time and at the same location.

15020
 15021 A) Dissolved Organic Carbon (DOC). Prior to analysis, the supplier
 15022 must filter DOC samples ~~must be filtered~~ through the 0.45 µm pore-
 15023 diameter filter as soon as practical after sampling, not to exceed 48
 15024 hours. After filtration, the supplier must acidify DOC samples
 15025 ~~must be acidified~~ to achieve pH less than or equal to 2 with
 15026 minimal addition of the acid ~~specified in~~ the method or ~~by the~~
 15027 instrument manufacturer specifies. The supplier must analyze
 15028 acidified ~~Acidified~~ DOC samples ~~must be analyzed~~ within 28 days
 15029 after sample collection. The supplier must remove inorganic
 15030 ~~Inorganic~~ carbon ~~must be removed~~ from the samples prior to
 15031 analysis. The supplier must use water ~~Water~~ passed through the
 15032 filter ~~prior to filtration of the sample must serve~~ as the filtered blank.
 15033 The supplier must analyze this ~~This~~ filtered blank ~~must be analyzed~~
 15034 using procedures identical to those it used for analysis of the
 15035 samples, and the blank must ~~meet the following standards:~~ DOC
 15036 less than 0.5 mg/ℓ DOC.

15037
 15038 i) High-Temperature Combustion Method. SM 5310 B (92),
 15039 SM 5310 B (96), SM 5310 B (00), SM 5310 B (14),
 15040 USEPA 415.3 (05), or USEPA 415.3 (09).

15041
 15042 ii) Persulfate-Ultraviolet or Heated-Persulfate Oxidation
 15043 Method. SM 5310 C (92), SM 5310 C (96), SM 5310 C
 15044 (00), SM 5310 C (14), USEPA 415.3 (05), or USEPA
 15045 415.3 (09).

15046
 15047 iii) Wet-Oxidation Method. SM 5310 D (92), (96), SM 5310
 15048 D (00), USEPA 415.3 (05), or USEPA 415.3 (09).

15049
 15050 B) Ultraviolet Absorption at 254 nm (UV₂₅₄) by Spectrometry. SM
 15051 5910 B (94), SM 5910 B (00), 5910 B (11), 5910 B (13), USEPA
 15052 415.3 (05), or USEPA 415.3 (09). The supplier must measure UV
 15053 absorption ~~must be measured~~ at 253.7 nm (may be rounded off to
 15054 254 nm). Prior to analysis, the supplier must filter UV₂₅₄ samples

~~must be filtered~~ through a 0.45 µm pore-diameter filter. The ~~supplier must not adjust~~ pH of UV₂₅₄ samples ~~may not be adjusted~~. ~~The supplier Samples must analyze samples be analyzed~~ as soon as practical after sampling, not to exceed 48 hours.

- 5) pH. All methods ~~allowed~~ in Section 611.611(a)(17) for ~~measuring~~ pH.
- 6) Magnesium. All methods ~~allowed~~ in Section 611.611(a) for ~~measuring~~ magnesium.

BOARD NOTE: ~~This Section derives Derived~~ from 40 CFR 141.131 and appendix A to 40 CFR 141. The Board ~~did has~~ not separately ~~list listed the following~~ approved alternative methods from Standard Methods Online that are the same version as a method ~~appearing that appears~~ in a printed edition of Standard Methods. ~~Using Use of~~ the Standard Methods Online copy is acceptable.

Standard Methods Online, Methods 4500-C1 D-93, 4500-C1 E-93, 4500-C1 F-93, 4500-C1 G-93, 4500-C1 H-93, and 4500-C1 I-93 appear in the 19th and 20th editions as Methods 4500-C1 D, 4500-C1 E, 4500-C1 F, 4500-C1 G, 4500-C1 H, and 4500-C1 I. ~~These In this Section, these~~ appear ~~in this Section~~ as SM 4500-C1 D (93), SM 4500-C1 E (93), SM 4500-C1 F (93), SM 4500-C1 G (93), SM 4500-C1 H (93), and SM 4500-C1 I (93).

Standard Methods Online, Methods 4500-C1 D-00, 4500-C1 E-00, 4500-C1 F-00, 4500-C1 G-00, 4500-C1 H-00, and 4500-C1 I-00 appear in the 21st, 22nd, and 23rd editions as Methods 4500-C1 D, 4500-C1 E, 4500-C1 F, 4500-C1 G, 4500-C1 H, and 4500-C1 I. ~~These In this Section, these~~ appear ~~in this Section~~ as SM 4500-C1 D (00), 4500-C1 E (00), 4500-C1 F (00), 4500-C1 G (00), 4500-C1 H (00), and 4500-C1 I (00).

Standard Methods Online, Methods 4500-C1O2 D-93 and 4500-C1O2 E-93 appear in the 19th and 20th editions as Methods 4500-C1O2 D and 4500-C1O2 E. ~~These In this Section, these~~ appear ~~in this Section~~ as SM 4500-C1O2 D (93) and SM 4500-C1O2 E (93).

Standard Methods Online, Methods 4500-C1O2 D-00 and 4500-C1O2 E-00 appear in the 21st, 22nd, and 23rd editions as Methods 4500-C1O2 D and 4500-C1O2 E. ~~These In this Section, these~~ appear ~~in this Section~~ as SM 4500-C1O2 D (00) and SM 4500-C1O2 E (00).

Standard Methods Online, Methods 5310 B-00, 5310 C-00, and 5310 D-00 appear in the 21st and 22nd editions as Methods 5310 B, 5310 C, and 5310 D. ~~These In~~

15097 ~~this Section, these~~ appear in this Section as SM 5310 B (00), SM 5310 C (00), and
 15098 SM 5310 D (00).

15099
 15100 Standard Methods Online, Method 5910 B-00 appears in the 21st edition as
 15101 Method 5910 B. ~~This In this Section, this~~ appears in this Section as SM 5910 B
 15102 (00).

15103
 15104 Standard Methods Online, Method 5910 B-11 appears in the 22nd edition as
 15105 Method 5910 B. ~~This In this Section, this~~ appears in this Section as SM 5910 B
 15106 (11).

15107
 15108 Standard Methods Online, Method 6251 B-94 appears in the 19th, 20th, and 21st
 15109 editions as Method 6251 B. ~~This In this Section, this~~ appears in this Section as
 15110 SM 6251 B (94).

15111
 15112 Standard Methods Online, Method 6251 B-07 appears in the 22nd and 23rd
 15113 editions as Method 5910 B. ~~This In this Section, this~~ appears in this Section as
 15114 SM 6251 B (07).

15115
 15116 (Source: Amended at 47 Ill. Reg. _____, effective _____)

15117
 15118 SUBPART L: MICROBIOLOGICAL MONITORING
 15119 AND ANALYTICAL REQUIREMENTS
 15120

15121 **Section 611.531 Analytical Requirements**

15122
 15123 A supplier must use the ~~The~~ analytical methods ~~specified~~ in this Section, or Agency-approved
 15124 alternative methods ~~approved by the Agency~~ under Section 611.480, ~~must be used~~ to
 15125 demonstrate compliance with ~~the requirements of~~ only 611.Subpart B. A supplier must measure
 15126 Measurements for pH, temperature, turbidity, and RDCs ~~must be conducted~~ under the
 15127 supervision of a certified operator. A supplier must conduct measurements ~~Measurements for~~
 15128 total coliforms, fecal coliforms and HPC using ~~must be conducted by~~ a certified laboratory in
 15129 one of the categories ~~listed~~ in Section 611.490(a). The supplier must perform analyses using
 15130 following procedures must be performed by the following methods in this Section, each
 15131 incorporated by reference in Section 611.102:

- 15132
 15133 a) Basic Water Parameters and Microbiological Quality ~~A supplier must conduct~~
 15134 analyses as follows:
 15135
 15136 1) The supplier must analyze ~~conduct analyses~~ for pH and temperature using
 15137 in accordance with one of the methods in ~~listed at~~ Section 611.611; and
 15138
 15139 2) The supplier must analyze ~~conduct analyses~~ for total coliforms, fecal

coliforms, heterotrophic bacteria, and turbidity using specific in accordance with one of the following methods, and by using analytical test procedures contained in USEPA Technical Notes, incorporated by reference in Section 611.102, as follows:

A) Total Coliforms

BOARD NOTE: The time from sample collection to beginning initiation of analysis for source (raw) water samples required by Section 611.532 and Subpart B only must not exceed eight hours. The supplier should but needs is encouraged but not required to hold samples below 10° C during transit.

- i) Total Coliform Fermentation Technique. SM 9221 A (93), SM 9221 A (94), SM 9221 A (99), SM 9221 A (06), SM 9221 A (14), SM 9221 B (93), SM 9221 B (94), SM 9221 B (99), SM 9221 B (06), SM 9221 B (14), SM 9221 C (93), SM 9221 C (94), SM 9221 C (99), SM 9221 C (06), or SM 9221 C (14).

BOARD NOTE: The supplier may use commercially available lactose ~~Lactose~~ broth, as commercially available, may be used in lieu of lauryl tryptose broth if the supplier conducts at least 25 parallel tests between this medium and lauryl tryptose broth using the water it normally tests, tested and this comparison demonstrates that the false-positive rate and false-negative rate for total coliforms, using lactose broth, is less than ten percent using lactose broth. If the supplier uses inverted tubes are used to detect gas production, the media should cover these tubes at least one-half to two-thirds after the supplier adds the sample is added. The supplier needs not ~~No requirement exists to~~ run the completed phase on ten percent of all total coliform-positive confirmed tubes.

- ii) Total Coliform Membrane Filter Technique. SM 9222 A (91), SM 9222 A (94), SM 9222 A (97), SM 9222 A (06), SM 9222 A (15), SM 9222 B (91), SM 9222 B (94), SM 9222 B (97), 9222 B (06), SM 9222 B (15), SM 9222 C (91), SM 9222 C (94), SM 9222 C (97), SM 9222 C (06), or SM 9222 C (15).
- iii) ONPG-MUG (also known as Colilert®). SM 9223 (92),

15183 SM 9223 (94), SM 9223 (97), SM 9223 B (04), or SM
15184 9223 B (16).

15185
15186 B) Fecal Coliforms

15187
15188 BOARD NOTE: The time from collecting the sample ~~collection~~ to
15189 beginning initiation of analysis of ~~for~~ source (raw) water samples
15190 ~~required by Section 611.532 and Subpart B only~~ must not exceed
15191 eight hours. The supplier should but needs is encouraged but not
15192 ~~required to~~ hold samples below 10° C during transit.

15193
15194 i) Fecal Coliform Procedure. SM 9221 E (93), SM 9221 E
15195 (94), SM 9221 E (99), SM 9221 E (06), or SM 9221 E (14).

15196
15197 BOARD NOTE: A-1 broth may be held up to seven days in
15198 a tightly closed screwcap tube at 4° C (39° F).

15199
15200 BOARD NOTE: The supplier may hold A-1 broth up to
15201 seven days in a tightly closed screwcap tube at 4 °C (39
15202 °F).

15203
15204 ii) Fecal Coliform Membrane Filter Procedure. SM 9222 D
15205 (91), SM 9222 D (94), SM 9222 D (97), SM 9222 D (06),
15206 or SM 9222 D (15).

15207
15208 C) Heterotrophic Bacteria

15209
15210 i) Pour Plate Method. SM 9215 B (88), SM 9215 B (94), SM
15211 9215 B (00), SM 9215 B (04), or SM 9215 B (16).

15212
15213 BOARD NOTE: The time from collecting the sample
15214 ~~collection~~ to beginning initiation of analysis must not
15215 exceed eight hours. The supplier should but needs is
15216 ~~encouraged but~~ not ~~required to~~ hold samples below 10 °C
15217 during transit.

15218
15219 ii) SimPlate (00).

15220
15221 D) Turbidity

15222
15223 BOARD NOTE: Styrene divinyl benzene beads (e.g., AMCO-
15224 AEPA-1 or equivalent) and stabilized formazin (e.g., Hach
15225 StablCal™ or equivalent) are acceptable substitutes for formazin.

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- i) Nephelometric Method. SM 2130 B (88), SM 2130 B (94), SM 2130 B (01); USEPA 180.1 (93); or Hach 8195 (18).
 - ii) GLI Method 2 (92).
 - iii) Laser Nephelometry. Hach 10133 (00) (FilterTrak).
 - iv) Laser Nephelometry (On-Line). Lovibond PTV 6000 (16), Mitchell M5271 (09), or Mitchell M5331 (16).
 - v) LED Nephelometry (On-Line). AMI Turbiwell (09), Lovibond PTV 1000 (16), Lovibond PTV 2000 (16), Mitchell M5331 (09), or Mitchell M5331 (16).
 - vi) LED Nephelometry (Portable). Orion AQ4500 (09).
 - vii) 360° Nephelometry. Hach 10258 (16) or Hach 10258 (18).

b) A supplier must measure residual disinfectant concentrations with specific one of the following analytical methods:

1) Free Chlorine

- A) Amperometric Titration. ASTM D1253-03, ASTM D1253-08, ASTM D1253-14, SM 4500-Cl D (89), SM 4500-Cl D (93), or SM 4500-Cl D (00).
- B) DPD Ferrous Titrimetric. SM 4500-Cl F (89), SM 4500-Cl F (93), or SM 4500-Cl F (00).
- C) DPD Colimetric. Hach 10260 (13), SM 4500-Cl G (89), SM 4500-Cl G (93), or SM 4500-Cl G (00).
- D) Syringaldazine (FACTS). SM 4500-Cl H (89), SM 4500-Cl H (93), or SM 4500-Cl H (00).
- E) On-Line Chlorine Analyzer. USEPA 334.0 (09).
- F) Amperometric Sensor. Palintest ChloroSense (09) and Palintest ChloroSense (20).
- G) Indophenol Colorimetric. Hach 10241 (15).

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- 2) Total Chlorine
 - A) Amperometric Titration. ASTM D1253-03, ASTM D1253-08, ASTM D1253-14, SM 4500-Cl D (89), SM 4500-Cl D (93), or SM 4500-Cl D (00).
 - B) Amperometric Titration (low level measurement). SM 4500-Cl E (89), [SM 4500-Cl E \(93\)](#), or [SM 4500-Cl E \(00\)](#).
 - C) DPD Ferrous Titrimetric. SM 4500-Cl F (89), [SM 4500-Cl F \(93\)](#), or [SM 4500-Cl F \(00\)](#).
 - D) DPD Colimetric. SM 4500-Cl G (89), [SM 4500-Cl G \(93\)](#), [SM 4500-Cl G \(00\)](#), or Hach 10260 (13).
 - E) Iodometric Electrode. SM 4500-Cl I (89), [SM 4500-Cl I \(93\)](#), or [SM 4500-Cl I \(00\)](#).
 - F) On-Line Chlorine Analyzer. USEPA 334.0 (09).
 - G) Amperometric Sensor. Palintest ChloroSense (09) [and Palintest ChloroSense \(20\)](#).
 - H) [Indophenol Colorimetric. USEPA 127 \(21\)](#).
 - 3) Chlorine Dioxide
 - A) Amperometric Titration. [Palintest ChlordioX Plus \(13\)](#), [Palintest ChlordioX Plus \(20\)](#), SM 4500-ClO₂ C (88), SM 4500-ClO₂ C (93), SM 4500-ClO₂ C (00), SM 4500-ClO₂ E (88), SM 4500-ClO₂ E (93), or SM 4500-ClO₂ E (00).
 - B) DPD Method. SM 4500-ClO₂ D (88) or SM 4500-ClO₂ D (93).
 - C) Spectrophotometric. USEPA 327.0 (05).
 - 4) Ozone. Indigo Method. SM 4500-O₃ B (88), SM 4500-O₃ B (93), or SM 4500-O₃ B (00).
 - 5) Alternative Test Methods. The Agency may [issue grant](#)-a SEP [allowing that allows](#)-a supplier to use alternative chlorine test methods [as follows](#):
 - A) DPD Colorimetric Test Kits. [A supplier may measure residual](#)

~~Residual~~ disinfectant concentrations for free chlorine and combined chlorine ~~may also be measured by~~ using ITS Method D99-003.

- B) Continuous Monitoring for Free and Total Chlorine. A supplier may measure free ~~Free~~ and total chlorine residuals ~~may be measured~~ continuously by adapting a specified chlorine residual method for use with a continuous monitoring instrument, provided the chemistry, accuracy, and precision remain the same. A supplier must calibrate instruments it uses ~~Instruments used~~ for continuous monitoring ~~must be calibrated~~ with a grab sample measurement at least every five days or as the Agency provides otherwise ~~in a SEP provided by the Agency~~.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.74(a) and appendix A to subpart C of 40 CFR 141. The Board ~~did has~~ not separately list ~~listed the following~~ approved alternative methods from Standard Methods Online that are the same version as a method appearing that appears in a printed edition of Standard Methods. Using ~~Use of~~ the Standard Methods Online copy is acceptable.

Standard Methods Online, Method 2130 B-01 appears in the 21st, 22nd, and 23rd editions as Method 2130 B. This ~~In this Section, this~~ appears in this Section as SM 2130 B (01).

Standard Methods Online, Methods 4500-Cl D-93, 4500-Cl E-93, 4500-Cl F-93, 4500-Cl G-93, 4500-Cl H-93, and 4500-Cl I-93 appear in the 19th and 20th editions as Methods 4500-Cl D, 4500-Cl E, 4500-Cl F, 4500-Cl G, 4500-Cl H, and 4500-Cl I. These ~~In this Section, these~~ appear in this Section as SM 4500-Cl D (93), SM 4500-Cl E (93), SM 4500-Cl F (93), SM 4500-Cl G (93), SM 4500-Cl H (93), and SM 4500-Cl I (93).

Standard Methods Online, Methods 4500-Cl D-00, 4500-Cl E-00, 4500-Cl F-00, 4500-Cl G-00, 4500-Cl H-00, and 4500-Cl I-00 appear in the 21st, 22nd, and 23rd editions as Methods 4500-Cl D, 4500-Cl E, 4500-Cl F, 4500-Cl G, 4500-Cl H, and 4500-Cl I. These ~~In this Section, these~~ appear in this Section as SM 4500-Cl D (00), SM 4500-Cl E (00), SM 4500-Cl F (00), SM 4500-Cl G (00), SM 4500-Cl H (00), and SM 4500-Cl I (00).

Standard Methods Online, Methods 4500-ClO₂ C-93, 4500-ClO₂ D-93, and 4500-ClO₂ E-93 appear in the 19th and 20th editions as Methods 4500-ClO₂ C, 4500-ClO₂ D, and 4500-ClO₂ E. These ~~In this Section, these~~ appear in this Section as SM 4500-ClO₂ C (93), SM 4500-ClO₂ D (93), and SM 4500-ClO₂ E (93).

Standard Methods Online, Methods 4500-ClO₂ C-00 and 4500-ClO₂ E-00 appear in the 19th and 20th editions as Methods 4500-ClO₂ C and 4500-ClO₂ E. These ~~In this Section, these~~ appear in this Section as SM 4500-ClO₂ C (00) and SM 4500-ClO₂ E (00).

15356
 15357 Standard Methods Online, Method 4500-O₃ B-97 appears in the 20th edition as Method
 15358 4500-O₃ B. ~~This In this Section, this~~ appears in this Section as SM 4500-O₃ B (97).
 15359
 15360 Standard Methods Online, Method 9215 B-00 appears in the 21st edition as Method 9215
 15361 B. ~~This appears In this Section, these appear~~ in this Section as SM 9215 B (00).
 15362
 15363 Standard Methods Online, Method 9215 B-04 appears in the 22nd edition as Method 9215
 15364 B. ~~This In this Section, this~~ appears in this Section as SM 9215 B (04).
 15365
 15366 Standard Methods Online, Methods 9221 A-99, 9221 B-99, and 9221 C-99 appear in the
 15367 21st edition as Methods 9221 A, 9221 B, and 9221 C. ~~These In this Section, these~~ appear
 15368 in this Section as SM 9221 A (99), SM 9221 B (99), and SM 9221 C (99).
 15369
 15370 Standard Methods Online, Methods 9221 A-06, 9221 B-06, 9221 C-06, and 9221 E-06
 15371 appear in the 22nd edition as Methods 9221 A, 9221 B, 9221 C, and 9221 E. ~~These In this~~
 15372 ~~Section, these~~ appear in this Section as SM 9221 A (06), SM 9221 B (06), SM 9221 C
 15373 (06), and SM 9221 E (06).
 15374
 15375 Standard Methods Online, Methods 9222 A-97, 9222 B-97, and 9222 C-97 appear in the
 15376 20th and 21st editions as Methods 9222 A, 9222 B, and 9222 C. ~~These In this Section,~~
 15377 ~~these~~ appear in this Section as SM 9222 A (97), SM 9222 B (97), and SM 9222 C (97).
 15378
 15379 Standard Methods Online, Method 9223 B-97 appears in the 20th and 21st editions as
 15380 Method 9223 B. ~~This In this Section, this~~ appears in this Section as SM 9223 B (97).
 15381
 15382 Standard Methods Online, Method 9223 B-04 appears in the 22nd edition as Method 9223
 15383 B. ~~This In this Section, this~~ appears in this Section as SM 9223 B (04).
 15384
 15385 (Source: Amended at 47 Ill. Reg. _____, effective _____)
 15386

15387 **Section 611.532 Unfiltered PWSs**
 15388

15389 ~~A supplier that uses a surface water source and does not provide filtration treatment must~~
 15390 ~~monitor, unless the Agency has determined, under Section 611.211, that filtration is required.~~ If
 15391 the Agency determines that filtration is required, it must specify alternative monitoring
 15392 requirements, as appropriate, until filtration is in place. A supplier ~~using that uses~~ a groundwater
 15393 source under the direct influence of surface water ~~not providing and which does not provide~~
 15394 filtration treatment must monitor ~~as within six months after~~ the Agency directs in a SEP after
 15395 ~~determining has determined,~~ under Section 611.212; that the supplier's groundwater source is
 15396 under the direct influence of surface water, requiring the supplier to install and apply filtration
 15397 treatment, and specifying appropriate unless the Agency has determined that filtration is
 15398 required, in which case the Agency must specify alternative monitoring requirements, as

15399 ~~appropriate,~~ until filtration is in place.

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- a) ~~The supplier must sample and analyze for fecal~~ The supplier must sample and analyze for fecal coliform or total coliform density measurements ~~as required by~~ Section 611.231(a) requires must be performed on representative source water samples it collects immediately prior to the first or only point of applying disinfectant ~~application~~. The supplier must sample for fecal or total coliforms no less frequently than at the minimum frequency specified in Table B specifies each week the supplier serves water to the public. The supplier must also sample and analyze once for ~~Also, one~~ fecal or total coliform density ~~measurement must be made~~ every day the supplier serves water to the public and the turbidity of ~~its the~~ source water exceeds 1 NTU (these samples count towards the weekly coliform sampling requirement), unless the Agency issues a SEP determining ~~determines~~ that the supplier, ~~for logistical reasons outside the supplier's control~~ cannot analyze have the sample analyzed within 30 hours after collecting the sample for logistical reasons outside the supplier's control ~~collection~~.

- b) The supplier must measure turbidity ~~Turbidity measurements as required by~~ Section 611.231(b) requires must be performed on representative grab samples of source water it collects immediately prior to the first or only point of applying disinfectant no less frequently than ~~application~~ every four hours when (or more frequently) that the supplier serves water to the public. A supplier may substitute continuous turbidity monitoring for grab sample monitoring after validating the accuracy of regular if it validates the continuous measurement for accuracy ~~on a regular basis~~ using a protocol the Agency approved in by a SEP.

- c) The supplier must determine its total inactivation ratio for each day it operates ~~that the supplier is in operation must be determined~~ based on the appropriate CT_{99.9} values in Appendix B, ~~as appropriate~~. The supplier must monitor the parameters necessary to determine ~~its the~~ total inactivation ratio using specific procedures must be monitored as follows:
 - 1) The supplier must measure temperature of the disinfected water ~~must be measured~~ at least once per day at each RDC sampling point.
 - 2) If using the supplier uses chlorine, the supplier must measure the pH of the disinfected water ~~must be measured~~ at least once per day at each chlorine RDC sampling point.
 - 3) The supplier must determine the disinfectant contact times ("T") ~~must be determined~~ for each day during peak hourly flow.
 - 4) The supplier must measure the RDCs ("C") of the water before or at the

- 15442 first customer ~~must be measured~~ each day during peak hourly flow.
 15443
 15444 5) ~~A If a supplier using uses~~ a disinfectant other than chlorine, ~~the supplier~~
 15445 may monitor by other ~~Agency-approved~~ methods ~~approved~~ under Section
 15446 ~~611.241(a)611.241(a)(1) and (a)(2)~~.
 15447
 15448 d) The ~~supplier must calculate~~ total inactivation ratio ~~using a specific procedure~~
 15449 ~~be calculated as follows~~:
 15450
 15451 1) ~~A If the supplier applying disinfectant at uses~~ only one point of
 15452 ~~disinfectant application, the supplier~~ may determine the total inactivation
 15453 ratio based on either of ~~the following~~ two methods:
 15454
 15455 A) ~~Determining one One~~ inactivation ratio ($A_i = CT_{\text{calc}}/CT_{99.9}$) ~~is~~
 15456 ~~determined~~ before or at the first customer during peak hourly flow,
 15457 ~~so that the supplier achieves 99.9 percent Giardia lamblia~~
 15458 ~~inactivation and, if the A_i is greater than 1.0, the 99.9 percent~~
 15459 ~~Giardia lamblia inactivation requirement has been achieved~~; or
 15460
 15461 B) ~~The supplier may determine successive Successive~~ A_i values at
 15462 ~~points between where the supplier applies disinfectant and before~~
 15463 ~~or at the first customer~~, representing sequential inactivation ratios,
 15464 ~~are determined between the point of disinfectant application and a~~
 15465 ~~point before or at the first customer~~ during peak hourly flow.
 15466 Under this alternative, ~~the supplier must use a specific the~~
 15467 ~~following~~ method ~~must be used~~ to calculate the total inactivation
 15468 ratio:
 15469
 15470 i) Determine ~~A_i the following~~, for each sequence:
 15471
 15472
$$A_i = CT_{\text{calc}}/CT_{99.9}$$

 15473
 15474 ii) Add the A_i values ~~together, as follows~~:
 15475
 15476
$$B = \sum(A_i)$$

 15477
 15478 iii) If B is greater than 1.0, ~~the supplier achieved the required~~
 15479 ~~99.9 percent Giardia lamblia inactivation requirement has~~
 15480 ~~been achieved~~.
 15481
 15482 2) ~~A If the supplier applying disinfectant at uses~~ more than one point of
 15483 ~~disinfectant application~~ before or at the first customer, ~~the supplier~~ must
 15484 determine the CT value of each disinfection sequence immediately prior to

15485 the next point ~~it applies of~~ disinfectant ~~application~~ during peak hourly
 15486 flow. The supplier must calculate the A_i value of each sequence and B
 15487 ~~must be calculated~~ using the method in subsection (d)(1)(B) to determine
 15488 if the supplier ~~complies is in compliance~~ with Section 611.241.

15489
 15490 3) A supplier monitoring RDC at one or more points may voluntarily
 15491 calculate its ~~Although not required, the~~ total percent inactivation (PI) ~~for a~~
 15492 ~~supplier with one or more points of RDC monitoring may~~ using the
 15493 equation ~~be calculated as follows:~~

$$PI = 100 - \frac{100}{10^{3B}}$$

15495
 15496 e) The supplier must continuously monitor the RDC of the water entering its the
 15497 distribution system ~~must be monitored continuously,~~ and record the lowest value
 15498 ~~must be recorded~~ each day, except that the supplier may use grab sampling every
 15499 four hours for no more than five days in lieu of continuous monitoring after a
 15500 failure of if there is a failure in the continuous monitoring equipment. A supplier,
 15501 grab sampling every four hours may be conducted in lieu of continuous
 15502 monitoring, but for no more than five working days following the failure of the
 15503 equipment, and suppliers serving 3,300 or fewer persons may take grab samples
 15504 on an ongoing basis at the applicable frequency in Table C in lieu of ~~providing~~
 15505 continuous monitoring ~~on an ongoing basis at the frequencies prescribed in Table~~
 15506 C. If ~~at any time~~ the RDC falls below 0.2 mg/l in a system using grab sampling in
 15507 lieu of continuous monitoring, the supplier must take a grab sample every four
 15508 hours until ~~its the~~ RDC is equal to or greater than 0.2 mg/l.

15509
 15510 f) Measuring Points of Measurement

15511
 15512 1) The supplier must measure the RDC ~~must be measured at least~~ at the same
 15513 points in ~~its the~~ distribution system and at the same time it samples as total
 15514 coliforms ~~are sampled,~~ as ~~specified in~~ Sections 611.1054 through
 15515 611.1058 specify. The Agency must allow a supplier using that uses both
 15516 a groundwater source and a surface water source or ~~a groundwater source~~
 15517 under direct influence of surface water, ~~and a groundwater source~~ to take
 15518 disinfectant residual samples at points other than the total coliform
 15519 sampling points if the Agency ~~issues determines, by~~ a SEP determining,
 15520 that those such points better represent are more representative of treated
 15521 (disinfected) water quality within the distribution system. The supplier
 15522 may measure HPC ~~may be measured~~ in lieu of RDC.

15523
 15524 2) If the Agency determines, under Section 611.213, that a supplier has no
 15525 means for having a sample analyzed for HPC, ~~measured~~ as specified in

subsection (a) specifies, the ~~requirements of~~ subsection (f)(1) does do not apply ~~to that supplier~~.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.74(b).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.533 Filtered PWSs

A supplier using that uses a surface water source or a groundwater source under the direct influence of surface water and providing provides filtration treatment must monitor in accordance with this Section.

a) The supplier must perform turbidity ~~Turbidity~~ measurements as required by Section 611.250 requires must be performed on representative samples of the PWS's filtered water every four hours (or more frequently) when that the supplier serves water to the public. A supplier may substitute continuous turbidity monitoring for grab sample monitoring if it validates the continuous measurement for accuracy on a regular basis using a protocol the Agency approved in by a SEP. For a supplier any suppliers using slow sand filtration or filtration treatment other than conventional treatment, direct filtration, or diatomaceous earth filtration, the Agency must, by special exception permit condition, reduce the sampling frequency to once per day in a SEP if the Agency it determines that less frequent monitoring is sufficient to indicate effective filtration performance. For a suppliers suppliers serving 500 or fewer persons, the Agency must, by a SEP, reduce the turbidity sampling frequency to once per day in a SEP, regardless of the type of filtration treatment used, if the Agency determines that less frequent monitoring is sufficient to indicate effective filtration performance regardless of the type of filtration treatment used.

b) RDC Entering Distribution System

- 1) Suppliers Serving More Than ~~serving more than~~ 3300 Persons ~~persons~~. The supplier must continuously monitor the RDC of the water entering the distribution system must be monitored continuously, and the supplier must record the lowest value must be recorded each day, except that the supplier may conduct, if there is a failure in the continuous monitoring equipment, grab sampling every four hours may be conducted in lieu of continuous monitoring if there is a failure in the continuous monitoring equipment, but not for ~~no~~ more than five working days following the failure of the equipment failure.
- 2) Suppliers Servingserving 3,300 or Fewer Persons. The supplier fewer

15569 persons may take grab samples in lieu of providing continuous monitoring
15570 on an ongoing basis at the frequencies each day ~~prescribed in~~ Table C
15571 ~~prescribes~~. If at any time the RDC falls below 0.2 mg/l in a system using
15572 grab sampling in lieu of continuous monitoring, the supplier must take a
15573 grab sample every four hours until RDC is equal to or greater than 0.2
15574 mg/l.
15575

15576 c) Points of Measurement

15578 1) The ~~supplier must measure the~~ RDC ~~must be measured~~ at least at the same
15579 points in the distribution system and at the same time as ~~sampling~~ total
15580 coliforms ~~are sampled~~, as ~~specified in~~ Sections 611.1054 through
15581 611.1058 ~~specify~~. The Agency must allow a supplier ~~using that uses~~ both a
15582 surface water source ~~and a groundwater source~~, or a groundwater source
15583 under direct influence of surface water, and a groundwater source to take
15584 RDC samples at points other than the total coliform sampling points if the
15585 Agency determines that such points are more representative of treated
15586 (disinfected) water quality within the distribution system. ~~The supplier~~
15587 ~~may measure~~ HPC, ~~measured as specified in~~ Section 611.531(a) ~~specifies~~,
15588 ~~may be measured~~ in lieu of RDC.

15589
15590 2) Subsection (c)(1) does not apply if the Agency determines, under Section
15591 611.213(c), that a system has no means for having a ~~sample analyzed for~~
15592 ~~HPC by a~~ certified laboratory ~~analyze a sample for PHC~~ under the
15593 requisite time and temperature conditions ~~specified by~~ Section 611.531(a)
15594 ~~specifies~~ and ~~that~~ the supplier ~~provides~~ ~~is providing~~ adequate disinfection
15595 in ~~its~~ the distribution system.
15596

15597 BOARD NOTE: ~~This Section derives~~ Derived from 40 CFR 141.74(c).

15598
15599 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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15601 SUBPART M: TURBIDITY MONITORING AND ANALYTICAL REQUIREMENTS

15602
15603 **Section 611.560 Turbidity (Repealed)**

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15605 ~~The requirements in this Section apply to unfiltered PWSs until filtration is installed.~~

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15607 a) ~~Suppliers must take samples at representative entry points to the distribution~~
15608 ~~system at least once per day, for the purposes of making turbidity measurements~~
15609 ~~to determine compliance with Section 611.320.~~

15610
15611 1) ~~If Public Health determines that a reduced sampling frequency in a non-~~

~~CWS will not pose a risk to public health, it may reduce the required sampling frequency. The option of reducing the turbidity frequency will be permitted only in those suppliers that practice disinfection and which maintain an active RDC in the distribution system, and in those cases where Public Health has indicated in writing that no unreasonable risk to health existed under the circumstances of this option.~~

~~2) The turbidity measurements must be made in accordance with one of the methods set forth in Section 611.531(a).~~

~~b) If the result of a turbidity analysis indicates that the maximum allowable limit has been exceeded, the sampling and measurement must be confirmed by resampling as soon as practicable and preferably within one hour. If the repeat sample confirms that the maximum allowable limit has been exceeded, the supplier of water must report to the Agency within 48 hours. The repeat sample must be the sample used for the purpose of calculating the monthly average. If the monthly average of the daily samples exceeds the maximum allowable limit, or if the average of two samples taken on consecutive days exceeds 5 NTU, the supplier of water must report to the Agency and notify the public as directed in Subpart V of this Part.~~

~~e) This subsection (e) corresponds with 40 CFR 141.22(e), which states a past effective date for CWSs.~~

~~d) This Section applies only to suppliers that use water obtained in whole or in part from surface sources.~~

~~BOARD NOTE: Derived from 40 CFR 141.22 (2002).~~

~~(Source: Repealed at 47 Ill. Reg. _____, effective _____)~~

SUBPART N: INORGANIC MONITORING AND ANALYTICAL REQUIREMENTS

Section 611.591 Violation of a State-Only MCL

This Section applies to State-only old MCLs that are marked as "additional State requirements" at Section 611.300 and for which no specific monitoring, reporting, or public notice requirements are specified in subsections (a) through (e). If the result of analysis under Section 611.612 this Part indicates that the level of any contaminant exceeds the State-only old MCL, the CWS supplier must take certain actions do the following:

a) Report to the Agency within seven days and initiate three additional analyses at the same sampling point within one month;

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- b) Notify the Agency and give public notice, as ~~specified in~~ Subpart T specifies, ~~if when~~ the average of four analyses, ~~rounded to the same number of significant figures as the old MCL for the contaminant in question~~, exceeds the State-only ~~old~~ MCL; and
- c) After giving public notice, monitor ~~Monitor, after public notification~~, at a frequency ~~designated by~~ the Agency designates in a SEP. ~~The supplier must, and~~ continue monitoring until the results do not exceed the State-only ~~old~~ MCL ~~has not been exceeded~~ in two consecutive samples or until the effective date of a monitoring schedule the Board issues as a condition of a variance, adjusted standard, or enforcement action ~~becomes effective~~.

BOARD NOTE: This is an additional State requirement.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.592 Frequency of State Monitoring

This Section applies to State-only ~~old~~ MCLs ~~that are~~ marked as "additional State requirements" ~~in at~~ Section 611.300, and for which there are no specific monitoring, reporting, or public notice requirements among the NPDWRs ~~are specified below~~.

- a) A CWS supplier using surface water sources must repeat analyses ~~Analyses for the State-only MCLs all CWS suppliers utilizing surface water sources must be repeated~~ at yearly intervals.
- b) A CWS supplier using groundwater sources must repeat analyses ~~Analyses for the State-only MCLs all CWS suppliers utilizing only groundwater sources must be repeated~~ at three-year intervals.

BOARD NOTE: This is an additional State requirement.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.600 Applicability

Certain suppliers ~~The following types of suppliers~~ must monitor ~~conduct monitoring~~ to determine compliance with the State-only ~~old~~ MCLs in Section 611.300 and the revised MCLs in 611.301, as appropriate, as in accordance with ~~this~~ Subpart N requires:

- a) CWS suppliers.

- 15698 b) NTNCWS suppliers.
 15699
 15700 c) Transient non-CWS suppliers to determine compliance with the nitrate and nitrite
 15701 MCLs.
 15702
 15703 d) Detection Limits. ~~Specific The following are~~ detection limits apply for purposes
 15704 ~~of~~ this Subpart N (this list includes MCLs from Section 611.301 are ~~set forth~~ for
 15705 information purposes only):
 15706

Contaminant	MCL (mg/ℓ, except asbestos)	Method	Detection Limit (mg/ℓ)
Antimony	0.006	Atomic absorption – furnace technique	0.003
		Atomic absorption – furnace technique (stabilized temperature)	0.0008 ⁵
		Inductively coupled plasma-mass spectrometry	0.0004
		Atomic absorption – gaseous hydride technique	0.001
Arsenic	0.010	Atomic absorption – furnace technique	0.001
		Atomic absorption – furnace technique (stabilized temperature)	0.00005 ⁶
		Atomic absorption – gaseous hydride technique	0.001
		Inductively coupled plasma-mass spectrometry	0.0014 ⁷
Asbestos	7 MFL ¹	Transmission electron microscopy	0.01 MFL
Barium	2	Atomic absorption – furnace technique	0.002

		Atomic absorption – direct aspiration technique	0.1
		Inductively coupled plasma arc furnace	0.002
		Inductively coupled plasma	0.001
Beryllium	0.004	Atomic absorption – furnace technique	0.0002
		Atomic absorption – furnace technique (stabilized temperature)	0.00002 ⁵
		Inductively coupled plasma ²	0.0003
		Inductively coupled plasma-mass spectrometry	0.0003
Cadmium	0.005	Atomic absorption – furnace technique	0.0001
		Inductively coupled plasma	0.001
Chromium	0.1	Atomic absorption – furnace technique	0.001
		Inductively coupled plasma	0.007
		Inductively coupled plasma	0.001
Cyanide	0.2	Distillation, spectrophotometric ³	0.02
		Automated distillation, spectrophotometric ³	0.005
		Distillation, selective electrode ³	0.05
		Distillation, amenable, spectrophotometric ⁴	0.02
		UV, distillation,	0.0005

		spectrophotometric ⁸	
		Micro distillation, flow injection, spectrophotometric ³	0.0006
		Ligand exchange with amperometry ⁴	0.0005
Mercury	0.002	Manual cold vapor technique	0.0002
		Automated cold vapor technique	0.0002
Nickel	No MCL	Atomic absorption – furnace technique	0.001
		Atomic absorption – furnace technique (stabilized temperature)	0.0006 ⁵
		Inductively coupled plasma ²	0.005
		Inductively coupled plasma-mass spectrometry	0.0005
Nitrate (as N)	10	Manual cadmium reduction	0.01
		Automated hydrazine reduction	0.01
		Automated cadmium reduction	0.05
		Ion-selective electrode	1
		Ion chromatography	0.01
		Capillary ion electrophoresis	0.076
Nitrite (as N)	1	Spectrophotometric	0.01

		Automated cadmium reduction	0.05
		Manual cadmium reduction	0.01
		Ion chromatography	0.004
		Capillary ion electrophoresis	0.103
Selenium	0.05	Atomic absorption – furnace technique	0.002
		Atomic absorption – gaseous hydride technique	0.002
Thallium	0.002	Atomic absorption – furnace technique	0.001
		Atomic absorption – furnace technique (stabilized temperature)	0.0007 ⁵
		Inductively coupled plasma-mass spectrometry	0.0003

Footnotes.

- ¹ "MFL" means millions of fibers per liter less than 10 µm.
- ² Using a 2x preconcentration step as noted in USEPA 200.7 (94). Lower MDLs ~~are possible~~ ~~may be achieved~~ when using a 4x preconcentration.
- ³ Screening method for total cyanides.
- ⁴ Measures "free" cyanides when omitting distillation, digestion, or ligand exchange ~~is omitted~~.
- ⁵ Lower MDLs are ~~possible~~ ~~reported~~ using stabilized temperature graphite furnace atomic absorption.
- ⁶ The MDL ~~reported~~ for USEPA 200.9 (94) (atomic absorption-platform furnace (stabilized temperature)) ~~resulted~~ ~~was determined~~ using a 2x concentration step during sample digestion. The MDL ~~determined for samples analyzed~~ using direct analyses (i.e., no sample digestion) ~~is~~ ~~will be~~ higher. Using multiple depositions, USEPA 200.9 (94) can obtain ~~is capable of obtaining~~ an MDL of 0.0001 mg/l.
- ⁷ Using selective ion monitoring, USEPA 200.8 (94) (ICP-MS) is capable of obtaining an MDL of 0.0001 mg/l.
- ⁸ Measures total cyanides when using UV-digester ~~is used~~, and "free" cyanides when bypassing UV-digester ~~is bypassed~~.

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 15708 BOARD NOTE: Subsections (a) through (c) ~~derive are derived~~ from 40 CFR 141.23 preamble,
 15709 and subsection (d) ~~derives is derived~~ from 40 CFR 141.23 (a)(4)(i) and appendix A to subpart C
 15710 of 40 CFR 141. See the Board Note at Section 611.301(b) relating to the MCL for nickel.

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 15712 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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15714 **Section 611.611 Inorganic Analysis**
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15716 Analytical methods are from documents incorporated by reference in Section 611.102. The
 15717 substantive rules ~~These are~~ mostly reference these refereneed by a short name defined by Section
 15718 611.102(a) defines. Section 611.101 defines other ~~Other abbreviations are defined in Section~~
 15719 ~~611.101~~.

- 15720
 15721 a) A certified laboratory must conduct analyses ~~Analysis for the following~~
 15722 contaminants in this Section must be conducted using the indicated following
 15723 methods or an alternative method the Agency approved under Section 611.480.
 15724 USEPA Technical Notes, incorporated by reference in Section 611.102, includes
 15725 criteria ~~Criteria~~ for analyzing arsenic, barium, beryllium, cadmium, calcium,
 15726 chromium, copper, lead, nickel, selenium, sodium, and thallium with digestion or
 15727 directly without digestion, and other analytical procedures, ~~are contained in~~
 15728 USEPA Technical Notes, incorporated by reference in Section 611.102.
 15729

15730 BOARD NOTE: Because a laboratory determines MDLs it reports under
 15731 reported in USEPA 200.7 (94) and USEPA 200.9 (94) ~~were determined~~ using a
 15732 2× preconcentration step during sample digestion, MDLs the laboratory
 15733 determines analyzing determined when samples ~~are analyzed~~ by direct analysis
 15734 (i.e., no sample digestion) are will be higher. For direct analysis of cadmium and
 15735 arsenic using by USEPA 200.7 (94), and arsenic using by SM 3120 B (89), SM
 15736 3120 B (93), or SM 3120 B (99), it may be necessary to engage in sample
 15737 preconcentration using pneumatic nebulization ~~may be required~~ to achieve lower
 15738 detection limits. Direct Preeonecentration may also be required for direct analysis
 15739 of antimony, lead, and thallium using by USEPA 200.9 (94); antimony and lead
 15740 using by SM 3113 B (89), SM 3113 B (99), or SM 3113 B (10); and lead using by
 15741 ASTM D3559-96 D, ASTM D3559-03 D, ASTM D3559-08 D, or ASTM D3559-
 15742 15 D may require preconcentration, unless the laboratory makes multiple in-
 15743 furnace depositions ~~are made~~.
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- 15745 1) Alkalinity
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- 15747 A) Titrimetric. ASTM D1067-92 B, ASTM D1067-02 B, ASTM
 15748 D1067-06 B, ASTM D1067-11 B, ASTM D1067-16 B, SM 2320
 15749 B (91), or SM 2320 B (97).

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- B) Electrometric Titration. USGS I-1030-85.
- 2) Antimony
 - A) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - B) Atomic Absorption, Hydride Technique. ASTM D3697-92, ASTM D3697-02, ASTM D3697-07, ~~or~~ [ASTM D3697-12](#), ~~or~~ [ASTM D3697-17](#).
 - C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - D) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM 3113 B (10).
 - E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 3) Arsenic

BOARD NOTE: If [the laboratory uses](#) ultrasonic nebulization ~~is used~~ in [determining the determination of](#) arsenic ~~using by~~ USEPA 200.8 (94), the arsenic must be in the pentavalent state to provide uniform signal response. For direct analysis of arsenic with USEPA 200.8 (94) using ultrasonic nebulization, samples and standards must contain one mg/ℓ of sodium hypochlorite.

 - A) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - B) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - C) Atomic Absorption, Furnace Technique. ASTM D2972-97 C, ASTM D2972-03 C, ASTM D2972-08 C, ASTM D2972-15 C, SM 3113 B (89), SM 3113 B (93), 3113 B (99), 3113 B (04), or 3113 B (10).

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- D) Atomic Absorption, Hydride Technique.. ASTM D2972-97 B, ASTM D2972-03 B, ASTM D2972-08 B, ASTM D2972-15 B, SM 3114 B (89), SM 3114 B (93), SM 3114 B (97), SM 3114 B (04), or SM 3114 B (09).
- E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (94).
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- 4) Asbestos. Transmission Electron Microscopy. USEPA 100.1 (83) or USEPA 100.2 (94).
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- 5) Barium
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- A) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83), SM 3120 B (93), or SM 3120 B (99).
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- B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
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- C) Atomic Absorption, Direct Aspiration Technique. SM 3111 D (89), SM 3111 D (93), or SM 3111 D (99).
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- D) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), and SM 3113 B (10).
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- E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
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- 6) Beryllium
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- A) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83), SM 3120 B (93), or SM 3120 B (99).
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- B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
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- C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
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- D) Atomic Absorption, Furnace Technique. ASTM D3645-97 B, ASTM D3645-03 B, ASTM D3645-08 B, ASTM D3645-15 B, SM

- 15834 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04),
15835 or SM 3113 B (10).
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15837 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
15838 Spectrometry (AVICP-AES). USEPA 200.5 (03).
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15840 7) Cadmium
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15842 A) Inductively Coupled Plasma Arc Furnace. USEPA 200.7 (94).
15843
15844 B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
15845 (94).
15846
15847 C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
15848 (94).
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15850 D) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM
15851 3113 B (93), SM 3113 B (99), SM 3113 B (04), and SM 3113 B
15852 (10).
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15854 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
15855 Spectrometry (AVICP-AES). USEPA 200.5 (03).
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15857 8) Calcium
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15859 A) EDTA Titrimetric. ASTM D511-93 A, ASTM D511-03 A, ASTM
15860 D511-09 A, ASTM D511-14 A, SM 3500-Ca B (97), or 3500-Ca
15861 D (91).
15862
15863 B) Atomic Absorption, Direct Aspiration. ASTM D511-93 B, ASTM
15864 D511-03 B, ASTM D511-09 B, ASTM D511-14 B, SM 3111 B
15865 (89), SM 3111 B (93), or SM 3111 B (99).
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15867 C) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83),
15868 SM 3120 B (93), or SM 3120 B (99).
15869
15870 D) Ion Chromatography. ASTM D6919-03, ~~or~~ ASTM D6919-09, or
15871 ASTM D 6919-17.
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15873 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
15874 Spectrometry (AVICP-AES). USEPA 200.5 (03).
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15876 9) Chromium

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- A) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83), SM 3120 B (93), or SM 3120 B (99).
 - B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - D) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), and SM 3113 B (10).
 - E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 10) Copper
- A) Atomic Absorption, Furnace Technique. ASTM D1688-95 C, ASTM D1688-02 C, ASTM D1688-07 C, ASTM D1688-12 C, [ASTM D1688-17 C](#), SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), and SM 3113 B (10).
 - B) Atomic Absorption, Direct Aspiration. ASTM D1688-95 A, ASTM D1688-02 A, ASTM D1688-07 A, ASTM D1688-12 A, [ASTM D1688-17 A](#), SM 3111 B (89), SM 3111 B (93), or SM 3111 B (99).
 - C) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83), SM 3120 B (93), or SM 3120 B (99).
 - D) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - E) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - F) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
 - G) Colorimetric. Hach 8026 (15) or Hach 10272 (15).

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- 11) Conductivity; Conductance. ASTM D1125-95 (1999) A, ASTM D1125-14 A, SM 2510 B (91), or SM 2510 B (97).
 - 12) Cyanide
 - A) Manual Distillation with MgCl₂. (ASTM D2036-98 A, ASTM D2036-06 A, SM 4500-CN⁻ C (90), SM 4500-CN⁻ C (97), SM 4500-CN⁻ C (99), or SM 4500-CN⁻ C (16)), followed by spectrophotometric, amenable (ASTM D2036-98 B, ASTM D2036-06 B, SM 4500-CN⁻ G (90), SM 4500-CN⁻ G (97), SM 4500-CN⁻ G (99), or SM 4500-CN⁻ G (16)).
 - B) Manual Distillation with MgCl₂. Distillation (ASTM D2036-98 A or ASTM D2036-06 A or SM 4500-CN⁻ C (90), SM 4500-CN⁻ C (97), SM 4500-CN⁻ C (99), or SM 4500-CN⁻ C (16)), followed by Spectrophotometric, Manual (ASTM D2036-98 A, ASTM D2036-06 A, SM 4500-CN⁻ E (90), 4500-CN⁻ E (97), 4500-CN⁻ E (99), 4500-CN⁻ E (16), or USGS I-3300-85).
 - C) Spectrophotometric, Semiautomated. USEPA 335.4 (93).
 - D) Selective Electrode. SM 4500-CN⁻ F (90), SM 4500-CN⁻ F (97), SM 4500-CN⁻ F (99), or SM 4500-CN⁻ F (16).
 - E) UV/Distillation/Spectrophotometric. Kelada 01 (01).
 - F) Microdistillation/Flow Injection/Spectrophotometric. QuikChem 10-204-00-1-X (00).
 - G) Ligand Exchange and Amperometry. ASTM D6888-04 or OIA-1677 DW (04).
 - H) Gas Chromatography-Mass Spectrometry Headspace. ME355.01 (09).
 - 13) Fluoride
 - A) Ion Chromatography. USEPA 300.0 (93), USEPA 300.1 (97), ASTM D4327-97, ASTM D4327-03, ASTM D4327-11, [ASTM D4327-17](#), SM 4110 B (90), SM 4110 B (91), SM 4110 B (97), or SM 4110 B (00).

- 15962 B) Manual Distillation, Colorimetric SPADNS. SM 4500-F⁻ B (88),
- 15963 SM 4500-F⁻ B (94), SM 4500-F⁻ B (97), SM 4500-F⁻, D (88), SM
- 15964 4500-F⁻ B (94), or SM 4500-F⁻ B (97).
- 15965
- 15966 C) Manual Electrode. ASTM D1179-93 B, ASTM D1179-99 B,
- 15967 ASTM D1179-04 B, ASTM D1179-10 B, ASTM D1179-16 B, SM
- 15968 4500-F⁻ C (88), SM 4500-F⁻ C (94), or SM 4500-F⁻ C (97).
- 15969
- 15970 D) Automated Electrode. Technicon # 380-75WE (76).
- 15971
- 15972 E) Automated Alizarin. SM 4500-F⁻ E (88), SM 4500-F⁻ E (94), SM
- 15973 4500-F⁻ E (97), or Technicon #129-71W.
- 15974
- 15975 F) Arsenite-Free Colorimetric SPADNS. Hach 10225 (11) (SPADNS
- 15976 2).
- 15977
- 15978 G) Capillary Ion Electrophoresis. ASTM D6508-00.
- 15979

15980 BOARD NOTE: On March 12, 2007 (at 72 Fed. Reg. 11200),

15981 USEPA amended the entry for fluoride to add capillary ion

15982 electrophoresis in the table at corresponding 40 CFR 141.23(k)(1)

15983 to allow the use of "Waters Method D6508, Rev. 2". The Board

15984 ~~has~~ cited ~~to~~ the ASTM Method D6508-00 (2005). On May 2, 2012

15985 [\(at 77 Fed. Reg. 26072, 26096-97; in corrections to UCMR 3\)](#),

15986 USEPA changed the entries for nitrate, nitrite, and orthophosphate

15987 to ASTM D6508-00.

15988

15989 14) Lead

15990

- 15991 A) Atomic Absorption, Furnace Technique. ASTM D3559-96 D,
- 15992 ASTM D3559-03 D, ASTM D3559-08 D, ASTM D3559-15 D,
- 15993 SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B
- 15994 (04), or SM 3113 B (10).
- 15995
- 15996 B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
- 15997 (94).
- 15998
- 15999 C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
- 16000 (94).
- 16001
- 16002 D) Differential Pulse Anodic Stripping Voltammetry. Palintest 1001
- 16003 (99).
- 16004

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- E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
 - F) [Differential Pulse Anode Stripping Voltametry. Palintest 1001 \(20\).](#)
- 15) Magnesium
- A) Atomic Absorption. ASTM D511-93 B, ASTM D511-03 B, ASTM D511-09 B, ASTM D511-14 B, SM 3111 B (89), SM 3111 B (93), or SM 3111 B (99).
 - B) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (89), SM 3120 B (93), or SM 3120 B (99).
 - C) Complexation Titrimetric. ASTM D511-93 A, ASTM D511-03 A, ASTM D511-09 A, ASTM D511-14 A, SM 3500-Mg B (97), SM 3500-Mg E (90), or SM 3500-Mg E (91).
 - D) Ion Chromatography. ASTM D6919-03, ~~or~~ ASTM D6919-09, [or ASTM D6919-17.](#)
 - E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 16) Mercury
- A) Manual Cold Vapor Technique. ASTM D3223-97, ASTM D3223-02, ASTM D3223-12, [ASTM D3223-17](#), SM 3112 B (88), SM 3112 B (93), SM 3112 B (99), SM 3112 B (09), or USEPA 245.1 (91).
 - B) Automated Cold Vapor Technique. USEPA 245.2 (74).
 - C) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
- 17) Nickel
- A) Inductively Coupled Plasma. SM 3120 B (89), SM 3120 B (93), SM 3120 B (99), or USEPA 200.7 (94).

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- B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - D) Atomic Absorption, Direct Aspiration Technique. SM 3111 B (89), 3111 B (93), or 3111 B (99).
 - E) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM 3113 B (10).
 - F) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 18) Nitrate
- A) Ion Chromatography. ASTM D4327-97, ASTM D4327-03, ASTM D4327-11, [ASTM D4327-17](#), SM 4110 B (90), SM 4110 B (97), SM 4110 B (00), ~~or~~ USEPA 300.0 (93), USEPA 300.1 (97), or Waters B-1011 (87).
 - B) Automated Cadmium Reduction. ASTM D3867-90 A; SM 4500-NO₃⁻ F (88), 4500-NO₃⁻ F (93), 4500-NO₃⁻ F (97), 4500-NO₃⁻ F (00), 4500-NO₃⁻ F (16), or USEPA 353.2 (93).
 - C) Ion Selective Electrode. ATI Orion Technical Bulletin 601 (94), SM 4500-NO₃⁻ D (88), SM 4500-NO₃⁻ D (93), SM 4500-NO₃⁻ D (97), SM 4500-NO₃⁻ D (00), or SM 4500-NO₃⁻ D (16).
 - D) Manual Cadmium Reduction. ASTM D3867-90 B, SM 4500-NO₃⁻ E (88), SM 4500-NO₃⁻ E (93), SM 4500-NO₃⁻ E (97), SM 4500-NO₃⁻ E (00), or SM 4500-NO₃⁻ E (16).
 - E) Capillary Ion Electrophoresis. ASTM D6508-00 or ASTM D6508-15.
 - F) Reduction-Colorimetric. Systea Easy (1-Reagent) (09) or NECi Nitrate-Reductase (06).
 - G) Direct Colorimetric. Hach 10206 (TNTplus 835/836).

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- 19) Nitrite
- A) Ion Chromatography. ASTM D4327-97, ASTM D4327-03, ASTM D4327-11, [ASTM D4327-17](#), SM 4110 B (90), SM 4110 B (97), ~~or~~ SM 4110 B (00), USEPA 300.0 (93), USEPA 300.1 (97), or Waters B-1011 (87).
 - B) Automated Cadmium Reduction. ASTM D3867-90 A, SM 4500-NO₃⁻ F (93), 4500-NO₃⁻ F (97), 4500-NO₃⁻ F (00), 4500-NO₃⁻ F (16), or USEPA 353.2 (93).
 - C) Manual Cadmium Reduction. ASTM D3867-90 B, SM 4500-NO₃⁻ E (93), 4500-NO₃⁻ E (97), 4500-NO₃⁻ E (00), or 4500-NO₃⁻ E (16).
 - D) Spectrophotometric. SM 4500-NO₂⁻ B (88), 4500-NO₂⁻ B (93), or 4500-NO₂⁻ B (00).
 - E) Capillary Ion Electrophoresis. ASTM D6508-00 or ASTM D6508-15.
 - F) Reduction-Colorimetric. Systea Easy (1-Reagent) (09) or NECi Nitrate-Reductase (06).
- 20) Orthophosphate (unfiltered, without digestion or hydrolysis)
- A) Automated Colorimetric, Ascorbic Acid. SM 4500-P F (88), SM 4500-P F (93), SM 4500-P F (97), SM 4500-P F (99), SM 4500-P F (05), Thermo-Fisher Discrete Analyzer (16), or USEPA 365.1 (93).
 - B) Single-Reagent Colorimetric, Ascorbic Acid. ASTM D515-88 A, SM 4500-P E (88), 4500-P E (93), 4500-P E (97), or 4500-P E (99), or 4500-P E (05).
 - C) Colorimetric, Phosphomolybdate. USGS I-1601-85.
 - D) Phosphorus, Orthophosphate, Colorimetry, Phosphomolybdate, Automated-Segmented Flow. USGS I-2601-90.
 - E) Colorimetric, Phosphomolybdate, Automated Discrete. USGS I-2598-85.

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- F) Ion Chromatography. ASTM D4327-97, ASTM D4327-03, ASTM D4327-11, [ASTM D4327-17](#), SM 4110 B (90), SM 4110 B (91), SM 4110 B (97), SM 4110 B (00), USEPA 300.0 (93), or USEPA 300.1 (97).
 - G) Capillary Ion Electrophoresis. ASTM D6508-00 or ASTM D6508-15.
- 21) pH, Electrometric. ASTM D1293-95, ASTM D1293-99, ASTM D1293-12, [ASTM D1293-18](#), SM 4500-H⁺ B (90), SM 4500-H⁺ B (96), SM 4500-H⁺ B (00), USEPA 150.1 (71), USEPA 150.2 (82), or USEPA 150.3 (13).
- 22) Selenium
- A) Atomic Absorption, Hydride. ASTM D3859-98 A, ASTM D3859-03 A, ASTM D3859-08 A, ASTM D3859-15 A, SM 3114 B (89), SM 3114 (93), SM 3114 (97), or SM 3114 (09).
 - B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - D) Atomic Absorption, Furnace Technique. ASTM D3859-98 B, ASTM D3859-03 B, ASTM D3859-08 B, ASTM D3859-15 B, SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM 3113 B (10).
 - E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 23) Silica
- A) Colorimetric, Molybdate Blue. USGS I-1700-85.
 - B) Colorimetric, Molybdate Blue, Automated-Segmented Flow. USGS I-2700-85.
 - C) Colorimetric. ASTM D859-94, ASTM D859-00, ASTM D859-05, ASTM D859-10, or ASTM D859-16.

- 16176 D) Molybdsilicate. SM 4500-Si D (88), SM 4500-Si D (93), or SM
16177 4500-SiO₂ C (97).
16178
16179 E) Heteropoly Blue. SM 4500-Si E (88), SM 4500-Si E (93), or SM
16180 4500-SiO₂ D (97).
16181
16182 F) Automated Method for Molybdate-Reactive Silica. SM 4500-Si F
16183 (88), SM 4500-Si F (93), or SM 4500-SiO₂ E (97).
16184
16185 G) Inductively Coupled Plasma. SM 3120 B (89), SM 3120 B (93),
16186 SM 3120 B (99), or USEPA 200.7 (94).
16187
16188 H) Axially Viewed Inductively Coupled Plasma-Atomic Emission
16189 Spectrometry (AVICP-AES). USEPA 200.5 (03).
16190
16191 24) Sodium
16192
16193 A) Inductively Coupled Plasma. USEPA 200.7 (94).
16194
16195 B) Atomic Absorption, Direct Aspiration. SM 3111 B (89), SM 3111
16196 B (93), or SM 3111 B (99).
16197
16198 C) Ion Chromatography. ASTM D6919-03, ~~or~~ ASTM D6919-09, or
16199 ASTM D6919-17.
16200
16201 D) Axially Viewed Inductively Coupled Plasma-Atomic Emission
16202 Spectrometry (AVICP-AES). USEPA 200.5 (03).
16203
16204 25) Temperature; Thermometric. SM 2550 (88), SM 2550 (93), SM 2550
16205 (00), or SM 2550 (10).
16206
16207 26) Thallium
16208
16209 A) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
16210 (94).
16211
16212 B) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
16213 (94).
16214
16215 b) The supplier must use specific sample preservation, container, and maximum
16216 holding time procedures when collecting samples ~~Sample collection~~ for antimony,
16217 arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride,
16218 mercury, nickel, nitrate, nitrite, selenium, and thallium under Sections 611.600

through 611.604 ~~must be conducted using the following sample preservation, container, and maximum holding time procedures:~~

BOARD NOTE: For cyanide determinations, ~~the supplier must adjust samples to pH 12 must be adjusted~~ with sodium hydroxide to pH 12 ~~when collecting them at the time of collection.~~ When ~~a sample needs~~ chilling, ~~the supplier must ship and store is indicated~~ the sample ~~must be shipped and stored~~ at 4° C or less. ~~The supplier may acidify~~ ~~Acidification of~~ nitrate or metals samples ~~using may be with~~ a concentrated acid or a dilute (50% by volume) solution of the ~~applicable~~ concentrated acid. ~~USEPA encourages acidifying~~ ~~Acidification of~~ samples for metals analysis ~~is encouraged~~ and ~~that allowed at~~ the laboratory ~~acidify,~~ rather than at the time of sampling, provided ~~the supplier follows~~ the shipping time and other instructions in Section 8.3 of USEPA 200.7 (94), USEPA 200.8 (94), or USEPA 200.9 (94) ~~are followed.~~

- 1) Antimony
 - A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.

- 2) Arsenic
 - A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.

- 3) Asbestos
 - A) Preservative: Cool to 4° C.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within 48 hours.

- 4) Barium

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- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 5) Beryllium
- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 6) Cadmium
- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 7) Chromium
- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 8) Cyanide
- A) Preservative: Cool to 4° C. Add sodium hydroxide to pH greater than 12. See the analytical methods for information on sample preservation.
 - B) Plastic or glass (hard or soft).

- 16305 C) Holding Time. Samples must be analyzed as soon after collection
16306 as possible, but in any event within 14 days.
16307
- 16308 9) Fluoride
16309
- 16310 A) Preservative: None.
16311
- 16312 B) Plastic or glass (hard or soft).
16313
- 16314 C) Holding Time. Samples must be analyzed as soon after collection
16315 as possible, but in any event within one month.
16316
- 16317 10) Mercury
16318
- 16319 A) Preservative: Concentrated nitric acid to pH less than 2.
16320
- 16321 B) Plastic or glass (hard or soft).
16322
- 16323 C) Holding Time. Samples must be analyzed as soon after collection
16324 as possible, but in any event within 28 days.
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- 16326 11) Nickel
16327
- 16328 A) Preservative: Concentrated nitric acid to pH less than 2.
16329
- 16330 B) Plastic or glass (hard or soft).
16331
- 16332 C) Holding Time. Samples must be analyzed as soon after collection
16333 as possible, but in any event within six months.
16334
- 16335 12) Nitrate, Chlorinated
16336
- 16337 A) Preservative: Cool to 4° C.
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- 16339 B) Plastic or glass (hard or soft).
16340
- 16341 C) Holding Time. Samples must be analyzed as soon after collection
16342 as possible, but in any event within 14 days.
16343
- 16344 13) Nitrate, Non-Chlorinated
16345
- 16346 A) Preservative: Concentrated sulfuric acid to pH less than 2.
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- 16348 B) Plastic or glass (hard or soft).
16349
16350 C) Holding Time. Samples must be analyzed as soon after collection
16351 as possible, but in any event within 14 days.
16352
16353 14) Nitrite
16354
16355 A) Preservative: Cool to 4° C.
16356
16357 B) Plastic or glass (hard or soft).
16358
16359 C) Holding Time. Samples must be analyzed as soon after collection
16360 as possible, but in any event within 48 hours.
16361
16362 15) Selenium
16363
16364 A) Preservative: Concentrated nitric acid to pH less than 2.
16365
16366 B) Plastic or glass (hard or soft).
16367
16368 C) Holding Time. Samples must be analyzed as soon after collection
16369 as possible, but in any event within six months.
16370
16371 16) Thallium
16372
16373 A) Preservative: Concentrated nitric acid to pH less than 2.
16374
16375 B) Plastic or glass (hard or soft).
16376
16377 C) Holding Time. Samples must be analyzed as soon after collection
16378 as possible, but in any event within six months.
16379
16380 c) A certified laboratory in one of the categories in Section 611.490(a) must conduct
16381 analyses ~~Analyses~~ under this Subpart N ~~must be conducted by a certified~~
16382 ~~laboratory in one of the categories listed in Section 611.490(a).~~ The Agency must
16383 certify laboratories to conduct analyses for antimony, arsenic, asbestos, barium,
16384 beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate, nitrite,
16385 selenium, and thallium if the laboratory fulfills certain conditions ~~does as follows~~:
16386
16387 1) The laboratory ~~It~~ analyzes performance evaluation (PE) samples, ~~provided~~
16388 ~~by~~ the Agency provides under 35 Ill. Adm. Code 186, including that
16389 ~~include~~ those substances at levels not exceeding reasonably in excess of
16390 ~~levels~~ expected levels in drinking water; and

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- 2) The laboratory ~~It~~ achieves quantitative results on the analyses within specified ~~the following~~ acceptance limits:
- A) Antimony: $\pm 30\%$ at greater than or equal to 0.006 mg/l.
 - B) Arsenic: $\pm 30\%$ at greater than or equal to 0.003 mg/l.
 - C) Asbestos: 2 standard deviations based on study statistics.
 - D) Barium: $\pm 15\%$ at greater than or equal to 0.15 mg/l.
 - E) Beryllium: $\pm 15\%$ at greater than or equal to 0.001 mg/l.
 - F) Cadmium: $\pm 20\%$ at greater than or equal to 0.002 mg/l.
 - G) Chromium: $\pm 15\%$ at greater than or equal to 0.01 mg/l.
 - H) Cyanide: $\pm 25\%$ at greater than or equal to 0.1 mg/l.
 - I) Fluoride: $\pm 10\%$ at 1 to 10 mg/l.
 - J) Mercury: $\pm 30\%$ at greater than or equal to 0.0005 mg/l.
 - K) Nickel: $\pm 15\%$ at greater than or equal to 0.01 mg/l.
 - L) Nitrate: $\pm 10\%$ at greater than or equal to 0.4 mg/l.
 - M) Nitrite: $\pm 15\%$ at greater than or equal to 0.4 mg/l.
 - N) Selenium: $\pm 20\%$ at greater than or equal to 0.01 mg/l.
 - O) Thallium: $\pm 30\%$ at greater than or equal to 0.002 mg/l.

16425 BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.23(k) and appendix A to
 16426 subpart C of 40 CFR 141. The Board did has not separately list listed the following approved
 16427 alternative methods from Standard Methods Online that are the same version as a method
 16428 appearing that appears in a printed edition of Standard Methods. Using Use of the Standard
 16429 Methods Online copy is acceptable.

16430
 16431 Standard Methods Online, Method 2320 B-97 appears in the 21st, 22nd, and 23rd editions
 16432 as Method 2320 B. This In this Section, this appears in this Section as SM 2320 B (97).
 16433

16434 Standard Methods Online, Method 2510 B-97 appears in the 20th, 21st, 22nd, and 23rd
 16435 editions as Method 2510 B. ~~This In this Section, this~~ appears [in this Section](#) as SM 2510
 16436 B (97).

16437
 16438 Standard Methods Online, Method 2550-00 appears in the 21st edition as Method 2550.
 16439 ~~This In this Section, this~~ appears [in this Section](#) as SM 2550 (00).

16440
 16441 Standard Methods Online, Method 2550-10 appears in the 22nd edition as Method 2550.
 16442 ~~This In this Section, this~~ appears [in this Section](#) as SM 2550 (10).

16443
 16444 Standard Methods Online, Methods 3111 B-99 and 3111 D-99 appear in the 21st, 22nd,
 16445 and 23rd editions as Methods 3111 B and 3111 D. ~~These In this Section, these~~ appear [in](#)
 16446 [this Section](#) as SM 3111 B (99) and SM 3111 D (99).

16447
 16448 Standard Methods Online, Method 3112 B-09 appears in the 22nd and 23rd editions as
 16449 Method 3112 B. ~~This In this Section, this~~ appears [in this Section](#) as SM 3112 B (09).

16450
 16451 Standard Methods Online, Method 3113 B-99 appears in the 21st edition as Method 3113
 16452 B. ~~This In this Section, this~~ appears [in this Section](#) as SM 3113 B (99).

16453
 16454 Standard Methods Online, Method 3113 B-10 appears in the 22nd and 23rd editions as
 16455 Method 3113 B. ~~This In this Section, this~~ appears [in this Section](#) as SM 3113 B (10).

16456
 16457 Standard Methods Online, Method 3114 B-97 appears in the 21st edition as Method 3114
 16458 B. ~~This In this Section, this~~ appears [in this Section](#) as SM 3114 B (97).

16459
 16460 Standard Methods Online, Method 3114 B-09 appears in the 22nd and 23rd editions as
 16461 Method 3114 B. ~~This In this Section, this~~ appears [in this Section](#) as SM 3114 B (09).

16462
 16463 Standard Methods Online, Method 3120 B-99 appears in the 21st edition as Method 3120
 16464 B. ~~This In this Section, this~~ appears [in this Section](#) as SM 3120 B (99).

16465
 16466 Standard Methods Online, Methods 3500-Ca B-97 and 3500-Ca D-97 appear in the 20th,
 16467 21st, 22nd, and 23rd editions as Methods 3500-Ca B and 3500-Ca D. ~~These In this Section,~~
 16468 ~~these~~ appear [in this Section](#) as SM 3500-Ca B (97) and SM 3500-Ca D (97).

16469
 16470 Standard Methods Online, Method 3500-Mg B-97 appears in the 20th, 21st, 22nd, and 23rd
 16471 editions as Method 3500-Mg B. ~~This In this Section, this~~ appears [in this Section](#) as SM
 16472 3500-Mg B (97).

16473
 16474 Standard Methods Online, Method 4110 B-00 appears in the 21st, 22nd, and 23rd editions
 16475 as Method 4110 B. ~~This In this Section, this~~ appears [in this Section](#) as SM 4110 B (00).

16476

16477 Standard Methods Online, Methods 4500-CN⁻ C-90, 4500-CN⁻ E-90, 4500-CN⁻ F-90,
 16478 and 4500-CN⁻ G-90 appear in the 18th and 19th editions as Methods 4500-CN⁻ C, 4500-
 16479 CN⁻ E, 4500-CN⁻ F, and 4500-CN⁻ G. ~~These In this Section, these~~ appear [in this Section](#)
 16480 as SM 4500-CN⁻ C (90), SM 4500-CN⁻ E (90), SM 4500-CN⁻ F (90), and SM 4500-CN⁻
 16481 G (90).

16482
 16483 Standard Methods Online, Methods 4500-CN⁻ C-99, 4500-CN⁻ E-99, 4500-CN⁻ F-99,
 16484 and 4500-CN⁻ G-99 appear in the 21st and 22nd editions as Methods 4500-CN⁻ C, 4500-
 16485 CN⁻ E, 4500-CN⁻ F, and 4500-CN⁻ G. ~~These In this Section, these~~ appear [in this Section](#)
 16486 as SM 4500-CN⁻ C (99), SM 4500-CN⁻ E (99), SM 4500-CN⁻ F (99), and SM 4500-CN⁻
 16487 G (99).

16488
 16489 Standard Methods Online, Methods 4500-F⁻ B-97, 4500-F⁻ C-97, 4500-F⁻ D-97, and
 16490 4500-F⁻ E-97 appear in the 20th, 21st, 22nd, and 23rd editions as Methods 4500-F⁻ B, 4500-
 16491 F⁻ C, 4500-F⁻ D, and 4500-F⁻ E. ~~These In this Section, these~~ appear [in this Section](#) as
 16492 SM 4500-F⁻ B (97), SM 4500-F⁻ C (97), SM 4500-F⁻ D (97), and SM 4500-F⁻ E (97).

16493
 16494 Standard Methods Online, Methods 4500-NO₃⁻ D-00, 4500-NO₃⁻ E-00, and 4500-NO₃⁻
 16495 F-00 appear in the 21st, 22nd, and 23rd editions as Methods 4500-NO₃⁻ D, 4500-NO₃⁻ E,
 16496 and 4500-NO₃⁻ F. ~~These In this Section, these~~ appear [in this Section](#) as SM 4500-NO₃⁻ D
 16497 (00), SM 4500-NO₃⁻ E (00), and SM 4500-NO₃⁻ F (00).

16498
 16499 Standard Methods Online, Methods 4500-NO₂⁻ B-00 appears in the 21st, 22nd, and 23rd
 16500 editions as Method 4500-NO₂⁻ B. ~~This In this Section, this~~ appears [in this Section](#) as SM
 16501 4500-NO₂⁻ B (00).

16502
 16503 Standard Methods Online, Method 4500-H⁺ B-90 appears in the 18th and 19th editions as
 16504 Method 4500-H⁺ B. ~~This In this Section, this~~ appears [in this Section](#) as SM 4500-H⁺ B
 16505 (90).

16506
 16507 Standard Methods Online, Method 4500-H⁺ B-00 appears in the 21st, 22nd, and 23rd
 16508 editions as Method 4500-H⁺ B. ~~This In this Section, this~~ appears [in this Section](#) as SM
 16509 4500-H⁺ B (00).

16510
 16511 Standard Methods Online, Methods 4500-P E-99 and 4500-P F-99 appear in the 21st and
 16512 22nd editions as Methods 4500-P E and 4500-P F. ~~These In this Section, these~~ appear [in](#)
 16513 [this Section](#) as SM 4500-P E (97) and SM 4500-P F (97).

16514
 16515 Standard Methods Online, Methods 4500-SiO₂ C-97, 4500-SiO₂ D-97, and 4500-SiO₂ E-
 16516 97 appear in the 20th, 21st, 22nd, and 23rd editions as Methods 4500-SiO₂ C, 4500-SiO₂ D,
 16517 and 4500-SiO₂ E. ~~These In this Section, these~~ appear [in this Section](#) as SM 4500-SiO₂ C
 16518 (97), SM 4500-SiO₂ D (97), and SM 4500-SiO₂ E (97).

16519

Standard Methods Online, Method 6251 B-07 appears in the 22nd and 23rd editions as Method 6251 B. ~~This In this Section, this~~ appears in this Section as SM 6251 B (07).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART O: ORGANIC MONITORING AND ANALYTICAL REQUIREMENTS

Section 611.641 State-Only Old MCLs

- a) An analysis of substances for the purpose of determining compliance with the State-only old MCLs of Section 611.310 must be made as follows:
 - 1) The Agency must issue a, by SEP requiring, require CWS suppliers utilizing surface water sources to collect samples during the period of the year when contamination by pesticides is most likely to occur. The Agency must require the supplier to repeat these analyses at least annually.
 - 2) The Agency must issue a, by SEP requiring C2WS, require CWS suppliers utilizing only groundwater sources to collect samples at least once every three years.
- b) If the result of an analysis made under pursuant to subsection (a) indicates that the level of any contaminant exceeds its State-only old MCL, the CWS supplier must report to the Agency within seven days and initiate three additional analyses within one month.
- c) When the average of four analyses made under pursuant to subsection (a), rounded to the same number of significant figures as the MCL for the substance in question, exceeds the State-only old MCL, the CWS supplier must report to the Agency and give notice to the public under pursuant to Subpart T of this Part. Monitoring after public notification must be at a frequency designated by the Agency and must continue until the MCL has not been exceeded in two successive samples or until a monitoring schedule as a condition to a variance, adjusted standard, or enforcement action becomes effective.
- d) Analysis made to determine compliance with the State-only old MCLs of Section 611.310 must be made in accordance with the appropriate methods specified in Section 611.645.

BOARD NOTE: This provision now applies only to State-only MCLs. This Section originally ~~It was formerly~~ derived from 40 CFR 141.24(a) through (e), which USEPA removed and reserved.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.645 Analytical Methods for Organic Chemical Contaminants

~~The laboratory must analyze Analysis~~ for the Section 611.311(a) VOCs under Section 611.646, the Section 611.311(c) SOCs under Section 611.648, the Section 611.310 ~~State-only~~ ~~old~~ MCLs under Section 611.641, and ~~for~~ the Section 611.312 MCL for TTHMs under Section 611.381 ~~must be conducted~~ using the methods ~~listed~~ in this Section. All methods are incorporated by reference in Section 611.102. USEPA Technical Notes, incorporated by reference in Section 611.102, contains other ~~Other~~ required analytical test procedures germane to conducting the ~~conduct of~~ these analyses ~~are contained in the USEPA Technical Notes, incorporated by reference in Section 611.102.~~

- a) Volatile Organic Chemical Contaminants (VOCs)
 - 1) Benzene
 - A) Purge and Trap Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
 - 2) Carbon tetrachloride
 - A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
 - C) Liquid-Liquid Extraction and Gas Chromatography. USEPA 551.1 (95).
 - 3) Chlorobenzene
 - A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
 - 4) 1,2-Dichlorobenzene

- 16606 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16607 502.2 (95).
 16608
- 16609 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16610 524.2 (95), 524.3 (09), or 524.4 (13).
 16611
- 16612 5) 1,4-Dichlorobenzene
 16613
- 16614 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16615 502.2 (95).
 16616
- 16617 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16618 524.2 (95), 524.3 (09), or 524.4 (13).
 16619
- 16620 6) 1,2-Dichloroethane
 16621
- 16622 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16623 502.2 (95).
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- 16625 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16626 524.2 (95), 524.3 (09), or 524.4 (13).
 16627
- 16628 7) 1,1-Dichloroethylene
 16629
- 16630 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16631 502.2 (95).
 16632
- 16633 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16634 524.2 (95), 524.3 (09), or 524.4 (13).
 16635
- 16636 8) cis-Dichloroethylene
 16637
- 16638 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16639 502.2 (95).
 16640
- 16641 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16642 524.2 (95), 524.3 (09), or 524.4 (13).
 16643
- 16644 9) trans-Dichloroethylene
 16645
- 16646 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16647 502.2 (95).
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- B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
- 10) Dichloromethane
- A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
- 11) 1,2-Dichloropropane
- A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
- 12) Ethylbenzene
- A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
- 13) Styrene
- A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95)
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
- 14) Tetrachloroethylene
- A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).

- 16692 C) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 16693 551.1 (95).
 16694
 16695 15) Toluene
 16696
 16697 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16698 502.2 (95).
 16699
 16700 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16701 524.2 (95), 524.3 (09), or 524.4 (13).
 16702
 16703 16) 1,2,4-Trichlorobenzene
 16704
 16705 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16706 502.2 (95).
 16707
 16708 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16709 524.2 (95), 524.3 (09), or 524.4 (13).
 16710
 16711 17) 1,1,1-Trichloroethane
 16712
 16713 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16714 502.2 (95).
 16715
 16716 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16717 524.2 (95), 524.3 (09), or 524.4 (13).
 16718
 16719 C) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 16720 551.1 (95).
 16721
 16722 18) 1,1,2-Trichloroethane
 16723
 16724 A) Purge and Trap Capillary Column Gas Chromatography. USEPA
 16725 502.2 (95).
 16726
 16727 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
 16728 524.2 (95), 524.3 (09), or 524.4 (13).
 16729
 16730 C) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 16731 551.1 (95).
 16732
 16733 19) Trichloroethylene
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- A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
 - C) Liquid-Liquid Extraction and Gas Chromatography. USEPA 551.1 (95).
- 20) Vinyl chloride
- A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
- 21) Xylenes (total)
- A) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2 (95), 524.3 (09), or 524.4 (13).
- b) Synthetic Organic Chemical Contaminants (SOCs)
- 1) 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD or Dioxin). Isotope Dilution High Resolution Gas Chromatography-High Resolution Mass Spectrometry. USEPA 1613 (94).
 - 2) 2,4-D
 - A) Gas Chromatography with Electron Capture Detector. ASTM D5317-93, ASTM D5317-98(2003), SM 6640 B (01), or SM 6640 B (06).
 - B) Liquid-Liquid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.1 (89) or USEPA 515.3 (96).
 - C) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.2 (95).

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- D) Liquid-Liquid Microextraction, Derivatization, and Fast Gas Chromatography with Electron Capture Detector. USEPA 515.4 (00).
 - E) High Performance Liquid Chromatography with Photodiode Array Ultraviolet Detector. USEPA 555 (92).
- 3) 2,4,5-TP (Silvex)
- A) Gas Chromatography with Electron Capture Detector. ASTM D5317-93, ASTM D5317-98(2003), SM 6640 B (01), or SM 6640 B (06).
 - B) Liquid-Liquid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.1 (89) or USEPA 515.3 (96).
 - C) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.2 (95).
 - D) Liquid-Liquid Microextraction, Derivatization, and Fast Gas Chromatography with Electron Capture Detector. USEPA 515.4 (00).
 - E) High Performance Liquid Chromatography with Photodiode Array Ultraviolet Detector. USEPA 555 (92).
- 4) Alachlor
- A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 - B) Gas Chromatography with Nitrogen-Phosphorus Detector. USEPA 507 (95).
 - C) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 508.1 (95).
 - D) Liquid-Solid Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 - E) Solid Phase Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.3 (12).

- 16821 F) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 16822 551.1 (95).
 16823
 16824 5) Atrazine
 16825
 16826 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 16827
 16828 B) Gas Chromatography with Nitrogen-Phosphorus Detector.
 16829 USEPA 507 (95).
 16830
 16831 C) Liquid-Solid Extraction Gas Chromatography with Electron
 16832 Capture Detector. USEPA 508.1 (95).
 16833
 16834 D) Liquid-Solid Extraction Gas Chromatography with Electron
 16835 Capture Detector. USEPA 523 (11).
 16836
 16837 E) Liquid-Solid Extraction and Capillary Column Gas
 16838 Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 16839
 16840 F) Solid Phase Extraction and Capillary Column Gas
 16841 Chromatography-Mass Spectrometry. USEPA 525.3 (12).
 16842
 16843 G) Liquid Chromatography Electrospray Ionization Tandem Mass
 16844 Spectrometry. USEPA 536 (07).
 16845
 16846 H) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 16847 551.1 (95).
 16848
 16849 I) Immunoassay. Syngenta AG-6252.
 16850
 16851 6) Benzo(a)pyrene
 16852
 16853 A) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 16854
 16855 B) Solid Phase Extraction and Capillary Column Gas
 16856 Chromatography-Mass Spectrometry. USEPA 525.3 (12).
 16857
 16858 C) Liquid Liquid Extraction and HPLC with Coupled Ultraviolet and
 16859 Fluorescence Detection. USEPA 550 (90) or USEPA 550.1 (90).
 16860
 16861 7) Carbofuran. ~~Direct Aqueous Injection HPLC with Post Column~~
 16862 ~~Derivatization. SM 6610 (92), 6610 (96), 6610 B (99), SM 6610 B (04),~~
 16863 ~~USEPA 531.1 (95), or USEPA 531.2 (01).~~

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- A) Direct Aqueous Injection HPLC with Post-Column Derivatization. SM 6610 (92), 6610 (96), 6610 B (99), SM 6610 B (04), USEPA 531.1 (95), or USEPA 531.2 (01).
- B) Liquid Chromatography/Mass Spectrometry. ME 531 (19).
- 8) Chlordane
 - A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 - B) Gas Chromatography with Electron Capture Detector. USEPA 508 (95).
 - C) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 508.1 (95).
 - D) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 - E) Solid Phase Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.3 (12).
- 9) Dalapon
 - A) Liquid-Liquid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.1 (89) or USEPA 515.3 (96).
 - B) Liquid-Liquid Microextraction, Derivatization, and Fast Gas Chromatography with Electron Capture Detector. SM 6640 B (01), SM 6640 B (06), or USEPA 515.4 (00).
 - C) Solid Phase Extractor (Acidic Methanol), Gas Chromatography, Electron Capture Detector. USEPA 552.1 (92).
 - D) Liquid-Liquid Extraction (Acidic Methanol), Gas Chromatography, Electron Capture Detector. USEPA 552.2 (95) or USEPA 552.3 (03).
 - E) Ion Chromatography, Electrospray Ionization, Tandem Mass Spectrometry. USEPA 557 (09).
- 10) Dibromochloropropane (DBCP)

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- A) Microextraction and Gas Chromatography. USEPA 504.1 (95).
 - B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.3 (09).
 - C) Liquid-Liquid Extraction, Gas Chromatography, Electron Capture Detector. USEPA 551.1 (95).
- 11) Di(2-ethylhexyl)adipate
- A) Liquid-Liquid or Liquid-Solid Extraction and Gas Chromatography with Photoionization Detection. USEPA 506 (95).
 - B) Liquid-Solid Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 - C) Solid Phase Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.3 (12).
- 12) Di(2-ethylhexyl)phthalate
- A) Liquid-Liquid or Liquid-Solid Extraction and Gas Chromatography with Photoionization Detection. USEPA 506 (95).
 - B) Liquid-Solid Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 - C) Solid Phase Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.3 (12).
- 13) Dinoseb
- A) Liquid-Liquid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.1 (89) or USEPA 515.3 (96).
 - B) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.2 (95).

- 16948 C) Liquid-Liquid Microextraction, Derivatization, and Fast Gas
16949 Chromatography with Electron Capture Detector. SM 6640 B
16950 (01), SM 6640 B (06), or USEPA 515.4 (00).
16951
- 16952 D) High Performance Liquid Chromatography with Photodiode Array
16953 Ultraviolet Detector. USEPA 555 (92).
16954
- 16955 14) Diquat. Liquid-Solid Extraction and HPLC with Ultraviolet Detection.
16956 USEPA 549.2 (97).
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- 16958 15) Endothall. Ion-Exchange Extraction, Acidic Methanol Methylation and
16959 Gas Chromatography/Mass Spectrometry. USEPA 548.1 (92).
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- 16961 16) Endrin
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- 16963 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
16964
- 16965 B) Gas Chromatography with Electron Capture Detector. USEPA
16966 508 (95).
16967
- 16968 C) Liquid-Solid Extraction Gas Chromatography with Electron
16969 Capture Detector. USEPA 508.1 (95).
16970
- 16971 D) Liquid-Solid Extraction and Capillary Column Gas
16972 Chromatography-Mass Spectrometry. USEPA 525.2 (95).
16973
- 16974 E) Solid Phase Extraction and Capillary Column Gas
16975 Chromatography-Mass Spectrometry. USEPA 525.3 (12).
16976
- 16977 F) Liquid-Liquid Extraction and Gas Chromatography. USEPA
16978 551.1 (95).
16979
- 16980 17) Ethylene Dibromide (EDB)
16981
- 16982 A) Microextraction and Gas Chromatography. USEPA 504.1 (95).
16983
- 16984 B) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA
16985 524.3 (09).
16986
- 16987 C) Liquid-Liquid Extraction, Gas Chromatography, Electron Capture
16988 Detector. USEPA 551.1 (95).
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- 16990 18) Glyphosate

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- A) Direct Aqueous Injection HPLC, Post-Column Derivatization, and Fluorescence Detection. USEPA 547 (90).
 - B) Anion- or Cation-Exchange HPLC and Post-Column Derivatization with Ultraviolet Fluorescence Detector. SM 6651 B (91), SM 6651 B (96), SM 6651 B (00), or SM 6651 B (05).
- 19) Heptachlor
- A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 - B) Gas Chromatography with Electron Capture Detector. USEPA 508 (95).
 - C) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 508.1 (95).
 - D) Liquid-Solid Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 - E) Solid Phase Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.3 (12).
 - F) Liquid-Liquid Extraction and Gas Chromatography. USEPA 551.1 (95).
- 20) Heptachlor Epoxide
- A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 - B) Gas Chromatography with Electron Capture Detector. USEPA 508 (95).
 - C) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 508.1 (95).
 - D) Liquid-Solid Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 - E) Solid Phase Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.3 (12).

- 17034 F) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 17035 551.1 (95).
 17036
 17037 21) Hexachlorobenzene
 17038
 17039 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 17040
 17041 B) Gas Chromatography with Electron Capture Detector. USEPA
 17042 508 (95).
 17043
 17044 C) Liquid-Solid Extraction Gas Chromatography with Electron
 17045 Capture Detector. USEPA 508.1 (95).
 17046
 17047 D) Liquid-Solid Extraction and Capillary Column Gas
 17048 Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 17049
 17050 E) Solid Phase Extraction and Capillary Column Gas
 17051 Chromatography-Mass Spectrometry. USEPA 525.3 (12).
 17052
 17053 F) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 17054 551.1 (95).
 17055
 17056 22) Hexachlorocyclopentadiene
 17057
 17058 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 17059
 17060 B) Gas Chromatography with Electron Capture Detector. USEPA
 17061 508 (95).
 17062
 17063 C) Liquid-Solid Extraction Gas Chromatography with Electron
 17064 Capture Detector. USEPA 508.1 (95).
 17065
 17066 D) Liquid-Solid Extraction and Capillary Column Gas
 17067 Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 17068
 17069 E) Solid Phase Extraction and Capillary Column Gas
 17070 Chromatography-Mass Spectrometry. USEPA 525.3 (12).
 17071
 17072 F) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 17073 551.1 (95).
 17074
 17075 23) Lindane
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- 17077 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 17078
 17079 B) Gas Chromatography with Electron Capture Detector. USEPA
 17080 508 (95).
 17081
 17082 C) Liquid-Solid Extraction Gas Chromatography with Electron
 17083 Capture Detector. USEPA 508.1 (95).
 17084
 17085 D) Liquid-Solid Extraction and Capillary Column Gas
 17086 Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 17087
 17088 E) Solid Phase Extraction and Capillary Column Gas
 17089 Chromatography-Mass Spectrometry. USEPA 525.3 (12).
 17090
 17091 F) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 17092 551.1 (95).
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 17094 24) Methoxychlor
 17095
 17096 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
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 17098 B) Gas Chromatography with Electron Capture Detector. USEPA
 17099 508 (95).
 17100
 17101 C) Liquid-Solid Extraction Gas Chromatography with Electron
 17102 Capture Detector. USEPA 508.1 (95).
 17103
 17104 D) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 17105
 17106 E) Solid Phase Extraction and Capillary Column Gas
 17107 Chromatography-Mass Spectrometry. USEPA 525.3 (12).
 17108
 17109 F) Liquid-Liquid Extraction and Gas Chromatography. USEPA
 17110 551.1 (95).
 17111
 17112 25) Oxamyl. ~~Direct Aqueous Injection HPLC with Post-Column~~
 17113 ~~Derivatization. SM 6610 (92), 6610 (96), 6610 B (99), SM 6610 B (04),~~
 17114 ~~USEPA 531.1 (95), or USEPA 531.2 (01).~~
 17115
 17116 A) Direct Aqueous Injection HPLC with Post-Column Derivatization.
 17117 SM 6610 (92), 6610 (96), 6610 B (99), SM 6610 B (04), USEPA
 17118 531.1 (95), or USEPA 531.2 (01).
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- B) Liquid Chromatography/Mass Spectrometry. ME 531 (19).
- 26) PCBs (measured for compliance purposes as decachlorobiphenyl).
Screening by Perchlorination and Gas Chromatography. USEPA 508A
(89).
- 27) PCBs (qualitatively identified as alachlors)
- A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
- B) Gas Chromatography with Electron Capture Detector. USEPA
508 (95).
- C) Liquid-Solid Extraction Gas Chromatography with Electron
Capture Detector. USEPA 508.1 (95).
- D) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
- E) Solid Phase Extraction and Capillary Column Gas
Chromatography-Mass Spectrometry. USEPA 525.3 (12).
- 28) Pentachlorophenol
- A) Gas Chromatography with Electron Capture Detector. ASTM
D5317-93, ASTM D5317-98(2003), SM 6640 B (01), or SM 6640
B (06).
- B) Liquid-Liquid Extraction Gas Chromatography with Electron
Capture Detector. USEPA 515.1 (89) or USEPA 515.3 (96).
- C) Liquid-Solid Extraction Gas Chromatography with Electron
Capture Detector. USEPA 515.2 (95).
- D) Liquid-Liquid Microextraction, Derivatization, and Fast Gas
Chromatography with Electron Capture Detector. USEPA 515.4
(00).
- E) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
- F) Solid Phase Extraction and Capillary Column Gas
Chromatography-Mass Spectrometry. USEPA 525.3 (12).

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- G) High Performance Liquid Chromatography with Photodiode Array Ultraviolet Detector. USEPA 555 (92).
- 29) Picloram
- A) Gas Chromatography with Electron Capture Detector. ASTM D5317-93, ASTM D5317-98(2003), SM 6640 B (01), or SM 6640 B (06).
 - B) Liquid-Liquid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.1 (89) or USEPA 515.3 (96).
 - C) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 515.2 (95).
 - D) Liquid-Liquid Microextraction, Derivatization, and Fast Gas Chromatography with Electron Capture Detector. USEPA 515.4 (00).
 - E) High Performance Liquid Chromatography with Photodiode Array Ultraviolet Detector. USEPA 555 (92).
- 30) Simazine
- A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
 - B) Gas Chromatography with Electron Capture Detector. USEPA 507 (95).
 - C) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 508.1 (95).
 - D) Liquid-Solid Extraction Gas Chromatography with Electron Capture Detector. USEPA 523 (11).
 - E) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
 - F) Solid Phase Extraction and Capillary Column Gas Chromatography-Mass Spectrometry. USEPA 525.3 (12).
 - G) Liquid Chromatography Electrospray Ionization Tandem Mass Spectrometry. USEPA 536 (07).

- 17205 H) Liquid-Liquid Extraction and Gas Chromatography. USEPA
17206 551.1 (95).
- 17207
- 17208 31) Toxaphene
- 17209
- 17210 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
- 17211
- 17212 B) Gas Chromatography with Electron Capture Detector. USEPA
17213 508 (95).
- 17214
- 17215 C) Liquid-Solid Extraction Gas Chromatography with Electron
17216 Capture Detector. USEPA 508.1 (95).
- 17217
- 17218 D) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
- 17219
- 17220 E) Solid Phase Extraction and Capillary Column Gas
17221 Chromatography-Mass Spectrometry. USEPA 525.3 (12).
- 17222
- 17223 c) Total Trihalomethanes (TTHMs)
- 17224
- 17225 1) Purge and Trap Capillary Column Gas Chromatography. USEPA 502.2
17226 (95).
- 17227
- 17228 2) Purge and Trap Gas Chromatography-Mass Spectrometry. USEPA 524.2
17229 (95), USEPA 524.3 (09), or USEPA 524.4 (13).
- 17230
- 17231 3) Liquid-Liquid Extraction and Gas Chromatography. USEPA 551.1 (95).
- 17232
- 17233 d) State-Only MCLs (for which a method is not listed in subsections (a) through (c))
- 17234
- 17235 1) Aldrin
- 17236
- 17237 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
- 17238
- 17239 B) Gas Chromatography with Electron Capture Detector. USEPA
17240 508 (95).
- 17241
- 17242 C) Liquid-Solid Extraction Gas Chromatography with Electron
17243 Capture Detector. USEPA 508.1 (95).
- 17244
- 17245 D) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
- 17246
- 17247 2) DDT

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17249 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
17250
17251 B) Gas Chromatography with Electron Capture Detector. USEPA
17252 508 (95).
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17254 3) Dieldrin
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17256 A) Microextraction and Gas Chromatography. USEPA 505 (95)1.
17257
17258 B) Gas Chromatography with Electron Capture Detector. USEPA
17259 508 (95).
17260
17261 C) Liquid-Solid Extraction Gas Chromatography with Electron
17262 Capture Detector. USEPA 508.1 (95).
17263
17264 D) Gas Chromatography-Mass Spectrometry. USEPA 525.2 (95).
17265

17266 e) The following endnotes are appended to method entries in subsections (a) and (b):
17267

17268 ¹ denotes that, for the particular contaminant, the laboratory should substitute a
17269 nitrogen-phosphorus detector ~~should be substituted~~ for the electron capture
17270 detector in USEPA 505 (95) (or use another approved method ~~should be used~~)
17271 to determine alachlor, atrazine, and simazine if it needs a lower detection limit
17272 ~~limits are required~~.

17273
17274 ² denotes that the laboratory may not use Syngenta AG-625 (01) ~~for may not be~~
17275 ~~used for the analysis of~~ atrazine in any system using where chlorine dioxide ~~is~~
17276 ~~used for drinking water~~ treatment. In samples from all other systems, the
17277 laboratory must confirm any result for atrazine using generated by Syngenta
17278 AG-625 (01) that is greater than one-half the maximum contaminant level
17279 (MCL) (in other words, greater than 0.0015 mg/l or 1.5 µg/l) ~~must be~~
17280 ~~confirmed~~ using another approved method ~~for this contaminant~~ and ~~should use~~
17281 additional volume of the original sample the supplier collected ~~for compliance~~
17282 ~~monitoring~~. ~~If in instances where~~ a result from Syngenta AG-625 (01) triggers
17283 ~~such~~ confirmatory testing, the supplier must use the confirmatory result ~~is to be~~
17284 ~~used~~ to determine compliance.
17285

17286 BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.24(e) and appendix A to
17287 subpart C of 40 CFR 141. The Board ~~did has~~ not separately list listed the following approved
17288 alternative methods from Standard Methods Online that are the same version as a method
17289 appearing that appears in a printed edition of Standard Methods. Using Use of the Standard
17290 Methods Online copy is acceptable.

17291
17292 Standard Methods Online, Method 6610 B-04 appears in the 22nd and 23rd editions as
17293 Method 6610 B. ~~This In this Section, this~~ appears in this Section as SM 6610 B (04).
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17295 Standard Methods Online, Method 6640 B-01 appears in the 21st edition as Method 6640
17296 B. ~~This In this Section, this~~ appears in this Section as SM 6640 B (01).
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17298 Standard Methods Online, Method 6640 B-06 appears in the 22nd and 23rd editions as
17299 Method 6640 B. ~~This In this Section, this~~ appears in this Section as SM 6640 B (06).
17300

17301 Standard Methods Online, Method 6651 B-00 appears in the 21st edition as Method 6651
17302 B. ~~This In this Section, this~~ appears in this Section as SM 6651 B (00).
17303

17304 Standard Methods Online, Method 6651 B-05 appears in the 22nd and 23rd editions as
17305 Method 6651 B. ~~This In this Section, this~~ appears in this Section as SM 6651 B (05).
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17307 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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17309 **Section 611.648 Phase II, Phase IIB, and Phase V Synthetic Organic Contaminants**
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17311 Analysis of the Phase II, Phase IIB, and Phase V SOCs for the purposes of determining
17312 compliance with the MCL must be conducted as follows:
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17314 a) Definitions. As used in this Section, the following terms will have the following
17315 meanings:
17316

17317 "Detect" or "detection" means that the contaminant of interest is present at
17318 a level greater than or equal to the "detection limit".
17319

17320 "Detection limit" means the level of the contaminant of interest that is
17321 specified in subsection (r).
17322

17323 BOARD NOTE: This is a "trigger level" for Phase II, Phase IIB, and
17324 Phase V SOCs inasmuch as it prompts further action. The use of the term
17325 "detect" or "detection" in this Section is not intended to include any
17326 analytical capability of quantifying lower levels of any contaminant, or the
17327 "method detection limit".
17328

17329 b) Required Sampling. Each supplier must take a minimum of one sample at each
17330 sampling point at the times required in subsection (q).
17331

17332 BOARD NOTE: See the Board note appended to Section 611.311(c) for
17333 information relating to implementation of requirements relating to aldicarb,

17334 aldicarb sulfone, and aldicarb sulfoxide.

17335

17336 c) Sampling Points

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17338 1) Sampling Points for GWSs. Unless otherwise provided ~~in a by~~SEP, a
17339 GWS supplier must take at least one sample from each of the following
17340 points: each entry point that is representative of each well after treatment.

17341

17342 2) Sampling Points for an SWS or Mixed System Supplier. Unless otherwise
17343 provided ~~in a by~~SEP, an SWS or mixed system supplier must sample
17344 from each of the following points:

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17346 A) Each entry point after treatment; or

17347

17348 B) Points in the distribution system that are representative of each
17349 source.

17350

17351 3) The supplier must take each sample at the same sampling point unless the
17352 Agency ~~issues has granted~~a SEP that designates another location as more
17353 representative of each source, treatment plant, or within the distribution
17354 system.

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17356 4) If a system draws water from more than one source, and the sources are
17357 combined before distribution, the supplier must sample at an entry point
17358 during periods of normal operating conditions when water is
17359 representative of all sources being used.

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17361 BOARD NOTE: Subsections (b) and (c) ~~derive derived~~from 40 CFR
17362 141.24(h)(1) through (h)(3).

17363

17364 d) Monitoring Frequency

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17366 1) Each CWS and NTNCWS supplier must take four consecutive quarterly
17367 samples for each of the Phase II, Phase IIB, and Phase V SOCs during
17368 each compliance period, beginning in the three-year compliance period
17369 starting in the initial compliance period.

17370

17371 2) Suppliers serving more than 3,300 persons that do not detect a
17372 contaminant in the initial compliance period must take a minimum of two
17373 quarterly samples in one year of each subsequent three-year compliance
17374 period.

17375

17376 3) Suppliers serving fewer than or equal to 3,300 persons that do not detect a

- 17377 contaminant in the initial compliance period must take a minimum of one
 17378 sample during each subsequent three-year compliance period.
 17379
- 17380 e) Reduction to Annual Monitoring Frequency. A CWS or NTNCWS supplier may
 17381 apply to the Agency for a SEP releasing the supplier that releases it from the
 17382 requirements of subsection (d). A SEP from the requirement of subsection (d)
 17383 may must last for only a single three-year compliance period.
 17384
- 17385 f) Vulnerability Assessment. The Agency must issue grant a SEP from the
 17386 requirements of subsection (d) based on consideration of the factors set forth at
 17387 Section 611.110(a).
 17388
- 17389 g) If one of the Phase II, Phase IIB, or Phase V SOCs is detected in any sample, then
 17390 the following must occur:
 17391
- 17392 1) The supplier must monitor quarterly for the contaminant at each sampling
 17393 point that resulted in a detection.
 17394
 - 17395 2) Annual Monitoring
 17396
- 17397 A) A supplier may request that the Agency issue grant a SEP reducing
 17398 that reduces the monitoring frequency to annual.
 17399
 - 17400 B) A request for a SEP must include the following minimal
 17401 information:
 17402
 - 17403 i) For a GWS, two quarterly samples.
 - 17404
 - 17405 ii) For an SWS or mixed system supplier, four quarterly
 17406 samples.
 17407 - 17408 C) The Agency must issue grant a SEP allowing that allows annual
 17409 monitoring at a sampling point if it determines that the sampling
 17410 point is reliably and consistently below the MCL.
 17411
 - 17412 D) When ~~in~~ issuing the SEP, the Agency must specify the level of the
 17413 contaminant upon which the "reliably and consistently below the
 17414 MCL" determination was based. Any SEP allowing that allows
 17415 less frequent monitoring based on an Agency "reliably and
 17416 consistently below the MCL" determination must include a
 17417 condition requiring the supplier to resume quarterly monitoring
 17418 under subsection (g)(1) if it detects any Phase II SOC.
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- 3) Suppliers that monitor annually must monitor during the quarters that previously yielded the highest analytical result.
 - 4) Suppliers that have three consecutive annual samples with no detection of a contaminant at a sampling point may apply to the Agency for a SEP with respect to that point, as specified in subsections (e) and (f).
 - 5) Monitoring for Related Contaminants
 - A) If monitoring results in detection of one or more of the related contaminants listed in subsection (g)(5)(B), subsequent monitoring must analyze for all the related compounds in the respective group.
 - B) Related Contaminants
 - i) First Group
 - aldicarb
 - aldicarb sulfone
 - aldicarb sulfoxide
 - BOARD NOTE: See the Board note appended to Section 611.311(c) for information relating to implementation of requirements relating to aldicarb, aldicarb sulfone, and aldicarb sulfoxide.
 - ii) Second Group
 - heptachlor
 - heptachlor epoxide.
 - h) Quarterly Monitoring Following MCL Violations
 - 1) Suppliers that violate an MCL for one of the Phase II, Phase IIB, or Phase V SOCs, as determined by subsection (k), must monitor quarterly for that contaminant at the sampling point where the violation occurred, beginning the next quarter after the violation.
 - 2) Annual Monitoring

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- A) A supplier may request that the Agency ~~issue grant~~ a SEP ~~reducing that reduces~~ the monitoring frequency to annual.
 - B) A request for a SEP must include, at a minimum, the results from four quarterly samples.
 - C) The Agency must ~~issue grant~~ a SEP ~~allowing that allows~~ annual monitoring at a sampling point if it determines that the sampling point is reliably and consistently below the MCL.
 - D) ~~When in~~ issuing the SEP, the Agency must specify the level of the contaminant upon which the "reliably and consistently below the MCL" determination was based. Any SEP ~~allowing that allows~~ less frequent monitoring based on an Agency "reliably and consistently below the MCL" determination must include a condition requiring the supplier to resume quarterly monitoring under subsection (h)(1) if it detects any Phase II SOC.
 - E) The supplier must monitor during the quarters that previously yielded the highest analytical result.
- i) Confirmation Samples
- 1) If any of the Phase II, Phase IIB, or Phase V SOCs are detected in a sample, the supplier must take a confirmation sample as soon as possible, but no later than 14 days after the supplier receives notice of the detection.
 - 2) Averaging is as specified in subsection (k).
 - 3) The Agency must delete the original or confirmation sample if it determines that a sampling error occurred, in which case the confirmation sample will replace the original or confirmation sample.
- j) This subsection (j) corresponds with 40 CFR 141.24(h)(10), an optional USEPA provision relating to compositing of samples that USEPA does not require for state programs. This statement maintains structural consistency with USEPA rules.
- k) Compliance with the MCLs for the Phase II, Phase IIB, and Phase V SOCs must be determined based on the analytical results obtained at each sampling point. If one sampling point is in violation of an MCL, the supplier is in violation of the MCL.

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- 1) For a supplier that monitors more than once per year, compliance with the MCL is determined by a running annual average at each sampling point.
 - 2) A supplier that monitors annually or less frequently whose sample result exceeds the regulatory detection level as defined by subsection (r) must begin quarterly sampling. The system will not be considered in violation of the MCL until it has completed one year of quarterly sampling.
 - 3) If any sample result will cause the running annual average to exceed the MCL at any sampling point, the supplier is out of compliance with the MCL immediately.
 - 4) If a supplier fails to collect the required number of samples, compliance will be based on the total number of samples collected.
 - 5) If a sample result is less than the detection limit, zero will be used to calculate the annual average.
- l) This subsection (l) corresponds with 40 CFR 141.24(h)(12), which USEPA removed and reserved. This statement maintains structural consistency with the federal regulations.
- m) Analysis for PCBs must be conducted as follows using the methods in Section 611.645:
- 1) Each supplier that monitors for PCBs must analyze each sample using either USEPA 505 (95) or USEPA 508 (95).
 - 2) If PCBs are detected in any sample analyzed using USEPA ~~Organic Methods, Method-~~505 (95) or USEPA 508 (95), the supplier must reanalyze the sample using USEPA 508A (89) to quantitate the individual Aroclors (as decachlorobiphenyl).
 - 3) Compliance with the PCB MCL must be determined based upon the quantitative results of analyses using USEPA 508A (89).
- n) This subsection (n) corresponds with 40 CFR 141.24(h)(14), an obsolete provision that relates to the initial compliance period from 1993 through 1995. This statement maintains consistency with the federal regulations.
- o) The Agency must issue a SEP ~~increasing that increases~~ the number of sampling points or the frequency of monitoring if it determines that this is necessary to detect variations within the PWS due to such factors as fluctuations in

17549 contaminant concentration due to seasonal use or changes in the water source.

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 17551 BOARD NOTE: At 40 CFR 141.24(h)(15), ~~USEPA uses the stated factors~~ are as
 17552 non-limiting examples of circumstances making that make additional monitoring
 17553 necessary.

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 17555 p) This subsection (p) corresponds with 40 CFR 141.24(h)(16), a USEPA provision
 17556 relating to reserving enforcement authority to the State that would serve no useful
 17557 function as part of the State's rules. This statement maintains structural
 17558 consistency with USEPA rules.

17559
 17560 q) Each supplier must monitor, within each compliance period, at the time
 17561 designated by the Agency in a by SEP.

17562
 17563 r) "Detection" means greater than or equal to the following concentrations for each
 17564 contaminant:

17565
 17566 1) For PCBs (Aroclors), the following:
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Aroclor	Detection Limit (mg/l)
1016	0.00008
1221	0.02
1232	0.0005
1242	0.0003
1248	0.0001
1254	0.0001
1260	0.0002

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 17569 2) For other Phase II, Phase IIB, and Phase V SOCs, the following:
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Contaminant	Detection Limit (mg/l)
Alachlor	0.0002
Aldicarb	0.0005
Aldicarb sulfoxide	0.0005
Aldicarb sulfone	0.0008
Atrazine	0.0001
Benzo(a)pyrene	0.00002
Carbofuran	0.0009
Chlordane	0.0002
2,4-D	0.0001

Dalapon	0.001
1,2-Dibromo-3-chloropropane (DBCP)	0.00002
Di(2-ethylhexyl)adipate	0.0006
Di(2-ethylhexyl)phthalate	0.0006
Dinoseb	0.0002
Diquat	0.0004
Endothall	0.009
Endrin	0.00001
Ethylene dibromide (EDB)	0.00001
Glyphosate	0.006
Heptachlor	0.00004
Heptachlor epoxide	0.00002
Hexachlorobenzene	0.0001
Hexachlorocyclopentadiene	0.0001
Lindane	0.00002
Methoxychlor	0.0001
Oxamyl	0.002
Picloram	0.0001
Polychlorinated biphenyls (PCBs) (as decachlorobiphenyl)	0.0001
Pentachlorophenol	0.00004
Simazine	0.00007
Toxaphene	0.001
2,3,7,8-TCDD (dioxin)	0.000000005
2,4,5-TP (silvex)	0.0002

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BOARD NOTE: See the Board note appended to Section 611.311(c) for information relating to implementation of requirements relating to aldicarb, aldicarb sulfone, and aldicarb sulfoxide.

- s) Laboratory Certification
 - 1) Analyses under this Section must only be conducted by a laboratory in one of the categories listed in Section 611.490(a) that has been certified according to the conditions of subsection (s)(2).
 - 2) To receive certification to conduct analyses for the Phase II, Phase IIB, and Phase V SOCs, the laboratory must do the following:
 - A) Analyze PE samples provided by the Agency under 35 Ill. Adm. Code 183.125(c) that include these substances; and
 - B) Achieve quantitative results on the analyses performed under

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subsection (s)(2)(A) that are within the following acceptance limits:

SOC	Acceptance Limits
Alachlor	± 45%
Aldicarb	2 standard deviations
Aldicarb sulfone	2 standard deviations
Aldicarb sulfoxide	2 standard deviations
Atrazine	± 45%
Benzo(a)pyrene	2 standard deviations
Carbofuran	± 45%
Chlordane	± 45%
Dalapon	2 standard deviations
Di(2-ethylhexyl)adipate	2 standard deviations
Di(2-ethylhexyl)phthalate	2 standard deviations
Dinoseb	2 standard deviations
Diquat	2 standard deviations
Endothall	2 standard deviations
Endrin	± 30%
Glyphosate	2 standard deviations
Dibromochloropropane (DBCP)	± 40%
Ethylene dibromide (EDB)	± 40%
Heptachlor	± 45%
Heptachlor epoxide	± 45%
Hexachlorobenzene	2 standard deviations
Hexachlorocyclopentadiene	2 standard deviations
Lindane	± 45%
Methoxychlor	± 45%
Oxamyl	2 standard deviations
PCBs (as decachlorobiphenyl)	0-200%
Pentachlorophenol	± 50%
Picloram	2 standard deviations
Simazine	2 standard deviations
Toxaphene	± 45%
2,4-D	± 50%
2,3,7,8-TCDD (dioxin)	2 standard deviations
2,4,5-TP (silvex)	± 50%

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BOARD NOTE: See the Board note appended to Section 611.311(c) for information relating to implementation of requirements relating to aldicarb, aldicarb sulfone, and aldicarb sulfoxide.

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- t) A new system supplier or a supplier ~~using that uses~~ a new source of water must demonstrate compliance with the MCL within a period of time specified by a permit issued by the Agency. The supplier must also comply with the initial sampling frequencies specified by the Agency to ensure the supplier can demonstrate compliance with the MCL. Routine and increased monitoring frequencies must be conducted in accordance with the requirements in this Section.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.24(h).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART Q: RADIOLOGICAL MONITORING AND ANALYTICAL REQUIREMENTS

Section 611.720 Analytical Methods

- a) A certified laboratory must use specific ~~The methods specified below,~~ or alternative methods ~~approved by~~ the Agency approved under Section 611.480; incorporated by reference in Section 611.102, ~~are to be used~~ to determine whether the supplier complies ~~compliance~~ with Section 611.330; ~~except in cases where alternative methods have been approved in accordance with Section 611.480.~~
 - 1) Gross Alpha and Beta
 - A) Evaporation Methods. SM 302 (71); SM 7110 B (85); SM 7110 B (91); SM 7110 B (96); SM 7110 B (00); USEPA 900.0 (80); USEPA 900.0 (18); USEPA 00-01 (84); USEPA IRM (76), pages 1-3; USEPA RCA (79), pages 1-5; or USGS R1120-76.
 - B) Liquid Scintillation Methods. ASTM D7283-17 or SM 7110 D (17).
 - 2) Gross Alpha. Coprecipitation Methods. SM 7110 C (91), SM 7110 C (96), SM 7110 C (00), or USEPA 00-02 (84).
 - 3) Radium-226
 - A) Radiochemical Methods. ASTM D2460-97; ASTM D2460-07; Georgia Radium (04); New York Radium (82); SM 304 (71); SM 7500-Ra B (88); SM 7500-Ra B (93); SM 7500-Ra B (01); USEPA 903.0 (80); USEPA 903.0(21); USEPA Ra-03 (84); USEPA IRM

- 17639 (76), pages 13-15; USEPA RCA (79), pages 19-32; or USGS R-
 17640 1140-76.
 17641
 17642 B) Radon Emanation Methods. ASTM D3454-97; ASTM D3454-05;
 17643 [ASTM D3454-18](#); EML (97) Ra-04; EML (90) Ra-05; SM 305
 17644 (71); SM 7500-Ra C (88); SM 7500-Ra C (93); SM 7500-Ra C
 17645 (01); USEPA 903.1 (80); [USEPA 903.1 \(21\)](#); USEPA Ra-04 (84);
 17646 USEPA IRM (76), pages 16-23; or USGS R-1141-76.
 17647
 17648 C) Gamma Spectrometry. SM 7500-Ra E (01) or SM 7500-Ra E (07).
 17649
 17650 4) Radium-228
 17651
 17652 A) Radiochemical Methods. Georgia Radium (04); New Jersey
 17653 Radium (90); New York Radium (82); SM 7500-Ra D (88); SM
 17654 7500-Ra D (93); SM 7500-Ra D (01); USEPA 904.0 (80); USEPA
 17655 Ra-05 (90); USEPA IRM (76), pages 24-28; USEPA RCA (79),
 17656 pages 19-32; or USGS R-1142-76.
 17657
 17658 B) Gamma Spectrometry. SM 7500-Ra E (01) or SM 7500-Ra E (07).
 17659
 17660 5) Uranium
 17661
 17662 A) Radiochemical Methods. SM 7500-U B (88), SM 7500-U B (91),
 17663 SM 7500-U B (96), SM 7500-U B (00), or USEPA 908.0 (80).
 17664
 17665 B) Fluorometric Methods. ASTM D2907-97, EML (90) U-04, EML
 17666 (97) U-04, SM 7500-U C (88), SM 7500-U C (91), SM 7500-U C
 17667 (96), SM 7500-U C (00), USEPA 908.1 (80), USGS R-1180-76, or
 17668 USGS R-1181-76.
 17669
 17670 C) ICP-MS Methods. ASTM D5673-03, ASTM D5673-05, ASTM
 17671 D5673-10, ASTM D5673-16; SM 3125 (97); or USEPA 200.8
 17672 (94).
 17673
 17674 D) Alpha Spectrometry. ASTM D3972-97; ASTM D3972-02; ASTM
 17675 D3972-09; EML (90) U-02; EML (97) U-02; USEPA 00-07 (84);
 17676 USEPA RCA (79), pages 33-48; or USGS R-1182-76.
 17677
 17678 E) Laser Spectrometry. ASTM D5174-97, ASTM D5174-02, or
 17679 ASTM D5174-07.
 17680
 17681 F) Alpha Liquid Scintillation Spectrometry. ASTM D6239-09.

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BOARD NOTE: If the laboratory determines uranium (U) ~~is determined~~ by mass, it must use a conversion factor of 0.67 pCi/μg ~~U-of uranium must be used~~. This conversion factor ~~reflects~~ is based on the characteristic 1:1 activity ratio of ²³⁴U and ²³⁸U ~~that is characteristic~~ of naturally occurring uranium.

- 6) Radioactive Cesium
 - A) Radiochemical Methods. ASTM D2459-72; SM 7500-Cs B (88), SM 7500-Cs B (93); SM 7500-Cs B (00); USEPA 901.0 (80); USEPA IRM (76), pages 4-5; or USGS R-1111-76.
 - B) Gamma Ray Spectrometry. ASTM D3649-91; ASTM D3649-98a; ASTM D3649-06; EML (90) Ga-01; EML (97) Ga-01-R; SM 7120 (94); SM 7120 (97); USEPA 901.1 (80); USEPA RCA (79), pages 92-95; or USGS R-1110-76.
- 7) Radioactive Iodine
 - A) Radiochemical Methods. ASTM D3649-91; ASTM D3649-98a; ASTM D3649-06; SM 7500-I B (88); SM 7500-I B (93); SM 7500-I B (00); SM 7500-I C (88); SM 7500-I C (93); SM 7500-I C (00); SM 7500-I D (88); SM 7500-I D (93); SM 7500-I D (00); USEPA 902.0 (80); USEPA IRM (76), pages 6-8; or USEPA IRM (76), pages 9-12.
 - B) Gamma Ray Spectrometry. ASTM D4785-93; ASTM D4785-00a; ASTM D4785-08; EML (90) Ga-01; EML (97) Ga-01-R; SM 7120 (94); SM 7120 (97); USEPA 901.1 (80); or USEPA RCA (79), pages 92-95.
- 8) Radioactive Strontium-89 and -90. Radiochemical Methods. EML (90) Sr-01; EML (97) Sr-01; EML (90) Sr-02; EML (97) Sr-02; SM 303 (71); SM 7500-Sr B (88); SM 7500-Sr B (93); SM 7500-Sr B (01); USEPA 905.0 (80); USEPA Sr-04 (84); USEPA IRM (76), pages 29-33; USEPA RCA (79), pages 65-73; or USGS R-1160-76.
- 9) Tritium. Liquid Scintillation. ASTM D4107-91; ASTM D4107-98; ASTM D4107-08; SM 306 (71); SM 7500-3H B (88); SM 7500-3H B (93); SM 7500-3H B (00); USEPA 906.0 (80); USEPA H-02 (84); USEPA IRM (76), pages 34-37; USEPA RCA (79), pages 87-91; or USGS R-1171-76.

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10) Gamma Emitters. Gamma Ray Spectrometry. ASTM D3649-91; ASTM D3649-98a; ASTM D3649-06; ASTM D4785-93; ASTM D4785-00a; ASTM D4785-08; EML (90) Ga-01; EML (97) Ga-01-R; SM 7120 (94); SM 7120 (97); SM 7500-Cs B (88); SM 7500-Cs B (93); SM 7500-Cs B (00); SM 7500-I B (88); SM 7500-I B (93); SM 7500-I B (00); USEPA 901.0 (80); USEPA 901.1 (80); USEPA 902.0 (80); USEPA RCA (79), pages 92-95; or USGS R-1110-76.

b) When the laboratory must identify and measure ~~identification and measurement of~~ radionuclides other than those ~~listed~~ in subsection (a) ~~are required, it must use the following~~ methods from either of two sources, incorporated by reference in Section 611.102, ~~are to be used, except if the Agency approves in cases where~~ alternative methods underhave been approved in accordance with Section 611.480:

- 1) USEPA ARP (73).
- 2) EML (90) or EML (97).

c) For ~~the purpose of~~ monitoring radioactivity concentrations in drinking water, a detection limit defines the required sensitivity of the radioanalysis ~~is defined in terms of a detection limit~~. The detection limit ~~is the must be that~~ concentration a laboratory which can measure be counted with a precision of plus or minus 100 percent at the 95 percent confidence level (1.96σ , where σ is the standard deviation of the net counting rate of the sample).

1) When determining ~~To determine~~ compliance with Section 611.330(b), (c), and (e), the detection limit must not exceed certain ~~the concentrations set forth in the following table:~~

Contaminant	Detection Limit
Gross alpha particle activity	3 pCi/ℓ
Radium-226	1 pCi/ℓ
Radium-228	1 pCi/ℓ
Uranium	1 µg/ℓ

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BOARD NOTE: This subsection (c)(1) derives ~~Derived~~ from 40 CFR 141.25(c) Table B.

- 2) When determining ~~To determine~~ compliance with Section 611.330(d), the detection limits must not exceed certain ~~the~~ concentrations ~~listed in the following table:~~

Radionuclide	Detection Limit
Tritium	1,000 pCi/ℓ
Strontium-89	10 pCi/ℓ
Strontium-90	2 pCi/ℓ
Iodine-131	1 pCi/ℓ
Cesium-134	10 pCi/ℓ
Gross beta	4 pCi/ℓ
Other radionuclides	1/10 of applicable limit

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BOARD NOTE: This subsection (c)(2) derives ~~Derived~~ from 40 CFR 141.25(c) Table C.

- d) When determining ~~To judge~~ compliance with the MCLs ~~listed~~ in Section 611.330, the laboratory must use averages of data ~~must be used~~ and round results must be rounded to the same number of significant figures as the MCL ~~for the substance in question.~~

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BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.25 and appendix A to subpart C of 40 CFR 141. The Board ~~did has~~ not separately list ~~listed the following~~ approved alternative methods from Standard Methods Online that are the same version as a method appearing that appears in a printed edition of Standard Methods. Using ~~Use of~~ the Standard Methods Online copy is acceptable.

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Standard Methods Online, Methods 7110 B-91 and 7110 C-91 appear in the 18th and 19th editions as Methods 7110 B and 7110 C. These In this Section, these appear in this Section as SM 7110 B (91) and SM 7110 C (91).

17783 Standard Methods Online, Methods 7110 B-00 and 7110 C-00 appear in the 21st, 22nd,
 17784 and 23rd editions as Methods 7110 B and 7110 C. ~~These In this Section, these appear in~~
 17785 this Section as SM 7110 B (00) and SM 7110 C (00).

17786
 17787 Standard Methods Online, Method 7120-97 appears in the 20th, 21st, 22nd, and 23rd
 17788 editions as Method 7120. ~~This In this Section, this appears in this Section~~
 17789 as SM 7120
 17790 (97).

17791 Standard Methods Online, Method 7500-Cs B-00 appears in the 21st, 22nd, and 23rd
 17792 editions as Method 7500-Cs B. In this Section, thus appears as SM 7500-Cs B (00).
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17794 Standard Methods Online, Methods 7500-I B-00, 7500-I C-00, and 7500-I D-00 appear in
 17795 the 21st, 22nd, and 23rd editions as Methods 7500-I B, 7500-I C, and 7500-I D. ~~These In~~
 17796 this Section, these appear in this Section as SM 7500-I B (00), SM 7500-I C (00), and SM
 17797 7500-I D (00).
 17798

17799 Standard Methods Online, Methods 7500-Ra B-01, 7500-Ra C-01, and 7500-Ra D-01
 17800 appears in the 21st and 22nd editions as Methods 7500-Ra B, 7500-Ra C, and 7500-Ra D.
 17801 ~~These In this Section, these appear in this Section~~ as SM 7500-Ra B (01), SM 7500-Ra C
 17802 (01), and SM 7500-Ra D (01).
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17804 Standard Methods Online, Methods 7500-Ra B-07, 7500-Ra C-07, 7500-Ra D-07, and
 17805 7500-Ra E-07 appears in the 23rd edition as Methods 7500-Ra B, 7500-Ra C, 7500-Ra D,
 17806 and 7500-Ra E. ~~These In this Section, these appear in this Section~~ as SM 7500-Ra B
 17807 (07), SM 7500-Ra C (07), SM 7500-Ra D (07), and SM 7500-Ra E (07).
 17808

17809 Standard Methods Online, Method 7500-Sr B-01 appears in the 21st, 22nd, and 23rd
 17810 editions as Method 7500-Sr B. ~~This In this Section, this appears in this Section~~ as SM
 17811 7500-Sr B (01).
 17812

17813 Standard Methods Online, Method 7500-3H B-00 appears in the 21st, 22nd, and 23rd
 17814 editions as Method 7500-3H B. ~~This In this Section, this appears in this Section~~ as SM
 17815 7500-3H B (00)
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17817 Standard Methods Online, Methods 7500-U B and 7500-U C-00 appear in the 21st, 22nd,
 17818 and 23rd editions as Methods 7500-U B and 7500-U C. ~~These In this Section, these~~
 17819 appear in this Section as SM 7500-U B (00) and SM 7500-U C (00).
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17821 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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17823 **Section 611.731 Gross Alpha**
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17825 Monitoring ~~requirements for~~ Gross Alpha Particle Activity-gross alpha particle activity, Radium-

17826 226, Radium-228, radium-226, radium-228, and Uranium uranium are as follows:
 17827

- 17828 a) A ~~community water system (CWS)~~ supplier must monitor ~~conduct initial~~
 17829 monitoring to determine whether it complies ~~compliance~~ with Section 611.330(b),
 17830 (c), and (e). For ~~the purposes of monitoring~~ for gross alpha particle activity,
 17831 radium-226, radium-228, uranium, and beta particle and photon radioactivity in
 17832 drinking water, "detection limit" is defined as in Section 611.720(e).
 17833
- 17834 1) Applicability and Sampling Location for an Existing CWS Supplier. An
 17835 existing CWS supplier using groundwater, surface water, or both
 17836 groundwater and surface water ~~(for the purpose of this Section hereafter~~
 17837 ~~referred to as a supplier)~~ must sample at every entry point to the
 17838 distribution system representing that is representative of all sources the
 17839 supplier uses being used (hereafter called a sampling point) under normal
 17840 operating conditions. The supplier must take each sample at the same
 17841 sampling point, unless conditions make another sampling point more
 17842 representative of each source or the Agency designates ~~has designated~~ a
 17843 distribution system location, under in accordance with subsection
 17844 (b)(2)(C).
 17845
- 17846 2) Applicability and Sampling Location for a New CWS Supplier. A new
 17847 CWS supplier or a CWS supplier using that uses a new source of water
 17848 must begin ~~to conduct~~ initial monitoring for the new source within the first
 17849 quarter after beginning to initiating use of the source. A CWS supplier
 17850 must conduct more frequent monitoring as directed when ordered by the
 17851 Agency in a SEP due to the event of possible contamination or when
 17852 changes in the distribution system or treatment processes ~~occur~~ that may
 17853 increase the concentration of radioactivity in the supplier's finished water.
 17854
- 17855 b) Initial Monitoring. The Agency may issue a SEP directing a A-CWS supplier to
 17856 monitor must conduct initial monitoring for gross alpha particle activity, radium-
 17857 226, radium-228, and uranium for four consecutive quarters at all sampling
 17858 points. The Agency may revise the SEP waiving the final two quarters of initial
 17859 monitoring for a sampling point if the results of the samples from the previous
 17860 two quarters are below the detection limit. For gross alpha particle activity,
 17861 uranium, radium-226, and radium-228 monitoring, the Agency may issue a SEP
 17862 waiving the final two quarters of initial monitoring for a sampling point if the
 17863 results of the samples from the previous two quarters are below the detection
 17864 limit. If the average of the initial monitoring results for a sampling point is above
 17865 the MCL, the supplier must collect and analyze quarterly samples at that sampling
 17866 point until its results from four consecutive quarters are at or below the MCL,
 17867 unless the Agency issues a SEP requiring another schedule as part of a formal
 17868 compliance agreement as follows:

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- 1) ~~A CWS supplier without acceptable historical data, as defined in subsection (b)(2), is required to have collected four consecutive quarterly samples at all sampling points before December 31, 2007.~~

- 2) ~~Grandfathering Data. A CWS supplier may use historical monitoring data collected at a sampling point to satisfy the initial monitoring requirements for that sampling point, under the following situations.~~
 - A) ~~To satisfy initial monitoring requirements, a CWS supplier having only one entry point to the distribution system may use the monitoring data from the last compliance monitoring period that began between June 2000 and December 8, 2003.~~

 - B) ~~To satisfy initial monitoring requirements, a CWS supplier with multiple entry points and having appropriate historical monitoring data for each entry point to the distribution system may use the monitoring data from the last compliance monitoring period that began between June 2000 and December 8, 2003.~~

 - C) ~~To satisfy initial monitoring requirements, a CWS supplier with appropriate historical data for a representative point in the distribution system may use the monitoring data from the last compliance monitoring period that began between June 2000 and December 8, 2003, provided that the Agency finds that the historical data satisfactorily demonstrate that each entry point to the distribution system is expected to be in compliance based upon the historical data and reasonable assumptions about the variability of contaminant levels between entry points. The Agency must make its finding in writing, by a SEP, indicating how the data conforms to the requirements of this subsection (b)(2).~~

- 3) ~~For gross alpha particle activity, uranium, radium-226, and radium-228 monitoring, the Agency may, by a SEP, waive the final two quarters of initial monitoring for a sampling point if the results of the samples from the previous two quarters are below the detection limit.~~

- 4) ~~If the average of the initial monitoring results for a sampling point is above the MCL, the supplier must collect and analyze quarterly samples at that sampling point until the system has results from four consecutive quarters that are at or below the MCL, unless the supplier enters into another schedule as part of a formal compliance agreement with the Agency.~~

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- c) Reduced Monitoring. The Agency may allow a CWS supplier to reduce the future frequency of monitoring from once every three years to once every six or nine years at each sampling point, based on certain the following criteria:
- 1) If the average of the initial monitoring results for each contaminant (i.e., gross alpha particle activity, uranium, radium-226, or radium-228) is below the detection limit specified in the table at Section 611.720(c)(1) specifies, the supplier must collect and analyze for that contaminant using at least one sample at that sampling point every nine years.
 - 2) For gross alpha particle activity and uranium, if the average of the initial monitoring results for each contaminant is at or above the detection limit but at or below one-half the MCL, the supplier must collect and analyze for that contaminant using at least one sample at that sampling point every six years. For combined radium-226 and radium-228, the supplier must combine the analytical results ~~must be combined~~. If the average of the combined initial monitoring results for radium-226 and radium-228 is at or above the detection limit but at or below one-half the MCL, the supplier must collect and analyze for that contaminant using at least one sample at that sampling point every six years.
 - 3) For gross alpha particle activity and uranium, if the average of the initial monitoring results for each contaminant is above one-half the MCL but at or below the MCL, the supplier must collect and analyze at least one sample at that sampling point every three years. For combined radium-226 and radium-228, the supplier must combine the analytical results ~~must be combined~~. If the average of the combined initial monitoring results for radium-226 and radium-228 is above one-half the MCL but at or below the MCL, the supplier must collect and analyze at least one sample at that sampling point every three years.
 - 4) A supplier must use the samples it collected during the reduced monitoring period to determine the monitoring frequency for subsequent monitoring periods (e.g., if a supplier's sampling point is on a nine year monitoring period, and the sample result is above one-half the MCL, then the next monitoring period for that sampling point is three years).
 - 5) If a supplier has a monitoring result exceeding that exceeds the MCL while on reduced monitoring, the supplier must collect and analyze quarterly samples at that sampling point until the supplier has results from four consecutive quarters ~~that are~~ below the MCL, unless the supplier enters into another schedule as part of a formal compliance agreement

17955 with the Agency.

17956
 17957 d) Compositing. To fulfill quarterly monitoring requirements for gross alpha
 17958 particle activity, radium-226, radium-228, or uranium, a supplier may composite
 17959 up to four consecutive quarterly samples from a single entry point if analysis is
 17960 done within a year after collecting the first sample. The supplier must treat
 17961 analytical results from the composited sample ~~must be treated~~ as the average
 17962 analytical result to determine ~~whether the supplier complies compliance~~ with the
 17963 MCLs and the future monitoring frequency. If the analytical result from the
 17964 composited sample is greater than one-half the MCL, the Agency may ~~issue, by~~ a
 17965 SEP ~~directing, direct~~ the supplier to take additional quarterly samples before
 17966 allowing the supplier to sample under a reduced monitoring schedule.

17967
 17968 e) A supplier may substitute a gross alpha particle activity measurement ~~may be~~
 17969 ~~substituted~~ for the required radium-226 measurement, provided ~~that~~ the measured
 17970 gross alpha particle activity does not exceed 5 pCi/l. A supplier may substitute a
 17971 gross alpha particle activity measurement ~~may be substituted~~ for the required
 17972 uranium measurement, provided ~~that~~ the measured gross alpha particle activity
 17973 does not exceed 15 pCi/l.

17974
 17975 1) The gross alpha measurement must have a confidence interval of 95%
 17976 (1.65σ, where σ is the standard deviation of the net counting rate of the
 17977 sample) for radium-226 and uranium.

17978
 17979 2) When a supplier uses a gross alpha particle activity measurement in lieu of
 17980 a radium-226 or uranium measurement, the supplier must use the gross
 17981 alpha particle activity analytical result ~~will be used~~ to determine the future
 17982 monitoring frequency for radium-226 or uranium.

17983
 17984 3) If the laboratory does not detect gross alpha particle activity ~~result is less~~
 17985 ~~than detection~~, the supplier must use one-half the detection limit ~~will be~~
 17986 ~~used~~ to determine whether it complies compliance and ~~its the~~ future
 17987 monitoring frequency.

17988
 17989 BOARD NOTE: This Section derives Subsections (a) through (e) derive from 40 CFR
 17990 141.26(a).

17991
 17992 (Source: Amended at 47 Ill. Reg. _____, effective _____)

17993
 17994 **Section 611.732 Beta Particle and Photon Radioactivity**

17995
 17996 Monitoring and Compliance ~~Requirements~~ for Manmade Radioactivity. To determine
 17997 compliance with the maximum contaminant levels in Section 611.330(d) for beta particle and

17998 photon radioactivity, a supplier must monitor at a specified frequency ~~as follows~~:

- 17999
- 18000 a) If the Agency issues a SEP designating a A-CWS supplier (either a surface water
- 18001 or groundwater supplier) ~~designated by the Agency, by a SEP,~~ as vulnerable, the
- 18002 supplier must sample for beta particle and photon radioactivity. The A-supplier
- 18003 must collect quarterly samples for beta emitters and annual samples for tritium
- 18004 and strontium-90 at each entry point to the distribution system (hereafter called a
- 18005 sampling point); beginning within one quarter after ~~being notified by~~ the Agency
- 18006 issues the SEP. A supplier ~~already designated by~~ the Agency designates must
- 18007 continue to sample until the Agency issues a new SEP removing reviews and
- 18008 either reaffirms or removes the designation, ~~by a SEP~~.
- 18009
- 18010 1) If the gross beta particle activity minus the naturally occurring potassium-
- 18011 40 beta particle activity at a sampling point has a running annual average
- 18012 (computed quarterly) less than or equal to 50 pCi/l (the screening level),
- 18013 the Agency may reduce the monitoring frequency ~~of monitoring~~ at that
- 18014 sampling point to once every three years. A supplier must collect all
- 18015 required samples ~~required in subsection (a)~~ during the reduced monitoring
- 18016 period.
- 18017
- 18018 2) For a supplier in the vicinity of a nuclear facility, the Agency may issue a
- 18019 SEP allowing ~~allow~~ the CWS supplier to use utilize environmental
- 18020 surveillance data ~~collected by~~ the nuclear facility collected in lieu of
- 18021 monitoring at the supplier's entry points upon determining the nuclear
- 18022 facility's, where the Agency determines if such data are pertinent is
- 18023 applicable to the supplier's a particular water system, by a SEP. If in the
- 18024 event that there is a release from a nuclear facility occurs, a supplier ~~that is~~
- 18025 using surveillance data must begin monitoring at the CWS's community
- 18026 water supplier's entry points ~~under in accordance with~~ subsection (b)(1).
- 18027
- 18028 b) A CWS supplier (either a surface water or groundwater supplier) ~~designated by~~
- 18029 the Agency designates in, by a SEP, as using source water utilizing waters
- 18030 contaminated by effluent effluents from a nuclear facility facilities must sample
- 18031 for beta particle and photon radioactivity. The A-supplier must collect quarterly
- 18032 samples for beta emitters and iodine-131 and annual samples for tritium and
- 18033 strontium-90 at each entry point to its the distribution system (~~hereafter called a~~
- 18034 sampling point); beginning within one quarter after ~~being notified by~~ the Agency
- 18035 issues the SEP. A supplier already designated by the Agency as a supplier using
- 18036 waters contaminated by effluents from nuclear facilities must continue to sample
- 18037 until the Agency reviews and issues a SEP removing ~~either reaffirms or removes~~
- 18038 the designation, ~~by a SEP~~.
- 18039
- 18040 1) The supplier must base quarterly ~~Quarterly~~ monitoring for gross beta

- 18041 particle activity ~~must be based on the~~ analysis of monthly samples or the
 18042 analysis of a composite of three monthly samples.
- 18043
- 18044 BOARD NOTE: In corresponding 40 CFR 141.26(b)(2)(i), USEPA
 18045 recommends using the use of a composite of three monthly samples.
- 18046
- 18047 2) For iodine-131, the supplier must analyze a composite of five consecutive
 18048 daily samples ~~must be analyzed~~ once each quarter. The Agency must
 18049 issue a SEP requiring require, by a SEP, more frequent monitoring for
 18050 iodine-131 if analysis identifies where iodine-131 ~~is identified~~ in the
 18051 finished water.
- 18052
- 18053 3) The supplier must annually monitor Annual monitoring for strontium-90
 18054 and tritium using must be conducted by means of the analysis of a
 18055 composite of four consecutive quarterly samples or ~~analysis of~~ four
 18056 quarterly samples.
- 18057
- 18058 BOARD NOTE: In corresponding 40 CFR 141.26(b)(2)(iii), USEPA
 18059 recommends using the analysis of four consecutive quarterly samples.
- 18060
- 18061 4) If the gross beta particle activity minus the naturally occurring potassium-
 18062 40 beta particle activity at a sampling point has a running annual average
 18063 (computed quarterly) less than or equal to 15 pCi/l, the Agency may issue;
 18064 ~~by a SEP reducing, reduce~~ the frequency of monitoring at that sampling
 18065 point to once every three years. The supplier must collect the ~~same type of~~
 18066 samples ~~required in~~ subsection (b) requires during the reduced monitoring
 18067 period.
- 18068
- 18069 5) For a supplier in the vicinity of a nuclear facility, the Agency may issue a
 18070 SEP allowing allow the CWS to use utilize environmental surveillance
 18071 data ~~collected by~~ the nuclear facility collected in lieu of monitoring at the
 18072 system's entry points upon determining the nuclear facility's, where the
 18073 Agency ~~determines, by a SEP,~~ that such data are pertinent is applicable to
 18074 the supplier's particular water system. If In the event that there is a release
 18075 from a nuclear facility occurs, a supplier using that uses such surveillance
 18076 data must begin monitoring at the CWS's entry points under in accordance
 18077 with subsection (b)(1).
- 18078
- 18079 c) A CWS supplier ~~designated by~~ the Agency designates to monitor for beta particle
 18080 and photon radioactivity cannot apply to the Agency for a waiver from the
 18081 monitoring frequencies ~~specified in~~ subsection (a) or (b).
- 18082
- 18083 d) A CWS supplier may analyze for naturally occurring potassium-40 beta particle

activity ~~using from~~ the same or an equivalent sample it used for the gross beta particle activity analysis. A supplier ~~may is allowed to~~ subtract the potassium-40 beta particle activity value from the total gross beta particle activity value to determine if ~~it exceeded~~ the screening level ~~is exceeded~~. The supplier must calculate potassium-40 beta particle activity ~~must be calculated~~ by multiplying elemental potassium concentrations (in mg/l) by a factor of 0.82 pCi/mg.

- e) If the gross beta particle activity minus the naturally occurring potassium-40 beta particle activity exceeds the appropriate screening level, the supplier must analyze an analysis of the sample ~~must be performed~~ to identify the major radioactive constituents present in the sample and calculate and sum the appropriate doses ~~must be calculated and summed~~ to determine compliance with Section 611.330(d)(1); using the formula in Section 611.330(d)(2). The supplier must also calculate and combine doses ~~Doses must also be calculated and combined~~ for measured levels of tritium and strontium to determine compliance.
- f) A supplier must monitor monthly at the sampling points exceeding that exceeds the ~~MCL maximum contaminant level~~ in Section 611.330(d) beginning the month after the exceedance occurs. A supplier must continue monthly monitoring until the supplier has established that it meets the MCL; by a rolling average of three monthly samples; ~~that the MCL is being met~~. A supplier establishing that establishes that it meets the MCL ~~is being met~~ must return to quarterly monitoring until it complies with ~~meets the requirements set forth in~~ subsection (a)(1) or (b)(4).

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.26(b).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.733 General Monitoring and Compliance Requirements

- a) The Agency may ~~issue, by~~ a SEP requiring, require more frequent monitoring than ~~specified in~~ Sections 611.731 and 611.732 specify or requiring may require confirmation samples. The supplier must average the results of the initial and confirmation samples to determine whether it complies ~~will be averaged for use in a compliance determination~~.
- b) ~~A Each~~ PWS supplier must monitor at the time ~~designated by~~ the Agency designates during each compliance period.
- c) Compliance. A supplier must determine whether it complies ~~compliance~~ with Section 611.330(b) through (e) ~~must be determined~~ based on the analytical results it obtains ~~obtained~~ at each sampling point. If one sampling point violates is in

~~violation of~~ an MCL, the supplier ~~violates is in violation of~~ the MCL.

- 1) ~~A For a~~ supplier monitoring more than once per year ~~must run an annual average at each sampling point to determine whether it complies; compliance~~ with the MCL ~~is determined by a running annual average at each sampling point~~. If the average of any sampling point is greater than the MCL, ~~then~~ the supplier ~~does not comply is out of compliance~~ with the MCL.
- 2) ~~A For a~~ supplier monitoring more than once per year ~~immediately does not comply with an MCL~~; if any sample result would cause the running average to exceed the MCL at any single sampling point, ~~the supplier is immediately out of compliance with the MCL~~.
- 3) A supplier must include all samples ~~it takes and analyzes taken and analyzed~~ under ~~the provisions of~~ this Section and Sections 611.731 and 611.732 ~~to determine whether it complies in determining compliance~~, even if that number is greater than the ~~required~~ minimum ~~required~~.
- 4) If a supplier does not collect all required samples ~~to determine its when~~ compliance ~~is~~ based on a running annual average of quarterly samples, ~~the supplier must determine whether it complies compliance will be~~ based on the running average of the samples ~~it~~ collected.
- 5) If a sample result is less than the detection limit, ~~the supplier must use zero will be used~~ to calculate the annual average, ~~unless the supplier uses a gross alpha particle activity is being used~~ in lieu of radium-226 or uranium. If the gross alpha particle activity result is less than ~~the~~ detection limit, ~~the supplier must use~~ one-half the detection limit ~~will be used~~ to calculate the annual average.

d) The Agency may ~~issue, by~~ a SEP ~~allowing, allow~~ the supplier to delete results of obvious sampling or analytic errors.

e) ~~A CWS supplier exceeding If~~ the MCL for ~~a radioactive contaminant radioactivity set forth in Section 611.330(b) 611.330(b)~~ through (e) ~~is exceeded, the operator of a CWS~~ must ~~notify give notice to~~ the Agency under Section 611.840 and ~~to the public under, as required by~~ Subpart V.

BOARD NOTE: ~~This Section derives Derived~~ from 40 CFR 141.26(c).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART R: ENHANCED FILTRATION AND DISINFECTION:
SYSTEMS THAT SERVE 10,000 OR MORE PEOPLE

Section 611.740 General Requirements

- a) ~~This The requirements of this~~ Subpart R ~~contains are~~ National Primary Drinking Water Regulations. These ~~Subpart R regulations establish~~ requirements for filtration and disinfection ~~apply that are~~ in addition to ~~those applying standards under which filtration and disinfection are required~~ under Subpart B. ~~This The requirements of this~~ Subpart R ~~applies are applicable~~ to a Subpart B system supplier serving 10,000 or more persons, unless ~~otherwise specified in this~~ Subpart R ~~specifies otherwise~~. ~~This The regulations in this~~ Subpart R ~~establishes establish or extends extend~~ treatment ~~techniques technique requirements~~ in lieu of ~~maximum contaminant levels (MCLs) for certain the following~~ contaminants: Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, Cryptosporidium, and turbidity. ~~A Each~~ Subpart B system supplier serving 10,000 or more persons must ~~treat provide treatment of~~ its source water ~~complying that complies with the these~~ treatment ~~techniques in this Subpart R technique requirements~~ and are in addition to those ~~identified~~ in Section 611.220. The treatment ~~techniques in this Subpart R technique requirements~~ consist of installing and properly operating water treatment processes ~~that reliably achieving two objectives achieve the following~~:
- 1) At least 99 percent (2-log) removal of Cryptosporidium 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 for ~~a supplier applying filtration treatment filtered systems, or Cryptosporidium control under the watershed control plan for unfiltered systems~~; and
 - 2) Compliance with the profiling and benchmark requirements under ~~the provisions of~~ Section 611.742.
- b) A PWS supplier subject to ~~the requirements of this~~ Subpart R ~~complies is considered to be in compliance with the requirements of~~ subsection (a) if ~~it complies with the applicable filtration requirements in Section 611.250 or 611.743 and the disinfection requirements in Sections 611.240 and 611.742. the following is true~~:
- 1) ~~It meets the requirements for avoiding filtration in Sections 611.232 and 611.741, and the disinfection requirements in Sections 611.240 and 611.742; or~~
 - 2) ~~It meets the applicable filtration requirements in either Section 611.250 or~~

~~Section 611.743, and the disinfection requirements in Sections 611.240 and 611.742.~~

- c) A supplier must not begin ~~constructing an~~ construction of uncovered finished water storage ~~facility~~ facilities.
- d) A supplier ~~deciding to significantly~~ that decides to make a significant change to its disinfection practice, as ~~described in~~ Section 611.742 (c)(1)(A) through (c)(1)(D) describes, must obtain Agency ~~the~~ approval in a SEP before of the Agency prior to making the significant ~~such a~~ change.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.170 ~~(2016)~~.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.741 Standards for ~~Avoiding~~ Filtration

~~A~~ In addition to the requirements of Section 611.232, a PWS supplier must apply filtration treatment complying with Subpart B and subject to the requirements of this Subpart R that does not provide filtration must meet all of the conditions of subsections (a) and (b).

- a) ~~Site Specific Conditions. In addition to site specific conditions in Section 611.232, a supplier must maintain the watershed control program under Section 611.232(b) to minimize the potential for contamination by Cryptosporidium oocysts in the source water. The watershed control program must, for Cryptosporidium, do the following:~~
 - 1) ~~Identify watershed characteristics and activities that may have an adverse effect on source water quality; and~~
 - 2) ~~Monitor the occurrence of activities that may have an adverse effect on source water quality.~~
- b) ~~During the onsite inspection conducted under the provisions of Section 611.232(c), the Agency must determine whether the watershed control program established under Section 611.232(b) is adequate to limit potential contamination by Cryptosporidium oocysts. The adequacy of the program must be based on the comprehensiveness of the watershed review; the effectiveness of the supplier's program to monitor and control detrimental activities occurring in the watershed; and the extent to which the water supplier has maximized land ownership or controlled land use within the watershed.~~

BOARD NOTE: This Section originally derived ~~Derived~~ from 40 CFR 141.171. The Board

18256 removed provisions for unfiltered system suppliers. A supplier in Illinois using a surface water
18257 source or groundwater under the direct influence of surface water must apply filtration treatment
18258 and disinfection to water it provides to the public.

18259
18260 (Source: Amended at 47 Ill. Reg. _____, effective _____)

18261
18262 **Section 611.742 Disinfection Profiling and Benchmarking**

- 18263
18264 a) Determination of a Supplier Required to Profile. A PWS supplier subject to ~~the~~
18265 ~~requirements of~~ this Subpart R must determine its TTHM annual average under
18266 ~~using the procedure in~~ subsection (a)(1) and its HAA5 annual average under using
18267 ~~the procedure in~~ subsection (a)(2). The annual average is the arithmetic average
18268 of the quarterly averages ~~from of~~ four consecutive quarters of monitoring.
- 18269
18270 1) The ~~supplier must use the~~ TTHM annual average ~~that is used must be the~~
18271 ~~annual average~~ during the same period as the HAA5 annual average.
- 18272
18273 A) A supplier that collected data under ~~the provisions of~~ 40 CFR 141
18274 Subpart M (Information Collection Rule) must use the results of
18275 the samples collected during the last four quarters of required
18276 monitoring under former 40 CFR 141.42 (1995).
- 18277
18278 B) A supplier using that uses "grandfathered" HAA5 occurrence data
18279 under that meet the provisions of subsection (a)(2)(B) must use
18280 TTHM data it collected at the same time under ~~the provisions of~~
18281 former Section 611.680.
- 18282
18283 C) A supplier using that uses HAA5 occurrence data under that meet
18284 the provisions of subsection (a)(2)(C)(i) must use TTHM data it
18285 collected at the same time under the provisions of Section 611.310
18286 and former Section 611.680.
- 18287
18288 2) The HAA5 annual average the supplier uses that is used must be the
18289 annual average during the same period as the TTHM annual average.
- 18290
18291 A) A supplier that collected data under the provisions of 40 CFR 141
18292 Subpart M (Information Collection Rule) must use the results of
18293 the samples it collected during the last four quarters of required
18294 monitoring under former 40 CFR 141.42 (1995).
- 18295
18296 B) A supplier that ~~has~~ collected four quarters of HAA5 occurrence
18297 data meeting that meets the routine monitoring sample number and
18298 location requirements for TTHM in former Section 611.680 and

18299 handling and analytical method requirements of former Section
 18300 611.685 may use that data to determine whether ~~the requirements~~
 18301 ~~of this Section~~ applies-apply.

18302
 18303 C) A supplier that has not collected four quarters of HAA5 occurrence
 18304 data complying with either subsection (a)(2)(A) or (a)(2)(B) must
 18305 do either of two things:

18306
 18307 i) Conduct monitoring for HAA5 meeting the routine monitoring
 18308 sample number and location requirements for TTHM in former
 18309 Section 611.680 and handling and analytical method requirements
 18310 of former Section 611.685 to determine the HAA5 annual average
 18311 and whether subsection (b) applies; or

18312
 18313 ii) Comply with all other provisions of this Section as if the supplier
 18314 had conducted the HAA5 monitoring and the results required the
 18315 supplier to comply with subsection (b).

18316
 18317 3) The supplier may request that the Agency approve a more representative
 18318 annual data set than the data set ~~determined~~ under subsection (a)(1) or
 18319 (a)(2) for ~~the purpose of~~ determining applicability of ~~the requirements of~~
 18320 this Section.

18321
 18322 4) The Agency may require ~~that~~ a supplier to use a more representative
 18323 annual data set than the data set ~~determined~~ under subsection (a)(1) or
 18324 (a)(2) for ~~the purpose of~~ determining ~~the~~ applicability of ~~the requirements~~
 18325 ~~of~~ this Section.

18326
 18327 5) This subsection (a)(5) corresponds with 40 CFR 141.172(a)(5), an
 18328 implementing provision that no longer has operative effect. This
 18329 statement maintains structural consistency with the corresponding federal
 18330 rules.

18331
 18332 6) Any supplier that had either a TTHM annual average \geq (greater than or
 18333 equal to) 0.064 mg/l or an HAA5 annual average \geq 0.048 mg/l under
 18334 during the period identified in subsections (a)(1) and (a)(2) must comply
 18335 with subsection (b).

18336
 18337 BOARD NOTE: Former Sections 611.680 and 611.685 originally derived from
 18338 40 CFR 141.30(a), (b), and (e). USEPA removed 40 CFR 141.30 in its entirety in
 18339 2006. The Board repealed former Section 611.685 in 2007 and Section 611.680
 18340 in 2012. The references to former Sections 611.680 and 611.685 in this

18341 subsection (a) relate to ~~using use of~~ existing monitoring data collected under those
 18342 provisions as they existed before their repeal.

18343
 18344 b) Disinfection Profiling

18345
 18346 1) Any supplier ~~complying with that meets the standards in~~ subsection (a)(6)
 18347 ~~was to develop must have developed~~ a disinfection profile of its
 18348 disinfection practice for a period of up to three years. The Agency ~~was to~~
 18349 ~~determine must have determined~~ the period of the disinfection profile,
 18350 with a minimum period of one year.

18351
 18352 2) The supplier must monitor daily for a period of 12 consecutive calendar
 18353 months to determine the total logs of inactivation for each day of
 18354 operation, based on the ~~appropriate~~ CT_{99.9} values in Appendix B, ~~as~~
 18355 ~~appropriate~~, through the entire treatment plant. As a minimum, the
 18356 supplier ~~applying disinfection treatment at with~~ a single point ~~before the~~
 18357 ~~entry point of disinfectant application prior to entrance to its the~~
 18358 distribution system ~~was to conduct must have conducted~~ the monitoring
 18359 ~~under in~~ subsections (b)(2)(A) through (b)(2)(D). A supplier ~~applying~~
 18360 ~~disinfection treatment at with~~ more than one point ~~in its distribution~~
 18361 ~~system was to conduct of disinfectant application must have conducted~~ the
 18362 monitoring ~~under in~~ subsections (b)(2)(A) through (b)(2)(D) for each
 18363 disinfection segment. The supplier ~~was to monitor must have monitored~~
 18364 the parameters necessary to determine the total inactivation ratio, using
 18365 analytical methods in Section 611.531, ~~as follows~~:

18366
 18367 A) The ~~supplier was to measure the~~ temperature of the disinfected
 18368 water ~~must have been measured~~ once per day at each residual
 18369 disinfectant concentration sampling point during peak hourly flow.

18370
 18371 B) If the supplier uses chlorine, the ~~supplier was to measure the~~ pH of
 18372 the disinfected water ~~must have been measured~~ once per day at
 18373 each chlorine residual disinfectant concentration sampling point
 18374 during peak hourly flow.

18375
 18376 C) The ~~supplier was to determine the~~ disinfectant contact times ("T")
 18377 ~~must have been determined~~ for each day during peak hourly flow.

18378
 18379 D) The ~~supplier was to measure the~~ residual disinfectant
 18380 concentrations ("C") of the water before or at the first customer
 18381 and prior to each additional point of disinfection ~~must have been~~
 18382 ~~measured~~ each day during peak hourly flow.

18383

- 18384 3) This subsection (b)(3) corresponds with 40 CFR 141.172(b)(2)(A), a
 18385 provision relating to implementation of the Interim Enhanced ~~interim~~
 18386 ~~enhanced~~ Surface Water Treatment Rule. This statement maintains
 18387 structural consistency with the corresponding federal rule.
 18388
- 18389 4) The supplier must calculate the total inactivation ratio ~~as follows~~:
 18390
- 18391 A) A supplier using ~~If the supplier uses~~ only one point of disinfectant
 18392 application, ~~the system~~ may determine the total inactivation ratio
 18393 for ~~its~~ ~~the~~ disinfection segment under based on either of the
 18394 ~~methods in~~ subsection (b)(4)(A)(i) or (b)(4)(A)(ii).
 18395
- 18396 i) The supplier may determine ~~Determine~~ one inactivation
 18397 ratio ($CT_{calc}/CT_{99.9}$) before or at the first customer during
 18398 peak hourly flow; ~~or~~:
 18399
- 18400 ii) The supplier may determine ~~Determine~~ successive
 18401 $CT_{calc}/CT_{99.9}$ values, representing sequential inactivation
 18402 ratios, between the point where applying of ~~disinfectant~~
 18403 ~~application~~ and a point before or at the first customer
 18404 during peak hourly flow. Under this alternative, the
 18405 supplier must calculate the total inactivation ratio (\sum
 18406 ($CT_{calc}/CT_{99.9}$)) by determining $CT_{calc}/CT_{99.9}$ for each step
 18407 in the sequence, and then summing adding the $CT_{calc}/CT_{99.9}$
 18408 values for each step together to determine $\sum (CT_{calc}/CT_{99.9})$.
 18409
- 18410 B) A ~~If the supplier applying disinfection treatment at uses~~ more than
 18411 one point ~~of disinfectant application~~ before the first customer, ~~the~~
 18412 ~~system~~ must determine the CT value of each disinfection segment
 18413 during peak hourly flow immediately prior to the next point where
 18414 applying of disinfectant application, or for the final segment,
 18415 before or at the first customer for the final segment, during peak
 18416 hourly flow. The supplier must calculate the ($CT_{calc}/CT_{99.9}$) value
 18417 of each segment and ($\sum(CT_{calc}/CT_{99.9})$) ~~must be calculated~~ using
 18418 the method in subsection (b)(4)(A).
 18419
- 18420 C) The supplier must determine the total logs of inactivation by
 18421 multiplying the value calculated under in ~~in~~ subsection (b)(4)(A) or
 18422 (b)(4)(B) by 3.0.
 18423
- 18424 5) A supplier using that uses either ~~either~~ chloramines or ozone for primary
 18425 disinfection must also calculate the logs of inactivation for viruses using
 18426 an Agency-approved a method approved by the Agency.

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- 6) The supplier must maintain ~~retain~~ disinfection profile data in graphic form, as a spreadsheet, or in some other format acceptable to the Agency, for review as part of sanitary surveys ~~conducted by~~ the Agency conducts.

- c) Disinfection Benchmarking
 - 1) A ~~Any~~ supplier ~~that must required to~~ develop a disinfection profile under the ~~provisions of~~ subsections (a) and (b) deciding and that decides to ~~significantly make a significant~~ change to its disinfection practice must obtain ~~consult with the~~ Agency approval before ~~prior to~~ making the such change. Certain changes are significant ~~Significant~~ changes to disinfection practice ~~are the following~~:
 - A) A change in ~~Changes to~~ the point where the supplier applies of disinfection treatment;
 - B) A change in ~~Changes to~~ the disinfectant the supplier uses ~~disinfectants used in its~~ the treatment plant;
 - C) A change in ~~Changes to~~ the supplier's disinfection process; and
 - D) Any other modification ~~identified by~~ the Agency identifies as a significant change in a SEP.

 - 2) Any supplier ~~that is~~ modifying its disinfection practice must calculate its disinfection benchmark using the procedure ~~specified~~ in subsections (c)(2)(A) and (c)(2)(B).
 - A) For each year of profiling data a supplier collects ~~collected~~ and calculates ~~calculated~~ under subsection (b), the supplier must determine the lowest average monthly Giardia lamblia inactivation in each year of profiling data. The supplier must determine the average Giardia lamblia inactivation for each calendar month for each year of profiling data by dividing the sum of daily Giardia lamblia of inactivation by the number of values calculated for that month.

 - B) The disinfection benchmark is the lowest monthly average value (for a supplier systems with one year of profiling data) or average of lowest monthly average values (for a supplier systems with more than one year of profiling data) of the monthly logs of Giardia lamblia inactivation in each year of profiling data.

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- 3) A supplier using that uses either chloramines or ozone for primary disinfection must also calculate the disinfection benchmark for viruses using an Agency-approved a method approved by the Agency.
 - 4) The supplier must submit the information in subsections (c)(4)(A) through (c)(4)(C) to the Agency when seeking Agency approval as part of its consultation process.
 - A) A description of the proposed change;
 - B) The disinfection profile for Giardia lamblia (and, if necessary, viruses if necessary) under subsection (b) and benchmark as required by subsection (c)(2) requires; and
 - C) An analysis of how the proposed change will affect the current levels of disinfection.

18488 BOARD NOTE: This Section derives Derived from 40 CFR 141.172.

18489 (Source: Amended at 47 Ill. Reg. _____, effective _____)

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18491
18492 SUBPART S: GROUNDWATER RULE
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18494 **Section 611.801 Sanitary Surveys for GWS Suppliers**
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- a) A GWS supplier must provide the Agency, at the Agency's request, any existing information that will enable the Agency to conduct a sanitary survey.
 - b) For the purposes of this Subpart S, a "sanitary survey", as conducted by the Agency, includes an onsite review of the delineated WHPAs (identifying sources of contamination within the WHPAs and evaluations of the hydrogeologic sensitivity of the delineated WHPAs conducted under source water assessments or utilizing other relevant information if where available), facilities, equipment, operation, maintenance, and monitoring compliance of a PWS public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.
 - c) The sanitary survey must include an evaluation of the applicable components listed in subsections (c)(1) through (c)(8):
 - 1) Source;

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- 2) Treatment [including any corrosion control treatment and water quality parameters](#);
 - 3) Distribution system;
 - 4) Finished water storage;
 - 5) Pumps, pump facilities, and controls;
 - 6) Monitoring, reporting, and data verification;
 - 7) System management and operation; and
 - 8) Operator compliance with Agency requirements.
- d) The Agency must repeat the sanitary survey as follows:
- 1) The Agency must conduct a sanitary survey that addresses the eight sanitary survey components listed in subsection (c) no less frequently than every three years for a CWS supplier, except as provided in subsection (d)(3), and every five years for a non-CWS supplier. The Agency may conduct more frequent sanitary surveys for any supplier. The sanitary survey must include an evaluation of each of the elements set forth in subsection (c), as applicable.
 - 2) The Agency may use a phased review process to meet the requirements of subsection (d)(1) if all the applicable elements of subsection (c) are evaluated within the required interval.
 - 3) The Agency may conduct sanitary surveys once every five years for [CWSscommunity water systems](#) under any of the following circumstances:
 - A) If the system either provides at least 4-log treatment of viruses (using inactivation, removal, or an Agency-approved combination of 4-log inactivation and removal) before or at the first customer for all its groundwater sources; or
 - B) If the supplier has an outstanding performance record, as determined by the Agency and documented in previous sanitary surveys, and the supplier had no history of total coliform MCL or monitoring violations under former Sections 611.521 through 611.527 since the last sanitary survey.

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- 4) This subsection (d)(4) corresponds with 40 CFR 142.16(o)(2)(iv), which imposes requirements for describing the elements of the State's regulatory system. This statement maintains structural consistency with the corresponding federal provision.
 - 5) The Agency must provide a GWS supplier with written notice ~~in~~by a SEP that describes any significant deficiency ~~that~~which it has found no later than 30 days after the Agency has identified the significant deficiency. The notice may specify corrective actions and deadlines for completion of corrective actions. The Agency may provide the written notice at the time of the sanitary survey.

18569 BOARD NOTE: Subsections (a) through (c) ~~derive~~are derived from 40 CFR 141.401.
18570 Subsection (d) ~~derives~~ is derived from 40 CFR 142.16(o)(2).

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18572 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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18574 **Section 611.802 Groundwater Source Microbial Monitoring and Analytical Methods**
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- 18576 a) Triggered Source Water Monitoring
18577
18578 1) General Requirements. A GWS supplier must conduct triggered source
18579 water monitoring if the following conditions exist.
18580
18581 A) The supplier does not provide at least 4-log treatment of viruses
18582 (using inactivation, removal, or an Agency-approved combination
18583 of 4-log virus inactivation and removal) before or at the first
18584 customer for each groundwater source.
18585
18586 B) This subsection (a)(1)(B) corresponds with 40 CFR
18587 141.802(a)(1)(ii), which has no operative effect after a past
18588 implementation date. This statement maintains structural
18589 consistency with the federal regulations.
18590
18591 C) The system is notified that a sample collected under Sections
18592 611.1054 through 611.1057 is total coliform-positive and the
18593 sample is not invalidated under Section 611.1053(c).
18594
18595 2) Sampling Requirements. A GWS supplier must collect, within 24 hours
18596 after notification of the total coliform-positive sample, at least one
18597 groundwater source sample from each groundwater source in use at the
18598 time the total coliform-positive sample was collected under Sections
18599 611.1054 through 611.1057, except as provided in subsection (a)(2)(B).

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- A) The Agency may ~~issue, by~~ a SEP ~~extending, extend~~ the 24-hour time limit on a case-by-case basis if it determines that the supplier cannot collect the groundwater source water sample within 24 hours due to circumstances beyond the supplier's control. In the case of an extension, the Agency must specify how much time the supplier has to collect the sample.
 - B) If approved by the Agency, a supplier with more than one groundwater source may meet the requirements of this subsection (a)(2) by sampling a representative groundwater source or sources. If directed by the Agency ~~in by~~ a SEP, the supplier must submit for Agency approval a triggered source water monitoring plan that identifies one or more groundwater sources that are representative of each monitoring site in the system's sample siting plan under Section 611.1053 and that the system intends to use for representative sampling under this subsection (a).
 - C) This subsection (a)(2)(C) corresponds with 40 CFR 141.802(a)(1)(ii), a now-obsolete implementing provision. This statement maintains structural consistency with the federal regulations.
 - D) A GWS supplier ~~serving that serves~~ 1,000 or fewer people may use a repeat sample collected from a groundwater source to meet both the requirements of Subpart AA and to satisfy the monitoring requirements of subsection (a)(2) for that groundwater source only if the Agency ~~issues, by~~ a SEP ~~approving, approves~~ the use of E. coli as a fecal indicator for source water monitoring under this subsection (a) and approves the use of a single sample for meeting both the triggered source water monitoring requirements in this subsection (a) and the repeat monitoring requirements in Section 611.1058. If the repeat sample collected from the groundwater source is E. coli-positive, the system must comply with subsection (a)(3).
- 3) Additional Requirements. If the Agency does not require corrective action under Section 611.803(a)(2) for a fecal indicator-positive source water sample collected under subsection (a)(2) that is not invalidated under subsection (d), the ~~suppliersystem~~ must collect five additional source water samples from the same source within 24 hours after being notified of the fecal indicator-positive sample.
- 4) Consecutive and Wholesale Systems

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- A) In addition to the other requirements of this subsection (a), a consecutive GWS supplier that has a total coliform-positive sample collected under Sections 611.1054 through 611.1057, must notify the wholesale systems within 24 hours after being notified of the total coliform-positive sample.
 - B) In addition to the other requirements of this subsection (a), a wholesale GWS supplier must comply with the following requirements:
 - i) A wholesale GWS supplier that receives notice from a consecutive system it serves that a sample collected under Sections 611.1054 through 611.1057, is total coliform-positive must, within 24 hours after being notified, collect a sample from its groundwater sources under subsection (a)(2) and analyze it for a fecal indicator under subsection (c).
 - ii) If the sample collected under subsection (a)(4)(B)(i) is fecal indicator-positive, the wholesale GWS supplier must notify all consecutive systems served by that groundwater source of the fecal indicator source water positive within 24 hours after being notified of the groundwater source sample monitoring result and must meet the requirements of subsection (a)(3).
 - 5) Exceptions to the Triggered Source Water Monitoring Requirements. A GWS supplier is not required to comply with the source water monitoring requirements of subsection (a) if either of the following conditions exists:
 - A) The Agency ~~issues determines, and documents in writing, by a SEP determining and documenting;~~ that a distribution system deficiency caused the total coliform-positive sample collected under Sections 611.1054 through 611.1057, ~~is caused by a distribution system deficiency;~~ or
 - B) The total coliform-positive sample collected under Sections 611.1054 through 611.1057, is collected at a location that meets Agency criteria for distribution system conditions that will cause total coliform-positive samples.

18686 b) Assessment Source Water Monitoring. If ~~directed by~~ the Agency ~~directs in~~by a
 18687 SEP, a GWS supplier must conduct assessment source water monitoring that
 18688 meets Agency-determined requirements for such monitoring. A GWS supplier
 18689 conducting assessment source water monitoring may use a triggered source water
 18690 sample collected under subsection (a)(2) to meet the requirements of subsection
 18691 (b). Agency-determined assessment source water monitoring requirements may
 18692 include the following:

- 18694 1) Collection of a total of 12 groundwater source samples that represent each
 18695 month the system provides groundwater to the public;
- 18696 2) Collection of samples from each well, unless the system obtains written
 18697 Agency approval to conduct monitoring at one or more wells within the
 18698 GWS that are representative of multiple wells used by that system and
 18699 ~~that~~which draw water from the same hydrogeologic setting;
- 18700 3) Collection of a standard sample volume of at least 100 ml for fecal
 18701 indicator analysis, regardless of the fecal indicator or analytical method
 18702 used;
- 18703 4) Analysis of all groundwater source samples using one of the analytical
 18704 methods listed in subsection (c)(2) for the presence of E. coli, enterococci,
 18705 or coliphage;
- 18706 5) Collection of groundwater source samples at a location prior to any
 18707 treatment of the groundwater source unless the Agency approves a
 18708 sampling location after treatment; and
- 18709 6) Collection of groundwater source samples at the well itself, unless the
 18710 system's configuration does not allow for sampling at the well itself and
 18711 the Agency approves ~~in a SEP~~ an alternate sampling location ~~by a SEP~~
 18712 that is representative of the water quality of that well.

18713 c) Analytical Methods

- 18714 1) A GWS supplier subject to the source water monitoring requirements of
 18715 subsection (a) must collect a standard sample volume of at least 100 ml
 18716 for fecal indicator analysis, regardless of the fecal indicator or analytical
 18717 method used.
- 18718 2) A GWS supplier must analyze all groundwater source samples collected
 18719 under subsection (a) using one of the analytical methods listed in
 18720 subsections (c)(2)(A) through (c)(2)(C), each incorporated by reference in

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Section 611.102, or alternative methods approved by the Agency under Section 611.480, subject to the limitations of subsection (c)(2)(D), for the presence of E. coli, enterococci, or coliphage:

- A) E. coli. Enzyme Substrate Technique
 - i) Colilert[®]. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).
 - ii) Colisure[®]. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).
 - iii) Membrane Filter Method with MI Agar. USEPA 1604 (02).
 - iv) E*Colite (98).
 - v) EC-MUG. SM 9221 F (94), SM 9221 F (06), or SM 9221 F (14).
 - vi) NA-MUG. SM 9222 G (97) (20th ed. only) or SM 9222 I (15).
 - vii) Colilert[®]-18. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).
 - viii) ReadyCult[®] (07).
 - ix) Modified Colitag[™] (09) [or Modified Colitag[™] \(20\)](#).
 - x) Chromocult[®] (00).
 - xi) Tecta (14) or Tecta (17).
 - [xii\) RAPID'E. coli \(20\)](#).

BOARD NOTE: EC-MUG (SM 9221 F (94) (20th ed. only)) or NA-MUG (SM 9222 G (97) (20th ed. only)), both incorporated by reference in Section 611.102, can be used for E. coli testing step, as described in 40 CFR 141.21(f)(6)(i) or (f)(6)(ii), incorporated by reference in Section 611.102, after use of SM 9221 B (93), SM 9221 B (94), SM 9221 B (99), SM 9221 B (06), SM 9221 D (93), SM 9221 D (94), SM 9221 D (99), SM 9221 D (06), SM 9222 B (91),

18771 SM 9222 B (94), SM 9222 B (97), SM 9222 C (91), SM 9222 C
18772 (94), or SM 9222 C (97).
18773

18774 B) E. coli. Fermentation Technique
18775

18776 i) Hach 10029 (99) (m-ColiBlue24[®]).
18777

18778 ii) SM 9222 J (15).
18779

18780 C) Enterococci
18781

18782 i) Multiple-Tube Technique. SM 9230 B (93) (20th ed. only),
18783 SM 9230 B (04), SM 9230 C (93) (20th ed. only), SM 9230
18784 C (13), or USEPA 1600 (02).
18785

18786 BOARD NOTE: The holding time and temperature for
18787 groundwater samples are specified in subsection (c)(2)(D),
18788 rather than as specified in Section 8 of USEPA 1600 (02).
18789

18790 ii) Fluorogenic Substrate Enterococcus Test (using Enterolert).
18791 Enterolert (96) or SM 9230 D (13).
18792

18793 BOARD NOTE: Medium is available through IDEXX
18794 Laboratories, Inc., at the address set forth in Section
18795 611.102(b). Preparation and use of the medium must be as
18796 set forth in the article that embodies the method as
18797 incorporated by reference in Section 611.102(b).
18798

18799 D) Coliphage
18800

18801 i) Two-Step Enrichment Presence-Absence Procedure.
18802 USEPA 1601 (01) or Charm Fast Phage (12).
18803

18804 ii) Single Agar Layer Procedure. USEPA 1602 (01).
18805

18806 E) Limitation on Methods Use. The time from sample collection to
18807 initiation of analysis may not exceed 30 hours. The GWS supplier
18808 is encouraged but is not required to hold samples below 10° C
18809 during transit.
18810

18811 d) Invalidation of a Fecal Indicator-Positive Groundwater Source Sample
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- 1) A GWS supplier may obtain Agency invalidation of a fecal indicator-positive groundwater source sample collected under subsection (a) only under either of the following conditions:
 - A) The supplier provides the Agency with written notice from the laboratory that improper sample analysis occurred; or
 - B) The Agency issues a SEP determining and documenting ~~determines and documents in writing by a SEP that there is~~ substantial evidence that a fecal indicator-positive groundwater source sample is not related to source water quality.
 - 2) If the Agency invalidates a fecal indicator-positive groundwater source sample, the GWS supplier must collect another source water sample under subsection (a) within 24 hours after being notified by the Agency of its invalidation decision, and the supplier must have it analyzed for the same fecal indicator using the analytical methods in subsection (c). The Agency may extend the 24-hour time limit on a case-by-case basis if the supplier cannot collect the source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Agency must specify how much time the system has to collect the sample.
- e) Sampling Location
- 1) Any groundwater source sample required under subsection (a) must be collected at a location prior to any treatment of the groundwater source unless the Agency approves a sampling location after treatment.
 - 2) If the supplier's system configuration does not allow for sampling at the well itself, it may collect a sample at an Agency-approved location to meet the requirements of subsection (a) if the sample is representative of the water quality of that well.
- f) New Sources. If ~~directed by~~ the Agency directs in by a SEP, a GWS supplier placing that places a new groundwater source into service must conduct assessment source water monitoring under subsection (b). If ~~directed by~~ the SEP directs, the suppliersystem must begin monitoring before the groundwater source is used to provide water to the public.
- g) Public Notification. A GWS supplier with a groundwater source sample collected under subsection (a) or (b) that is fecal indicator-positive and that which is not invalidated under subsection (d), including a consecutive system supplier served

18855 by the groundwater source, must conduct public notification under Section
18856 611.902.

18857
18858 h) Monitoring Violations. A failure to meet the requirements of subsections (a)
18859 through (f) is a monitoring violation that requires the GWS supplier to provide
18860 public notification under Section 611.904.

18861
18862 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.402 and appendix A to
18863 subpart C of 40 CFR 141. The Board ~~did~~has not separately ~~list~~listed the following
18864 approved alternative methods from Standard Methods Online that are the same version as
18865 a method ~~appearing that appears~~ in a printed edition of Standard Methods. ~~Using~~Use of
18866 the Standard Methods Online copy is acceptable.

18867
18868 Standard Methods Online, Method 9221 F-06 appears in the 22nd edition as
18869 Method 9221 F. ~~This In this Section, this~~ appears in this Section as SM 9221 F
18870 (06).

18871
18872 Standard Methods Online, Method 9222 G-97 appears in the 20th and 21st editions
18873 as Method 9222 G. ~~This In this Section, this~~ appears in this Section as SM 9222 G
18874 (97).

18875
18876 Standard Methods Online, Method 9223 B-97 appears in the 20th and 21st editions
18877 as Method 9223 B. ~~This In this Section, this~~ appears in this Section as SM 9223 B
18878 (97).

18879
18880 Standard Methods Online, Method 9223 B-04 appears in the 22nd edition as
18881 Method 9223 B. ~~This In this Section, this~~ appears in this Section as SM 9223 B
18882 (04).

18883
18884 (Source: Amended at 47 Ill. Reg. _____, effective _____)

18885
18886 SUBPART T: REPORTING AND RECORDKEEPING

18887
18888 **Section 611.840 Reporting**

18889
18890 a) Except as this Part specifies~~where~~ a shorter period ~~is specified in this Part~~, a
18891 supplier must report to the Agency the results of any test measurement or analysis
18892 ~~required by~~ this Part requires within the sooner of specified~~following~~ times;
18893 ~~whichever is shortest~~:

18894
18895 1) Within~~The first~~ ten days after~~following~~ the month when the supplier
18896 receives~~in which~~ the result ~~is received~~; or

18897

- 18898 2) ~~Within The first~~ ten days ~~after following~~ the end of the ~~required~~-monitoring
18899 period ~~the Agency specifies in, as specified by~~ a SEP.
- 18900
- 18901 b) Except ~~as this Part specifies where~~ a different reporting period ~~is specified in this~~
18902 ~~Part, at the~~ supplier must report to the Agency within 48 hours any failure to
18903 comply with any provision (including failure to comply with monitoring
18904 requirements) of this Part.
- 18905
- 18906 c) The supplier ~~needs is~~ not ~~required to~~ report analytical results to the Agency ~~if in~~
18907 ~~eases where~~ an Agency laboratory performs the analysis.
- 18908
- 18909 d) Notice to the Agency
- 18910
- 18911 1) The supplier must certify to the Agency fully complying with public
18912 notification under Subpart V, within ten days after completing ~~the public~~
18913 ~~notification requirements under Subpart V for~~ the initial public notice and
18914 any repeat public notices, ~~must submit to the Agency a certification that it~~
18915 ~~has fully complied with the public notification regulations. For Tier 2 and~~
18916 ~~3 public notices, the~~The PWS must include with this certification a
18917 representative copy of each type of notice the Agency distributed,
18918 published, posted, or made available to the persons served ~~by the supplier~~
18919 or to the media.
- 18920
- 18921 2) For a Tier 1 public notice for exceeding the lead action level, the supplier
18922 must provide a copy of any Tier 1 public notice to USEPA and the Agency
18923 as soon as practicable but no later than 24 hours after the supplier learns of
18924 the exceedance.
- 18925
- 18926 e) The supplier must submit to the Agency within the time ~~the Agency states~~stated
18927 in ~~at the~~ request copies of any records ~~required to be maintained under~~ Section
18928 611.860 requires or copies of any existing documents ~~then in existence that the~~
18929 ~~Agency is entitled to inspect under the authority of~~ Section 4 of the Act [415
18930 ILCS 5/4] entitles the Agency to inspect.

18931 BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.31 ~~(2002)~~.

18932 (Source: Amended at 47 Ill. Reg. _____, effective _____)

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18936 SUBPART U: CONSUMER CONFIDENCE REPORTS

18937

18938 **Section 611.883 Content of the Reports**

- 18939
- 18940 a) Each CWS must provide to its customers an annual report containing~~that contains~~

18941 the information ~~specified in~~ this Section and Section 611.884 specify.

18942
18943 b) Information on the Source of the Water ~~the Supplier Delivers~~Delivered

18944
18945 1) Each report must identify the sources of the water ~~the CWS delivers~~
18946 ~~delivered by the CWS by~~ providing certain information ~~on the following~~:

18947
18948 A) The type of the water (~~i.e., e.g.,~~ surface water, groundwater, or
18949 groundwater under the direct influence of surface water); and

18950
18951 B) The commonly used name (if any) and location of the source body
18952 (or bodies) of water.

18953
18954 2) If ~~the supplier has~~ a complete source water assessment ~~has been completed~~,
18955 the report must notify consumers of the availability of this assessment
18956 ~~information~~ and how the means to obtain it. In addition, the supplier should
18957 ~~systems are encouraged to~~ highlight in the report significant sources of
18958 contamination in the source water area if ~~the supplier they have~~ readily has
18959 ~~that available~~ information. ~~If the supplier~~ Where a system has received thea
18960 source water assessment from the Agency, the report must include a brief
18961 summary of the system's susceptibility to potential sources of
18962 contamination, using language ~~provided by~~ the Agency provides or
18963 ~~as written by~~ the supplier writes.

18964
18965 c) Definitions

18966
18967 1) Each report must include ~~two~~the following definitions:

18968
18969 A) Maximum Contaminant Level Goal or MCLG: The level of a
18970 contaminant in drinking water below which USEPA determines
18971 ~~there is~~ no known or expected risk to health exists. MCLGs allow
18972 for a margin of safety.

18973
18974 BOARD NOTE: Although an MCLG is not an NPDWR that the
18975 Board must include in the Illinois SDWA regulations, USEPA
18976 mandates using the use of this definition ~~is mandatory where the~~
18977 term "MCLG" is defined.

18978
18979 B) Maximum Contaminant Level or MCL: The highest level of a
18980 contaminant that USEPA allows is allowed in drinking water.
18981 USEPA sets MCLs ~~are set~~ as close to the MCLGs as feasible using
18982 the best available treatment technology.

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- 2) A ~~report for a~~ CWS operating under relief from an NPDWR issued under Section 611.111, 611.112, 611.130, or 611.131 must include the following definition in its report: "Variances, Adjusted Standards, and Site-specific Rules: State permission not to meet an MCL or a treatment technique under certain conditions."
- 3) A report ~~containing that contains~~ data on contaminants that USEPA regulates using any of certain the following terms must include the applicable definitions:
- A) Treatment technique: A required process for reducing intended to reduce the concentration level of a contaminant in drinking water.
- B) Action level: The concentration of a contaminant above which a supplier must follow that, if exceeded, triggers treatment or other requirements ~~that a water system must follow~~.
- C) Maximum residual disinfectant level goal or MRDLG: The concentration level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of ~~using the use of~~ disinfectants to control microbial contaminants.
- BOARD NOTE: Although an MRDLG is not an NPDWR that the Board must include in the Illinois SDWA regulations, USEPA mandates using the use of this definition if is mandatory where the report uses the term "MRDLG" ~~is defined~~.
- D) Maximum residual disinfectant level or MRDL: The highest concentration level of a disinfectant USEPA allows allowed in drinking water. There is convincing evidence that adding addition of a disinfectant is necessary to for control ~~of~~ microbial contaminants.
- 4) A report ~~containing that contains~~ information about regarding a Level 1 or Level 2 assessment ~~required~~ under Subpart AA requires must include the applicable definition of the following definitions:
- A) "Level 1 assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system."

19026 B) "Level 2 assessment: A Level 2 assessment is a very detailed
 19027 study of the water system to identify potential problems and
 19028 determine (if possible) why an E. coli MCL violation ~~has occurred~~
 19029 or why monitoring found total coliform bacteria ~~have been found~~
 19030 in our water system on multiple occasions."

19031
 19032 d) Information on Detected Contaminants
 19033

19034 1) This subsection (d) specifies the ~~requirements for~~ information a supplier
 19035 ~~must include to be included~~ in each report for contaminants subject to
 19036 mandatory monitoring (except Cryptosporidium); ~~It applies to the~~
 19037 ~~following:~~

19038
 19039 A) Contaminants subject to an MCL, action level, MRDL, or
 19040 treatment technique (regulated contaminants); and

19041
 19042 B) Contaminants for which monitoring is required by USEPA under
 19043 40 CFR 141.40 (unregulated contaminants); ~~and~~

19044
 19045 C) ~~Disinfection byproducts or microbial contaminants for which~~
 19046 ~~monitoring is required by Section 611.382 and Subpart L, except~~
 19047 ~~as provided under subsection (e)(1), and which are detected in the~~
 19048 ~~finished water.~~

19049
 19050 2) The ~~report must display data relating to~~ these contaminants ~~must be~~
 19051 ~~displayed~~ in one table or in several adjacent tables. The CWS must
 19052 separately display any additional monitoring results if that a CWS
 19053 chooses to include in its report ~~must be displayed separately.~~

19054
 19055 3) The supplier must derive the data in the report ~~must have been derived~~ from
 19056 data it collected to comply with monitoring and analytical requirements
 19057 during each calendar year. If the Agency allows a supplier to monitor for
 19058 regulated contaminants less frequently than annually, the tables must
 19059 include the date and results of the most recent sampling, and the report must
 19060 include a brief statement indicating that the data in the report is from the
 19061 most recent testing done under the regulations. The supplier must not
 19062 include data older than five years. ~~1998 for the first report and must be~~
 19063 ~~derived from the data collected in subsequent calendar years, except that~~
 19064 ~~the following requirements also apply:~~

19065
 19066 A) ~~Where a system is allowed to monitor for regulated contaminants~~
 19067 ~~less often than once a year, the tables must include the date and~~
 19068 ~~results of the most recent sampling, and the report must include a~~

19069 brief statement indicating that the data presented in the report is
19070 from the most recent testing done in accordance with the
19071 regulations. No data older than five years need be included.
19072

19073 B) ~~Results of monitoring in compliance with Section 611.382 and~~
19074 ~~Subpart L need only be included for five years from the date of last~~
19075 ~~sample or until any of the detected contaminants becomes~~
19076 ~~regulated and subject to routine monitoring requirements,~~
19077 ~~whichever comes first.~~
19078

19079 4) For each detected regulated ~~contaminant~~contaminants (listed in Appendix
19080 A), the tables must contain specific information~~the following~~:

19081
19082 A) The MCL for ~~the~~that contaminant expressed as a number equal to
19083 or greater than 1.0 (as ~~provided in~~ Appendix A provides);

19084
19085 B) The federal Maximum Contaminant Level Goal (MCLG) for that
19086 contaminant expressed in the same units as the MCL;

19087
19088 C) If there is no MCL for a detected contaminant, the table must
19089 indicate that there is a treatment technique, or specify the action
19090 level for the, applicable to that contaminant, and the report must
19091 include the applicable of the definitions for treatment technique or
19092 action level that, as appropriate, specified in subsection (c)(3)
19093 specifies;

19094
19095 D) For contaminants subject to an MCL, except turbidity, total
19096 coliforms, fecal coliforms, and E. coli, the highest contaminant
19097 level the supplier used to determine compliance with the applicable
19098 an-NPDWR, and the range of detected levels, as follows:

19099
19100 i) When the supplier determines compliance with the MCL is
19101 determined annually or less frequently: the highest
19102 detected level at any sampling point and the range of
19103 detected levels expressed in the same units as the MCL.

19104
19105 ii) When the supplier determines compliance with the MCL is
19106 determined by calculating a running annual average of all
19107 samples taken at a monitoring location: the highest average
19108 of all any of the monitoring locations and the range of all
19109 monitoring locations expressed in the same units as the
19110 MCL. For ~~the MCLs for~~ TTHM and HAA5 MCLs in
19111 Section 611.312(b)611.312(b)(2), the supplier must include

19112 the highest locational running annual average for TTHM
19113 and HAA5 and the range of individual sample results for all
19114 monitoring locations expressed in the same units as the
19115 MCL. If results from more than one location exceed the
19116 TTHM or HAA5 MCL, the supplier must include the
19117 locational running annual average for each location
19118 ~~having whose~~ results ~~exceeding exceed~~ the MCL.

- 19119
- 19120 iii) When ~~the supplier determines~~ compliance with the MCL ~~is~~
19121 ~~determined~~ on a system-wide basis by calculating a running
19122 annual average of all samples at all monitoring locations:
19123 the average and range of ~~detected concentrations~~~~detection~~
19124 expressed in the same units as the MCL. The supplier
19125 ~~must is required to~~ include individual sample results for the
19126 IDSE ~~the supplier~~ conducted under Subpart W when
19127 determining the range of TTHM and HAA5 results to
19128 ~~report be reported~~ in ~~its~~~~the~~ annual consumer confidence
19129 report for the calendar year ~~when the supplier took that~~ the
19130 IDSE samples ~~were taken~~;

19131

19132 BOARD NOTE ~~to subsection (d)(4)(D):~~ ~~If a rule allows~~ ~~When~~
19133 rounding ~~of~~ results to determine compliance with ~~an~~~~the~~ MCL ~~is~~
19134 ~~allowed by the regulations,~~ ~~the supplier should round before~~
19135 ~~rounding should be done prior to~~ multiplying the results by the
19136 ~~applicable~~ factor ~~listed in Appendix A;~~ ~~derived from 40 CFR 153.~~

19137

19138 E) For turbidity, ~~the following~~:

- 19139
- 19140 i) ~~Corresponding 40 CFR 141.153(d)(4)(v)(A) relates to an~~
19141 ~~MCL for turbidity applicable to unfiltered systems, which do~~
19142 ~~not exist in Illinois. This statement maintains structural~~
19143 ~~consistency with the federal rules.~~ ~~When it is reported under~~
19144 ~~Section 611.560: the highest average monthly value.~~
- 19145
- 19146 ii) ~~If the supplier reports~~ ~~When it is reported~~ under the
19147 ~~requirements of~~ Section 611.211(b): the highest monthly
19148 value. The report must ~~explain~~~~include an explanation of~~
19149 the reasons for measuring turbidity.
- 19150
- 19151 iii) ~~If the supplier reports~~ ~~When it is reported~~ under Section
19152 611.250, 611.743, or 611.955(b): the highest single
19153 measurement and the lowest monthly percentage of
19154 samples meeting the turbidity limits ~~specified in~~ Section

19155 611.250, 611.743, or 611.955(b) specifies for the filtration
19156 technology the supplier uses being used. The report must
19157 explain include an explanation of the reasons for measuring
19158 turbidity;

19159
19160 F) For lead and copper, ~~the following~~: the 90th percentile
19161 concentration value of the most recent rounds round of sampling
19162 ~~and~~ the number of sampling sites exceeding the action level, and
19163 the range of tap sampling results;

19164
19165 G) This subsection (d)(4)(G) corresponds with 40 CFR
19166 141.153(d)(4)(vii), which has no operative effect after a past
19167 implementation date. This statement maintains structural
19168 consistency with the federal regulations;

19169
19170 H) This subsection (d)(4)(H) corresponds with 40 CFR
19171 141.153(d)(4)(viii), a now-obsolete implementing provision. This
19172 statement maintains structural consistency with the federal
19173 regulations;

19174
19175 I) The likely sources of detected contaminants to the best of the
19176 supplier's knowledge. Specific information regarding
19177 contaminants may be available in sanitary surveys and source
19178 water assessments; and must be used when available to the
19179 supplier. If the supplier lacks specific information on the likely
19180 source, the report must include one or more of the typical sources
19181 for that contaminant listed in Appendix G that are most applicable
19182 to the CWS; ~~and~~

19183
19184 J) For E. coli analytical results under Subpart AA, the total number of
19185 positive samples;

19186
19187 K) The report must state that the supplier inventoried its service lines
19188 (including if only a statement that the supplier serves no lead
19189 service lines) and instruct how to access the service line inventory;
19190 and

19191
19192 L) The report must notify consumers that complete lead tap sampling
19193 data are available for review and must inform how to access the
19194 data.

19195
19196 5) If a CWS distributes water to its customers from multiple hydraulically
19197 independent distribution systems ~~that are~~ fed by different raw water

- 19198 sources, the table must contain a separate column for each service area,
 19199 and the report must identify each separate distribution system.
 19200 Alternatively, a CWS may produce separate reports tailored to include
 19201 data for each service area.
 19202
- 6) The tables must clearly identify any data indicating violations of MCLs,
 19203 MRDLs, or treatment techniques, and the report must contain a clear and
 19204 readily understandable explanation of the violation, including specific
 19205 informationthe following: the length of the violation, the potential adverse
 19206 health effects, and actions taken by the CWS took to address the violation.
 19207 To describe the potential health effects, the CWS must use the relevant
 19208 language from Appendix A.
 19209
- 7) For detected unregulated contaminants for which USEPA requires
 19210 monitoring is required by USEPA under 40 CFR 141.40 (except
 19211 Cryptosporidium), the tables must contain the average and range at which
 19212 the supplier detected the contaminant was detected. The report may
 19213 briefly explaininclude a brief explanation of the reasons for monitoring for
 19214 unregulated contaminants.
 19215
- e) Information on Cryptosporidium, radon, and other contaminants, as follows:
 19216
- 1) If the CWS monitoredhas performed any monitoring for Cryptosporidium,
 19217 including monitoring underperformed to satisfy the requirements of
 19218 Subpart L, and the monitoringthat indicates the possible presence ofthat
 19219 Cryptosporidium may be present in the supplier's source water or the
 19220 finished water, the report must include specific informationthe following:
 19221
- A) It must summarizeA summary of the monitoring results of the
 19222 monitoring; and
 19223
- B) It must explainAn explanation of the results' significance of the
 19224 results.
 19225
- 2) If the CWS monitoredhas performed any monitoring for radon, and the
 19226 monitoringthat indicates the possible presence ofthat radon may be
 19227 present in the supplier's finished water, the report must include specific
 19228 informationthe following:
 19229
- A) The monitoring results of the monitoring; and
 19230
- B) It must explainAn explanation of the results' significance of the
 19231 results.
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- 3) If the CWS ~~conducted~~~~has performed~~ additional monitoring ~~indicating that indicates~~ the presence of other contaminants in the ~~supplier's~~ finished water, the report must include ~~specific information~~~~the following~~:
 - A) The ~~monitoring~~ results ~~of the monitoring~~; and
 - B) ~~It must explain~~~~An explanation of~~ the ~~results'~~ significance ~~of the results~~ noting ~~the existence of~~ any ~~pertinent~~ health advisory or proposed regulation.

- f) ~~Complying~~~~Compliance~~ with an NPDWR. In addition to the ~~information requirements of~~ subsection (d)(6) ~~requires~~, the report must note any ~~of specific violations in subsections (f)(1) through (f)(7) occurring~~ violation that ~~occurred~~ during the year ~~covered by~~ the report ~~covers~~ of a requirement listed below, and ~~clearly include a clear~~ and readily ~~understandably explain~~~~understandable explanation of~~ the violation, any potential adverse health effects, and the steps the CWS ~~took~~~~has taken~~ to correct the violation.
 - 1) ~~Failure in monitoring or~~~~Monitoring and~~ reporting ~~of~~ compliance data.
 - 2) Filtration and Disinfection ~~Under Prescribed by~~ Subpart B. For ~~a CWS failing~~~~CWSs that have failed~~ to install adequate filtration or disinfection equipment or processes, or ~~having filtration or disinfection~~~~have had a failure of such~~ equipment or processes ~~fail, causing that constitutes~~ a violation, the report must include ~~specific~~~~the following~~ language ~~to explain as part of the explanation of~~ potential adverse health effects: "Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches."
 - 3) Lead and Copper Control Requirements ~~Under Prescribed by~~ Subpart G. For ~~a supplier failing~~~~systems that fail~~ to take one or more actions ~~under prescribed by~~ Section 611.350(d), 611.351, 611.352, 611.353, or 611.354, the report must include the applicable language ~~from~~~~of~~ Appendix A for lead, copper, or both.
 - 4) Treatment Techniques for Acrylamide and Epichlorohydrin ~~Under Prescribed by~~ Section 611.296. For ~~a supplier violating~~~~systems that violate the requirements of~~ Section 611.296, the report must include the ~~applicable~~~~relevant~~ language from Appendix A.
 - 5) ~~A supplier failing to maintain required~~~~Recordkeeping of~~ compliance data

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records.

- 6) A supplier not complying with special~~Special~~ monitoring requirements underprescribed by Section 611.630.
- 7) A supplier violating~~Violation of~~ the terms of a variance, adjusted standard, site-specific rule, or administrative or judicial order.

g) Variances, Adjusted Standards, and Site-Specific Rules. If a supplier operatessystem is operating under the terms of a variance, adjusted standard, or site-specific rule the Board issued under Section 611.111, 611.112, or 611.131, the report must contain certain information~~the following~~:

- 1) It must explain~~An explanation of~~ the reasons for the variance, adjusted standard, or site-specific rule;
- 2) It must state when the Board issued~~The date on which~~ the variance, adjusted standard, or site-specific rule ~~was issued~~;
- 3) It must include a~~A~~ brief status report on the steps the CWS is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance, adjusted standard, or site-specific rule; and
- 4) It must include a~~A~~ notice of any opportunity for public input in any~~the~~ review, or renewal, of the variance, adjusted standard, or site-specific rule.

h) Additional Information

- 1) The report must briefly explain about~~contain a brief explanation regarding~~ contaminants that one may reasonably expect~~be expected to~~ find~~be found~~ in drinking water, including bottled water. This explanation may include the language from~~of~~ subsections (h)(1)(A) through (h)(1)(C), or the CW~~CWS~~s may use it~~their~~ own comparable language. The report also must include the language from~~of~~ subsection (h)(1)(D).

A) The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material. The water,~~and~~ can also pick up substances resulting from the presence of animals or from human activity.

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- B) Source Contaminants that may be present in source water may include any of several contaminants~~the following~~:
- i) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
 - ii) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
 - iii) Pesticides and herbicides, which may come from a variety of sources, ~~like such as~~ agriculture, urban stormwater runoff, ~~or~~ residential uses;
 - iv) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are products and byproducts of industrial processes and petroleum production; and which can also come from gas stations, urban stormwater runoff, ~~or~~ septic systems; and
 - v) Radioactive contaminants, which can be naturally-occurring or ~~be~~ the result of oil and gas production and mining activities.
- C) In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water PWSs provide~~provided by public water systems~~. United States Food and Drug Administration (USFDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.
- D) One may reasonably expect drinking~~Drinking~~ water, including bottled water, ~~may reasonably be expected~~ to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects is available from~~can be obtained by calling~~ the USEPA Safe Drinking Water Hotline (800-426-4791) or USEPA's Safe Drinking Water Information webpage (www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information).

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- 2) The report must include ~~at the~~ telephone number ~~for of~~ the CWS's owner, operator, or designee ~~of the CWS~~ as a source of additional information ~~about concerning~~ the report.
 - 3) In communities with a large proportion of non-English speaking residents, as ~~determined by~~ the Agency determines, the report must contain information in the appropriate languages regarding the importance of the report or contain a telephone number or address where ~~such~~ residents may contact the supplier for system to obtain a translated copy of the report or assistance in the appropriate language.
 - 4) The report must ~~inform include information~~ about opportunities for public participation in decisions potentially affecting water ~~that may affect the quality of the water~~.
 - 5) The CWS may include ~~any such~~ additional information ~~as~~ it deems necessary for public education that is consistent with, and does not detract/detracting from, the purpose of the report.
 - 6) Suppliers That Must Required to Comply with Subpart S
 - A) Any GWS supplier ~~receiving that receives~~ written notice from the Agency of a significant deficiency must inform its customers of any significant deficiency still uncorrected at the time of the next report. Any GWS supplier receiving or which receives notice from a laboratory of a fecal indicator-positive groundwater source sample that ~~the Agency does is~~ not ~~invalidate invalidated by the Agency~~ under Section 611.802(d) must inform its customers of ~~the any significant deficiency that is uncorrected at the time of the next report or of any~~ fecal indicator-positive groundwater source sample in the next report. The supplier must continue to annually inform the public ~~annually~~ until the Agency ~~issues, by~~ a SEP determining the supplier corrected the, determines that particular significant deficiency ~~is corrected or addressed~~ the fecal contamination in the groundwater source ~~is addressed~~ under Section 611.803(a). Each report must include specific the following information:
 - i) The nature of the particular significant deficiency or the source of the fecal contamination (if the supplier knows the source ~~is known~~) and the date the Agency identified the significant deficiency ~~was identified by the Agency~~ or the

- 19412 dates of the fecal indicator-positive groundwater source
19413 samples;
19414
- 19415 ii) Whether or not the supplier has addressed the fecal
19416 contamination in the groundwater source ~~has been~~
19417 ~~addressed~~ under Section 611.803(a) and the date the
19418 supplier did so of such action;
19419
- 19420 iii) For each significant deficiency or fecal contamination in
19421 the groundwater source that the supplier has not ~~been~~
19422 addressed under Section 611.803(a), the Agency-approved
19423 plan and schedule for correction, including interim
19424 measures, progress to date, and any interim measures the
19425 supplier completed; and
19426
- 19427 iv) If the supplier system receives notice of a fecal indicator-
19428 positive groundwater source sample that the Agency does is
19429 not ~~invalidate~~~~invalidated by the Agency~~ under Section
19430 611.802(d), the potential health effects using the pertinent
19431 health effects language ~~from of~~ Appendix A.
19432
- 19433 B) If ~~directed by~~ the Agency issues by a SEP directing a supplier to do
19434 so, a supplier with significant deficiencies that the supplier have
19435 been corrected before issuing the next report ~~is issued~~ must inform
19436 its customers under subsection (h)(7)(A)(iv) of the significant
19437 deficiency, how the supplier corrected the deficiency ~~was~~
19438 ~~corrected~~, and the date the supplier corrected the deficiency of
19439 ~~correction under subsection (h)(6)(A)~~.
19440
- 19441 7) Suppliers That Must Required to Comply with Subpart AA
19442
- 19443 A) Any supplier that must required to comply with the Level 1
19444 assessment requirement or a Level 2 assessment requirement that
19445 is not due to an E. coli MCL violation must include in the report
19446 the text found in subsections (h)(7)(A)(i) and (h)(7)(A)(ii) or
19447 (h)(7)(A)(i) and (h)(7)(A)(iii), as appropriate, filling in the blanks
19448 accordingly and the text found in subsection (h)(7)(A)(iv), if
19449 appropriate.
19450
- 19451 i) "Coliforms are bacteria that are naturally present in the
19452 environment and are used as an indicator that other,
19453 potentially harmful, waterborne pathogens may be present
19454 or that a potential pathway exists through which

- 19455 contamination may enter the drinking water distribution
19456 system. We found coliforms indicating the need to look for
19457 potential problems in water treatment or distribution.
19458 When this occurs, we are required to conduct assessment(s)
19459 to identify problems and to correct any problems that were
19460 found during these assessments."
19461
- 19462 ii) "During the past year we were required to conduct [insert
19463 number of Level 1 assessments] Level 1 assessment(s).
19464 [insert number of Level 1 assessments] Level 1
19465 assessment(s) were completed. In addition, we were
19466 required to take [insert number of corrective actions]
19467 corrective actions and we completed [insert number of
19468 corrective actions] of these actions."
19469
- 19470 iii) "During the past year [insert number of Level 2
19471 assessments] Level 2 assessments were required to be
19472 completed for our water system. [insert number of Level 2
19473 assessments] Level 2 assessments were completed. In
19474 addition, we were required to take [insert number of
19475 corrective actions] corrective actions and we completed
19476 [insert number of corrective actions] of these actions."
19477
- 19478 iv) Any supplier that has failed to complete all the required
19479 assessments or correct all identified sanitary defects, is in
19480 violation of the treatment technique requirement and must
19481 also include one or both of the following statements, as
19482 appropriate: "During the past year we failed to conduct all
19483 of the required assessment(s)." or "During the past year we
19484 failed to correct all identified defects that were found
19485 during the assessment."
19486
- 19487 B) Any supplier ~~that must~~required to conduct a Level 2 assessment
19488 due to an E. coli MCL violation must include in the report the text
19489 found in subsections (h)(7)(B)(i) and (h)(7)(B)(ii), filling in the
19490 blanks accordingly and the appropriate alternative text found in
19491 subsection (h)(7)(B)(ii), if appropriate.
19492
- 19493 i) "E. coli are bacteria whose presence indicates that the water
19494 may be contaminated with human or animal wastes.
19495 Human pathogens in these wastes can cause short-term
19496 effects, such as diarrhea, cramps, nausea, headaches, or
19497 other symptoms. They may pose a greater health risk for

- 19498 infants, young children, the elderly, and people with
19499 severely compromised immune systems. We found *E. coli*
19500 bacteria, indicating the need to look for potential problems
19501 in water treatment or distribution. When this occurs, we are
19502 required to conduct assessment(s) to identify problems and
19503 to correct any problems that were found during these
19504 assessments."
19505
19506 ii) "We were required to complete a Level 2 assessment
19507 because we found *E. coli* in our water system. In addition,
19508 we were required to take [insert number of corrective
19509 actions] corrective actions and we completed [insert
19510 number of corrective actions] of these actions."
19511
19512 iii) Any supplier that has failed to complete the required
19513 assessment or correct all identified sanitary defects, is in
19514 violation of the treatment technique requirement and must
19515 also include one or both of the following statements, as
19516 appropriate: "We failed to conduct the required
19517 assessment." or "We failed to correct all sanitary defects
19518 that were identified during the assessment that we
19519 conducted."
19520
19521 C) If a supplier detects *E. coli* and has violated the *E. coli* MCL, in
19522 addition to completing the table, as ~~required in~~ subsection (d)(4)
19523 ~~requires~~, the supplier must include one or more of ~~specific~~
19524 ~~the following~~ statements ~~best describing the~~ ~~to describe any~~
19525 ~~noncompliance, as applicable~~:
19526
19527 i) "We had an *E. coli*-positive repeat sample following a total
19528 coliform-positive routine sample."
19529
19530 ii) "We had a total coliform-positive repeat sample following
19531 an *E. coli*-positive routine sample."
19532
19533 iii) "We failed to take all required repeat samples following an
19534 *E. coli*-positive routine sample."
19535
19536 iv) "We failed to test for *E. coli* when any repeat sample tested
19537 positive for total coliform."
19538
19539 D) If a supplier detects *E. coli* ~~but does and has~~ not violated the *E. coli*
19540 MCL, in addition to completing the table as ~~required in~~ subsection

(d)(4) ~~requires~~, the supplier may include a statement ~~explaining that~~ ~~explains~~ that although ~~the supplier it has~~ detected E. coli, ~~it did the~~ ~~supplier is~~ not ~~violate in violation of~~ the E. coli MCL.

BOARD NOTE: ~~This Section derives~~ ~~Derived~~ from 40 CFR 141.153.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.884 Required Additional Health Information

- a) All reports must prominently display the following language: "Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA or Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline (800-426-4791)."
- b) A supplier that detects arsenic above 0.005 mg/ℓ and up to and including 0.010 mg/ℓ must do the following:
 - 1) The supplier must include in its report a short informational statement about arsenic, using the following language: "While your drinking water meets USEPA's standard for arsenic, it does contain low levels of arsenic. USEPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a naturally-occurring mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems."; or
 - 2) The supplier may write its own educational statement, but only in consultation with the Agency.
- c) A supplier that detects nitrate at levels above 5 mg/ℓ, but below the MCL, must do the following:
 - 1) The supplier must include a short informational statement about the impacts of nitrate on children, using the following language: "Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less

19584 than six months of age. High nitrate levels in drinking water can cause
19585 blue baby syndrome. Nitrate levels may rise quickly for short periods of
19586 time because of rainfall or agricultural activity. If you are caring for an
19587 infant you should ask advice from your health care provider"; or
19588

19589 2) The CWS supplier may write its own educational statement, but only in
19590 consultation with the Agency.

19591
19592 d) Every report must include the following lead-specific information:
19593

19594 1) A short informational statement about lead in drinking water and its
19595 effects on children. The statement must include the following
19596 information:
19597

19598 ~~Lead~~If present, elevated levels of lead can cause serious health
19599 problems, especially for pregnant women and young children.
19600 Lead in drinking water is primarily from materials and components
19601 associated with service lines and home plumbing. [NAME OF
19602 SUPPLIER] is responsible for providing high quality drinking
19603 water and removing lead pipes, but cannot control the variety of
19604 materials used in plumbing components in your home. You share
19605 the responsibility for protecting yourself and your family from the
19606 lead in your home plumbing. You can take responsibility by
19607 identifying and removing lead materials within your home
19608 plumbing and taking steps to reduce your family's risk. Before
19609 drinking tap water, flush your pipes for several minutes by running
19610 your tap, taking a shower, doing laundry or a load of dishes. You
19611 can also use a filter certified by an American National Standards
19612 Institute accredited certifier to reduce lead in drinking water.~~When~~
19613 ~~your water has been sitting for several hours, you can minimize the~~
19614 ~~potential for lead exposure by flushing your tap for 30 seconds to~~
19615 ~~two minutes before using water for drinking or cooking~~. If you are
19616 concerned about lead in your water, you may wish to have your
19617 water tested, contact [NAME OF UTILITY and CONTACT
19618 INFORMATION]. Information on lead in drinking water, testing
19619 methods, and steps you can take to minimize exposure is available
19620 from the Safe Drinking Water Hotline or at
19621 <http://www.epa.gov/safewater/lead>.
19622

19623 2) A supplier may write its own educational statement, but only in
19624 consultation with the Agency.

19625
19626 e) A CWS supplier that detects TTHM above 0.080 mg/l, but below the MCL in

19627 Section 611.312, as an annual average, monitored and calculated under the
19628 provisions of former Section 611.680, must include the health effects language
19629 prescribed by Appendix A of this Part.
19630

19631 BOARD NOTE: Former Section 611.680 originally derived from 40 CFR
19632 141.30(a) and (b). USEPA removed 40 CFR 141.30 in its entirety in 2006. The
19633 Board repealed former Section 611.680 in 2012. The references to former Section
19634 611.680 in this subsection (e) relate to use of existing monitoring data collected
19635 under those provisions as they existed before their repeal.
19636

19637 BOARD NOTE: [This Section derives](#)Derived from 40 CFR 141.154-(2014).
19638

19639 (Source: Amended at 47 Ill. Reg. _____, effective _____)
19640

19641 SUBPART V: PUBLIC NOTIFICATION OF DRINKING WATER VIOLATIONS 19642

19643 **Section 611.901 General Public Notification Requirements** 19644

19645 The requirements of this Subpart V replace former notice requirements.
19646

19647 a) Who Must Give Public Notice. Each owner or operator of a [PWSpublic water](#)
19648 [system](#) (a CWS, an NTNCWS, or a transient non-CWS) must give notice for all
19649 violations of an NPDWR and for other situations, as listed in this subsection (a).
19650 The term "NPDWR violation" is used in this Subpart V to include violations of an
19651 MCL, an MRDL, a treatment technique, monitoring requirements, or a testing
19652 procedure set forth in this Part. Appendix G identifies the tier assignment for
19653 each specific violation or situation requiring a public notice.
19654

19655 1) NPDWR Violations
19656

19657 A) A failure to comply with an applicable MCL or MRDL.
19658

19659 B) A failure to comply with a prescribed treatment technique.
19660

19661 C) A failure to perform water quality monitoring, as required by this
19662 Part.
19663

19664 D) A failure to comply with testing procedures as prescribed by this
19665 Part.
19666

19667 2) Relief Equivalent to a Variance and Exemptions under Sections 1415 and
19668 1416 of SDWA.
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- A) Operation under relief equivalent to a SDWA section 1415 variance, under Section 611.111, or a SDWA section 1416 exemption, under Section 611.112.
 - B) A failure to comply with the requirements of any schedule that has been set under relief equivalent to a SDWA section 1415 variance, under Section 611.111, or a SDWA section 1415 exemption, under Section 611.112.
- 3) Special Public Notices
- A) The occurrence of a waterborne disease outbreak or other waterborne emergency.
 - B) An exceedance of the nitrate MCL by a non-CWS, [ifwhere](#) granted permission by the Agency under Section 611.300(d).
 - C) The notice required by Section 611.908 for an exceedance of 2 mg/ℓ fluoride (the federal secondary MCL for fluoride (see 40 CFR 143.3)).

BOARD NOTE: See the Board Note appended to Section 611.908 for explanation.
 - D) The availability of unregulated contaminant monitoring data collected as required by USEPA under 40 CFR 141.40.
 - E) Other violations and situations determined by the Agency [inby](#) a SEP to require a public notice under this Subpart V, not already listed in Appendix G.
 - F) [Exceeding the lead action level.](#)
- b) The Type of Public Notice Required for Each Violation or Situation. The public notice requirements of this Subpart V are divided into three tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in subsection (a) are determined by the tier to which it is assigned. This subsection (b) provides the definition of each tier. Appendix G identifies the tier assignment for each specific violation or situation.
- 1) Tier 1 public notice: required for NPDWR violations and situations with significant potential to have serious adverse effects on human health as a

19713 result of short-term exposure.

19714
19715 2) Tier 2 public notice: required for all other NPDWR violations and
19716 situations with potential to have serious adverse effects on human health.

19717
19718 3) Tier 3 public notice: required for all other NPDWR violations and
19719 situations not included in Tier 1 and Tier 2.

19720
19721 c) Who Must Receive Notice

19722
19723 1) Each PWS supplier must provide public notice to persons served by the
19724 water supplier ~~under, in accordance with~~ this Subpart V. A PWS supplier
19725 that sells or otherwise provides drinking water to another PWS supplier
19726 (i.e., to a consecutive system) is required to give public notice to the
19727 owner or operator of the consecutive system; the consecutive system
19728 supplier is responsible for providing public notice to the persons it serves.

19729
19730 2) If a PWS supplier has a violation in a portion of the distribution system
19731 that is physically or hydraulically isolated from other parts of the
19732 distribution system, the Agency may allow the system to limit distribution
19733 of the public notice to only persons served by that portion of the system
19734 that is out of compliance. ~~The Permission by the Agency must issue a SEP~~
19735 ~~when allowing the supplier to limit distributing notice for limiting~~
19736 ~~distribution of the notice must be granted in writing, by a SEP.~~

19737
19738 3) ~~The supplier must also submit a~~A copy of the notice ~~must also be sent to~~
19739 the Agency ~~and the Administrator (for exceeding the lead action level), in~~
19740 ~~accordance with the requirements~~ under Section 611.840(d).

19741
19742 BOARD NOTE: ~~This Section derives~~Derived from 40 CFR 141.201.

19743
19744 (Source: Amended at 47 Ill. Reg. _____, effective _____)

19745
19746 **Section 611.902 Tier 1 Public Notice: Form, Manner, and Frequency of Notice**

19747
19748 a) Violations or Situations That Require a Tier 1 Public Notice. This subsection (a)
19749 lists the violation categories and other situations requiring a Tier 1 public notice.
19750 Appendix G identifies the tier assignment for each specific violation or situation.
19751 The violation categories include:

19752
19753 1) Violation of the MCL for E. coli (as specified in Section 611.325(c)).

19754
19755 2) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as

- 19756 defined in Section 611.301, or when the water supplier fails to take a
19757 confirmation sample within 24 hours after the supplier's receipt of the
19758 results from the first sample showing an exceedance of the nitrate or nitrite
19759 MCL, as specified in Section 611.606(b).
19760
- 19761 3) Exceedance of the nitrate MCL by a non-CWS supplier, [ifwhere](#) permitted
19762 to exceed the MCL by the Agency under Section 611.300(d), as required
19763 under Section 611.909.
19764
- 19765 4) Violation of the MRDL for chlorine dioxide, as defined in Section
19766 611.313(a), when one or more samples taken in the distribution system the
19767 day following an exceedance of the MRDL at the entrance of the
19768 distribution system exceed the MRDL, or when the water supplier does
19769 not take the required samples in the distribution system, as specified in
19770 Section 611.383(c)(2)(A).
19771
- 19772 5) This subsection (a)(5) refers to a violation of the former turbidity standard
19773 of Section 611.320, which the Board repealed because it applied to no
19774 suppliers in Illinois. This statement maintains structural consistency with
19775 the federal regulations.
19776
- 19777 6) Violation of the Surface Water Treatment Rule (SWTR), Interim
19778 Enhanced Surface Water Treatment Rule (IESWTR), or Long Term 1
19779 Enhanced Surface Water Treatment Rule (LT1ESWTR) treatment
19780 technique requirement resulting from a single exceedance of the maximum
19781 allowable turbidity limit (as identified in Appendix G), [ifwhere](#) the
19782 Agency determines after consultation that a Tier 1 [public](#) notice is
19783 required or [ifwhere](#) consultation does not take place within 24 hours after
19784 the supplier learns of the violation.
19785
- 19786 7) Occurrence of a waterborne disease outbreak, as defined in Section
19787 611.101, or other waterborne emergency (such as a failure or significant
19788 interruption in key water treatment processes, a natural disaster that
19789 disrupts the water supply or distribution system, or a chemical spill or
19790 unexpected loading of possible pathogens into the source water that
19791 significantly increases the potential for drinking water contamination).
19792
- 19793 8) Detection of E. coli, enterococci, or coliphage in source water samples, as
19794 specified in Section 611.802(a) and (b).
19795
- 19796 9) Other violations or situations with significant potential to have serious
19797 adverse effects on human health as a result of short-term exposure, as
19798 determined by the Agency [inby](#) a SEP.

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10) Exceeding the lead action level, as Section 141.80(c) specifies.

b) When the Tier 1 Public Notice Is ~~is~~ to Be Provided. Additional Steps Required. A PWS supplier must do the following:

- 1) It must provide a public notice as soon as practical but no later than 24 hours after the supplier learns of the violation;
- 2) It must initiate consultation with the Agency as soon as practical, but no later than 24 hours after the PWS supplier learns of the violation or situation, to determine additional public notice requirements; and
- 3) It must comply with any additional public notification requirements (including any repeat notices or direction on the duration of the posted notices) that are established as a result of the consultation with the Agency. Such requirements may include the timing, form, manner, frequency, and content of repeat notices (if any) and other actions designed to reach all persons served.

c) The Form and Manner of the Public Notice. A PWS supplier must provide the notice within 24 hours in a form and manner reasonably calculated to reach all persons served. The form and manner used by the PWS supplier are to fit the specific situation, but must be designed to reach residential, transient, and non-transient users of the water system. In order to reach all persons served, a water supplier is to use, at a minimum, one or more of the following forms of delivery:

- 1) Appropriate broadcast media (such as radio and television);
- 2) Posting of the notice in conspicuous locations throughout the area served by the water supplier;
- 3) Hand delivery of the notice to persons served by the water supplier; or
- 4) Another delivery method approved in writing by the Agency in by a SEP.

BOARD NOTE: This Section derives~~Derived~~ from 40 CFR 141.202.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART W: INITIAL DISTRIBUTION SYSTEM EVALUATIONS

Section 611.923 40/30 Certification

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- a) Eligibility. A supplier ~~was~~ eligible for 40/30 certification if it had no TTHM or HAA5 monitoring violations under Subpart I and no individual sample exceeded 0.040 mg/l for TTHM or 0.030 mg/l for HAA5 during an eight consecutive calendar quarter period ~~implementing during implementation of~~ this Subpart W. Eligibility for 40/30 certification ~~required is based on~~ eight consecutive calendar quarters of Subpart I compliance monitoring results, unless the supplier ~~was~~ on reduced monitoring under Subpart I and ~~needed was~~ not ~~required to~~ monitor. If the supplier did not monitor, the supplier ~~was to~~ must base its eligibility on compliance samples ~~taken~~ during the preceding 12 months.

BOARD NOTE: ~~Implementing Implementation of~~ this Subpart W occurred in stages ~~from between~~ October 1, 2006 through October 1, 2014. The monitoring ~~for that formed the basis of~~ 40/30 certification ~~was based on monitoring that~~ began either January 2004 or January 2005, depending on population served and other factors. See 40 CFR 141.600(c) and 141.603(a). The Board removed the now-obsolete implementation dates.

b) 40/30 Certification

- 1) A supplier ~~was to~~ must certify to the Agency that ~~no every individual~~ compliance sample ~~taken~~ under Subpart I during the applicable ~~period~~ ~~under of the periods specified in~~ subsection (a) ~~exceeded were no more than~~ 0.040 mg/l for TTHM ~~or and~~ 0.030 mg/l for HAA5, and ~~that~~ the supplier ~~had no has not had any~~ TTHM or HAA5 monitoring violations during the period ~~underspecified in~~ subsection (a).
- 2) The Agency ~~could~~ may require the supplier to submit compliance monitoring results, distribution system schematics, or recommended Subpart Y compliance monitoring locations in addition to the supplier's certification. If the supplier ~~failed~~ fails to submit the ~~Agency-~~requested information, the Agency ~~could~~ may require standard monitoring under Section 611.921 or a system-specific study under Section 611.922.
- 3) The Agency ~~could~~ may still require standard monitoring under Section 611.921 or a system-specific study under Section 611.922 even if the supplier ~~met~~ meets the criteria in subsection (a).
- 4) The supplier ~~was to~~ must retain a complete copy of its certification ~~submitted~~ under this Section for ten years after ~~submitting the date that it to the Agency submitted the supplier's certification.~~ The supplier ~~was to~~ must make the certification, all data upon which ~~it based~~ the certification ~~is based~~, and any Agency notification available for ~~Agency or public~~ review ~~by the Agency or the public.~~

19886
19887 BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.603. Although this Section is an
19888 implementing provision with compliance deadlines long past, the Board removed the obsolete
19889 compliance dates but retained the rule in past-tense to avoid a gap in the Illinois rules.

19890
19891 (Source: Amended at 47 Ill. Reg. _____, effective _____)
19892

19893 SUBPART X: ENHANCED FILTRATION AND DISINFECTION –
19894 SYSTEMS SERVING FEWER THAN 10,000 PEOPLE
19895

19896 **Section 611.954 Disinfection Benchmark**
19897

- 19898 a) Applicability. A Subpart B system supplier that ~~mustis required to~~ develop a
19899 disinfection profile under Section 611.953 must develop a disinfection benchmark
19900 if ~~decidingit decides~~ to ~~significantlymake a significant~~ change its disinfection
19901 practice. The supplier must ~~receive a SEP from~~consult with the Agency
19902 approving a significant changefor approval before implementing the change in its
19903 it can implement a significant disinfection practice ~~change~~.
19904
- 19905 b) Significant Changes to Disinfection Practice. Certain changes are significant
19906 Signifieant changes to disinfection practice ~~include the following~~:
19907
- 19908 1) Changing Changes to the point for applying disinfectantof disinfection;
 - 19909
 - 19910 2) Changing Changes to the applied disinfectantdisinfectants used in the
19911 treatment plant;
 - 19912
 - 19913 3) Changing Changes to the disinfection process; or
 - 19914
 - 19915 4) Any other modification ~~identified by~~ the Agency identifies.
19916
- 19917 c) Considering a Significant Change. A supplier ~~that is~~ considering a significant
19918 change to its disinfection practice must calculate a disinfection benchmark, as
19919 ~~described in~~ subsections (d) and (e) describe, and provide the benchmarks to the
19920 Agency. A supplier may only significantly change itsmake a significant
19921 disinfection practice ~~change~~ after receiving a SEP fromconsulting with the
19922 Agency approving the changefor approval. A supplier must submit certainthe
19923 following information to the Agency to gainas part of the consultation and
19924 approval of a significant changeprocess:
19925
- 19926 1) A description of the proposed change;
19927

- 19928 2) The disinfection profile for Giardia lamblia (and, if necessary, viruses) and
- 19929 disinfection benchmark;
- 19930
- 19931 3) An analysis of how the proposed change will affect the current levels of
- 19932 disinfection; and
- 19933
- 19934 4) Any additional information ~~requested by~~ the Agency requests.
- 19935

19936 d) Calculation of a Disinfection Benchmark. A supplier ~~significantly changing that is~~

19937 ~~making a significant change to~~ its disinfection practice must calculate a

19938 disinfection benchmark using the ~~specified following~~ procedure:

19939

- 19940 1) Step 1: Using the data that the supplier collected to develop the
- 19941 disinfection profile, ~~determine~~ determined the average Giardia lamblia
- 19942 inactivation for each calendar month by dividing the sum of all Giardia
- 19943 lamblia inactivations for that month by the number of values calculated for
- 19944 that month; and
- 19945
- 19946 2) Step 2: Determine the lowest monthly average value out of the 12 values.
- 19947 This value becomes the disinfection benchmark.
- 19948

19949 e) If a supplier uses chloramines, ozone, or chlorine dioxide for primary disinfection

19950 the supplier must calculate the disinfection benchmark from the data that the

19951 supplier collected for viruses to develop the disinfection profile ~~under~~ under

19952 subsection (d). ~~The supplier must calculate this~~ This viral benchmark ~~must be~~

19953 ~~calculated~~ in the same manner ~~as calculating used to calculate~~ the Giardia lamblia

19954 disinfection benchmark ~~under~~ under subsection (d).

19955

19956 BOARD NOTE: ~~This Section derives~~ Derived from 40 CFR 141.540 through 141.544.

19957

19958 (Source: Amended at 47 Ill. Reg. _____, effective _____)

19959

19960 SUBPART Z: ENHANCED TREATMENT FOR CRYPTOSPORIDIUM

19961

19962 **Section 611.1001 Source Water Monitoring Requirements: Source Water Monitoring**

19963

- 19964 a) Initial Round of Source Water Monitoring. A supplier must conduct the
- 19965 following monitoring on the schedule in subsection (c), unless it meets the
- 19966 monitoring exemption criteria in subsection (d).
- 19967
- 19968 1) A filtered system supplier ~~servicing that serves~~ 10,000 or more people must
- 19969 sample its source water for Cryptosporidium, E. coli, and turbidity at least
- 19970 monthly for 24 months.

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- 2) An unfiltered system supplier ~~servicing that serves~~ 10,000 or more people must sample its source water for ~~Cryptosporidium~~ Cryptosporidium at least monthly for 24 months.

 - 3) Smaller System Suppliers Monitoring for E. coli
 - A) A filtered system supplier ~~servicing that serves~~ fewer than 10,000 people must sample its source water for E. coli at least once every two weeks for 12 months.

 - B) A filtered system supplier ~~servicing that serves~~ fewer than 10,000 people may avoid E. coli monitoring if the system notifies the Agency that it will monitor for Cryptosporidium as described in subsection (a)(4). The system must notify the Agency no later than three months prior to the date before which the system is otherwise required to start E. coli monitoring under subsection (c).

 - 4) Smaller System Suppliers Monitoring for Cryptosporidium. A filtered system supplier ~~servicing that serves~~ fewer than 10,000 people must sample its source water for Cryptosporidium at least twice per month for 12 months or at least monthly for 24 months if it meets any of the conditions set forth in subsections (a)(4)(A) through (a)(4)(C), subject to the limitations of subsection (a)(4)(D), based on monitoring conducted under subsection (a)(3).
 - A) For a supplier ~~using that uses~~ a lake or reservoir source, the annual mean E. coli concentration is greater than 10 E. coli/100 ml.

 - B) For a supplier ~~using that uses~~ a flowing stream source, the annual mean E. coli concentration is greater than 50 E. coli/100 ml.

 - C) The supplier does not conduct E. coli monitoring as described in subsection (a)(3).

 - D) A supplier ~~using that uses~~ groundwater under the direct influence of surface water must comply with the requirements of subsection (a)(4) based on the E. coli level that applies to the nearest surface water body. If no surface water body is nearby, the system must comply based on the requirements that apply to a supplier ~~using that uses~~ a lake or reservoir source.

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- 5) For a filtered system supplier ~~servicing that serves~~ fewer than 10,000 people, the Agency may ~~issue, by~~ a SEP ~~approving, approve~~ monitoring for an indicator other than E. coli under subsection (a)(3). The Agency may also ~~issue, by~~ a SEP ~~approving, approve~~ an alternative to the E. coli concentration in subsection (a)(4)(A), (a)(4)(B), or (a)(4)(D) to trigger Cryptosporidium monitoring. This approval by the Agency must be provided to the supplier in writing, and it must include the basis for the Agency's determination that the alternative indicator or trigger level will provide a more accurate identification of whether a system will exceed the Bin 1 Cryptosporidium level set forth in Section 611.1010.
 - 6) An unfiltered system supplier ~~servicing that serves~~ fewer than 10,000 people must sample its source water for Cryptosporidium at least twice per month for 12 months or at least monthly for 24 months.
 - 7) A supplier may sample more frequently than required by this Section if the sampling frequency is evenly spaced throughout the monitoring period.
- b) Second Round of Source Water Monitoring. A supplier must conduct a second round of source water monitoring that meets the requirements for monitoring parameters, frequency, and duration described in subsection (a), unless it meets the monitoring exemption criteria in subsection (d). The supplier must conduct this monitoring on the schedule set forth in subsection (c).
- c) Monitoring Schedule. A supplier must perform the two rounds of monitoring ~~required by~~ subsections (a) and (b) ~~require~~ on the schedule ~~provided~~ in this subsection (c), unless the supplier meets the monitoring exemption criteria in subsection (d).
- 1) Suppliers That Serve at Least 100,000 People
 - A) The suppliers must have begun the first round of source water monitoring no later than the end of October 2006.
 - B) The suppliers must have begun the second round of source water monitoring no later than the end of April 2015.
 - 2) Suppliers That Serve from 50,000 to 99,999 People
 - A) The suppliers must have begun the first round of source water monitoring no later than the end of April 2007.

- 20055 B) The suppliers must have begun the second round of source water
- 20056 monitoring no later than the end of October 2015.
- 20057
- 20058 3) Suppliers That Serve from 10,000 to 49,999 People
- 20059
- 20060 A) The suppliers must have begun the first round of source water
- 20061 monitoring no later than the end of April 2008.
- 20062
- 20063 B) The suppliers must have begun the second round of source water
- 20064 monitoring no later than the end of October 2016.
- 20065
- 20066 4) Suppliers That Serve Fewer Than 10,000 People and ~~That~~^{Which} Monitor
- 20067 for E. coli
- 20068
- 20069 A) The suppliers must have begun the first round of source water
- 20070 monitoring no later than the end of October 2008.
- 20071
- 20072 B) The suppliers must have begun the second round of source water
- 20073 monitoring no later than the end of October 2017.
- 20074
- 20075 5) Suppliers That Serve Fewer Than 10,000 People and ~~That~~^{Which} Monitor
- 20076 for Cryptosporidium
- 20077
- 20078 A) The suppliers must have begun the first round of source water
- 20079 monitoring no later than the end of April 2010.
- 20080
- 20081 B) The suppliers must have begun the second round of source water
- 20082 monitoring no later than the end of April 2019.
- 20083

20084 BOARD NOTE: The Board retained the past implementation dates until

20085 implementation of the Long Term 2 Enhanced Surface Water Treatment Rule in

20086 this Subpart Z is complete.

- 20087
- 20088 d) Monitoring Avoidance
- 20089
- 20090 1) A filtered system supplier is not required to conduct source water
- 20091 monitoring under this Subpart Z if the system will provide a total of at
- 20092 least 5.5-log of treatment for Cryptosporidium, equivalent to meeting the
- 20093 treatment requirements of Bin 4 in Section 611.1011.
- 20094
- 20095 2) An unfiltered system supplier is not required to conduct source water
- 20096 monitoring under this Subpart Z if the system will provide a total of at
- 20097 least 3-log Cryptosporidium inactivation, equivalent to meeting the

- 20098 treatment requirements for an unfiltered system supplier with a mean
20099 Cryptosporidium concentration of greater than 0.01 oocysts/ℓ in Section
20100 611.1012.
20101
20102 3) If a supplier chooses to provide the level of treatment set forth in
20103 subsection (d)(1) or (d)(2), as applicable, rather than start source water
20104 monitoring, it must notify the Agency in writing no later than the date on
20105 which the system is otherwise required to submit a sampling schedule for
20106 monitoring under Section 611.1002. Alternatively, a supplier may choose
20107 to stop sampling at any point after it has initiated monitoring if it notifies
20108 the Agency in writing that it will provide this level of treatment. The
20109 supplier must install and operate technologies to provide this level of
20110 treatment before the applicable treatment compliance date set forth in
20111 Section 611.1013.
20112
20113 e) Plants Operating Only Part of the Year. A supplier that has a Subpart B plant that
20114 operates for only part of the year must conduct source water monitoring in
20115 accordance with this Subpart Z, but with the following modifications:
20116
20117 1) The supplier must sample its source water only during the months that the
20118 plant operates, unless the Agency ~~issue, by~~ a SEP ~~specifying, specifies~~
20119 another monitoring period based on plant operating practices.
20120
20121 2) A supplier with plants that operate less than six months per year and ~~that~~
20122 ~~which~~ monitors for Cryptosporidium must collect at least six
20123 Cryptosporidium samples per year during each of two years of monitoring.
20124 Samples must be evenly spaced throughout the period during which the
20125 plant operates.
20126
20127 f) New Sources and New Systems
20128
20129 1) New sources. A supplier that begins using a new source of surface water
20130 or groundwater under the direct influence of surface water after the
20131 supplier was required to begin monitoring under subsection (c) must
20132 monitor the new source on a schedule that the Agency has approved ~~in by~~
20133 a SEP. Source water monitoring must meet the requirements of this
20134 Subpart Z. The supplier must also meet the bin classification and
20135 Cryptosporidium treatment requirements of Sections 611.1010 and
20136 611.1011 or Section 611.1012, as applicable, for the new source on a
20137 schedule that the Agency has approved ~~in by~~ a SEP.
20138

- 20139 2) The requirements of Section 611.1001(f) apply to a Subpart B system
20140 supplier that begins operation after the applicable monitoring start date set
20141 forth in subsection (c).
20142
- 20143 3) The supplier must begin a second round of source water monitoring no
20144 later than six years following initial bin classification under Section
20145 611.1010 or determination of the mean Cryptosporidium level under
20146 Section 611.1012.
20147
- 20148 g) Failure to collect any source water sample required under this Section in
20149 accordance with the sampling schedule, sampling location, analytical method,
20150 approved laboratory, and reporting requirements of Sections 611.1002 through
20151 611.1006 is a monitoring violation.
20152
- 20153 h) Grandfathering Monitoring Data. A supplier may use (grandfather) monitoring
20154 data collected prior to the applicable monitoring start date in subsection (c) to
20155 meet the initial source water monitoring requirements in subsection (a).
20156 Grandfathered data may substitute for an equivalent number of months at the end
20157 of the monitoring period. All data submitted under this subsection must meet the
20158 requirements set forth in Section 611.1007.
20159

20160 BOARD NOTE: [This Section derives](#) ~~Derived~~ from 40 CFR 141.701.

20161 (Source: Amended at 47 Ill. Reg. _____, effective _____)
20162

20163 **Section 611.1002 Source Water Monitoring Requirements: Sampling Schedules**
20164

- 20165 a) A supplier required to conduct source water monitoring under Section 611.1001
20166 must submit a sampling schedule that specifies the calendar dates on which it will
20167 collect each required sample.
20168
- 20169 1) The supplier must submit sampling schedules no later than three months
20170 prior to the applicable date listed in Section 611.1001(c) for each round of
20171 required monitoring.
20172
- 20173 2) Submission of the Sampling Schedule to USEPA
20174
- 20175 A) A supplier [serving that serves](#) 10,000 or more people must submit
20176 its sampling schedule for the initial round of source water
20177 monitoring under Section 611.1001(a) to USEPA electronically
20178 into the Data Collection and Tracking System (DCTS) through
20179 USEPA's Central Data Exchange (CDX).
20180
20181

20182 BOARD NOTE: The supplier must register with the CDX to use
 20183 the DCTS. For information see "Step-by-Step Guide to the Data
 20184 Collection and Tracking System (DCTS)", USEPA, Office of
 20185 Water (4606) (document number EPA 815/B-08-001), available
 20186 from ~~the~~ USEPA, National Center for Environmental Publications,
 20187 www.epa.gov/nscep (search "815B08001"); telephone 888-890-
 20188 1995; e-mail epacdx@csc.com ("Technical Support" in the subject
 20189 line); or fax 301-429-3905.

20191 B) If a supplier is unable to submit the sampling schedule into the
 20192 DCTS, the supplier may use an alternative approach for submitting
 20193 the sampling schedule that USEPA has approved in writing.

20194
 20195 3) A supplier ~~servicing that serves~~ fewer than 10,000 people must submit to the
 20196 Agency its sampling schedules for the initial round of source water
 20197 monitoring Section 611.1001(a).

20198
 20199 4) A supplier must submit to the Agency sampling schedules for the second
 20200 round of source water monitoring required by Section 611.1001(b).

20201
 20202 5) If USEPA or the Agency does not respond to a supplier regarding its
 20203 sampling schedule, the supplier must sample at the reported schedule.

20204
 20205 b) A supplier must collect samples within two days before or two days after the dates
 20206 indicated in its sampling schedule (i.e., within a five-day period around the
 20207 schedule date) unless one of the conditions of subsection (b)(1) or (b)(2) applies.

20208
 20209 1) If an extreme condition or situation exists that may pose danger to the
 20210 sample collector, or one that cannot be avoided and ~~that which~~ causes the
 20211 supplier to be unable to sample in the scheduled five-day period, the
 20212 supplier must sample as close to the scheduled date as is feasible, unless
 20213 the Agency approves an alternative sampling date ~~in by~~ a SEP. The
 20214 supplier must submit an explanation for the delayed sampling date to the
 20215 Agency concurrent with the shipment of the sample to the laboratory.

20216
 20217 2) Replacement Samples

20218
 20219 A) If a supplier is unable to report a valid analytical result for a
 20220 scheduled sampling date due to equipment failure; loss of or
 20221 damage to the sample; failure to comply with the analytical method
 20222 requirements, including the quality control requirements in Section
 20223 611.1004; or the failure of an approved laboratory to analyze the
 20224 sample, then the supplier must collect a replacement sample.

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B) The supplier must collect the replacement sample not later than 21 days after receiving information that an analytical result cannot be reported for the scheduled date, unless the supplier demonstrates that collecting a replacement sample within this time frame is not feasible or the Agency approves an alternative resampling date in ~~by~~-a SEP. The supplier must submit an explanation for the delayed sampling date to the Agency concurrent with the shipment of the sample to the laboratory.

c) A supplier that fails to meet the criteria of subsection (b) for any source water sample required under Section 611.1001 must revise its sampling schedule to add dates for collecting all missed samples. A supplier must submit the revised schedule to the Agency for approval prior to collecting the missed samples.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.702.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.1006 Source Water Monitoring Requirements: Reporting Source Water Monitoring Results

a) A supplier must report results from the source water monitoring required under Section 611.1001 no later than ten days after the end of the first month following the month when the sample is collected.

b) Submission of Analytical Results to USEPA

1) A supplier servicing that serves-at least 10,000 people must report the results from the initial source water monitoring required under Section 611.1001(a) to the Data Collection and Tracking System (DCTS) through USEPA's Central Data Exchange (CDX).

BOARD NOTE: The supplier must register with the CDX to use the DCTS. For information see "Step-by-Step Guide to the Data Collection and Tracking System (DCTS)", ~~the~~ USEPA, Office of Water (4606) (document number EPA 815/B-08-001), available from ~~the~~ USEPA, National Center for Environmental Publications, www.epa.gov/nscep (search "815B08001"); telephone 888-890-1995; e-mail epacdx@csc.com ("Technical Support" in the subject line); or fax 301-429-3905.

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- 2) If a supplier is unable to report monitoring results into the DCTS, the supplier may use an alternative approach for reporting monitoring results that USEPA has approved in writing.

 - c) A supplier ~~servicing that serves~~ fewer than 10,000 people must report results from the initial source water monitoring required under Section 611.1001(a) to the Agency.

 - d) A supplier must report results from the second round of source water monitoring required under Section 611.1001(b) to the Agency.

 - e) A supplier must report the applicable information in subsections (e)(1) and (e)(2) for the source water monitoring required under Section 611.1001.
 - 1) A supplier must report the data elements set forth in subsection (e)(1)(D) for each Cryptosporidium analysis.
 - A) For matrix spike samples, a supplier must also report the sample volume spiked and estimated number of oocysts spiked. These data are not required for field samples.

 - B) For samples in which less than 10 ℓ is filtered or less than 100% of the sample volume is examined, the supplier must also report the number of filters used and the packed pellet volume.

 - C) For samples in which less than 100% of sample volume is examined, the supplier must also report the volume of resuspended concentrate and volume of this resuspension processed through immunomagnetic separation.

 - D) Data Elements
 - i) The PWS ID;
 - ii) The Facility ID;
 - iii) The sample collection date;
 - iv) The sample type (field or matrix spike);
 - v) The sample volume filtered (ℓ), to nearest ¼ ℓ;

- vi) Whether 100 percent of the filtered volume was examined;
and
- vii) The number of oocysts counted.

BOARD NOTE: Subsection (e)(1)(D) ~~derives is derived~~ from unnumbered tabulated text in 40 CFR 141.706(e)(1).

- 2) A supplier must report the following data elements for each E. coli analysis:
 - A) The PWS ID;
 - B) The Facility ID;
 - C) The sample collection date;
 - D) The analytical method number;
 - E) The method type;
 - F) The source type (flowing stream, lake or reservoir, groundwater under the direct influence of surface water);
 - G) The E. coli count per 100 mL.
 - H) The turbidity, except that a supplier ~~that which~~ serves fewer than 10,000 people that is not required to monitor for turbidity under Section 611.1001 is not required to report turbidity with its E. coli results.

BOARD NOTE: ~~This Section derives Derived~~ from 40 CFR 141.706.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.1013 Treatment Technique Requirements: Schedule for Compliance with Cryptosporidium Treatment Requirements

- a) Following initial bin classification under Section 611.1010(c), a filtered system supplier must provide the level of treatment for Cryptosporidium required by Section 611.1011 according to the applicable schedule set forth in subsection (c).

- 20350 b) Following initial determination of the mean Cryptosporidium level under Section
20351 611.1012(a)(1), an unfiltered system supplier must provide the level of treatment
20352 for Cryptosporidium required by Section 611.1012 according to the applicable
20353 schedule set forth in subsection (c).
20354
- 20355 c) Cryptosporidium Treatment Compliance Dates-
20356
20357 BOARD NOTE: The federal compliance dates and possible two-year extension
20358 ~~provided by~~ corresponding 40 CFR 141.713(c) ~~provides~~ are all past dates. The
20359 Board retains the text of subsections (c)(1) through (c)(5) as amended for
20360 guidance implementing the rules under Sections 611.1001(f) and 611.1013(d) and
20361 (e).
20362
- 20363 1) A supplier serving 100,000 or more persons was required to comply with
20364 Cryptosporidium treatment requirements before April 1, 2012.
20365
- 20366 2) A supplier serving 50,000 to 99,999 persons was required to comply with
20367 Cryptosporidium treatment requirements before October 1, 2012.
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- 20369 3) A supplier serving 10,000 to 49,999 persons was required to comply with
20370 Cryptosporidium treatment requirements before October 1, 2013.
20371
- 20372 4) A supplier serving fewer than 10,000 persons was required to comply with
20373 Cryptosporidium treatment requirements before October 1, 2014.
20374
- 20375 5) The Agency may allow no more than an additional two years for
20376 complying with the treatment requirement if it determines that additional
20377 time is necessary for the supplier to make capital improvements to
20378 implement the treatment.
20379
- 20380 d) If the bin classification for a filtered system supplier changes following the
20381 second round of source water monitoring, as determined under Section
20382 611.1010(d), the supplier must provide the level of treatment for Cryptosporidium
20383 required by Section 611.1011 on a schedule approved by the Agency ~~in by~~ a SEP.
20384
- 20385 e) If the mean Cryptosporidium level for an unfiltered system supplier changes
20386 following the second round of monitoring, as determined under Section
20387 611.1012(a)(2), and if the supplier must provide a different level of
20388 Cryptosporidium treatment under Section 611.1012 due to this change, the
20389 supplier must meet this treatment requirement on a schedule approved by the
20390 Agency ~~in by~~ a SEP.
20391
- 20392 BOARD NOTE: ~~This Section derives~~ ~~Derived~~ from 40 CFR 141.713.

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(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 611.1015 Requirements for Microbial Toolbox Components: Microbial Toolbox Options for Meeting Cryptosporidium Treatment Requirements

- a) Treatment Credits
 - 1) A supplier receives the applicable of the treatment credits set forth in subsection (b) by meeting the conditions for microbial toolbox options described in Sections 611.1016 through 611.1020. The supplier applies these treatment credits to meet the applicable treatment requirements set forth in Section 611.1011 or Section 611.1012.
 - 2) An unfiltered system supplier is eligible for treatment credits for the microbial toolbox options described in Section 611.1020 only.
- b) Subsections (b)(1) through (b)(5) summarize options in the microbial toolbox.
 - 1) Source Protection and Management Toolbox Options
 - A) Watershed Control Program. 0.5-log credit for Agency-approved program comprising required elements, annual program status report to Agency, and regular watershed survey. An unfiltered system supplier is not eligible for credit. Specific criteria are set forth in Section 611.1016(a).
 - B) Alternative source or intake management: No prescribed credit. A supplier may conduct simultaneous monitoring for treatment bin classification at alternative intake locations or under alternative intake management strategies. Specific criteria are set forth in Section 611.1016(b).
 - 2) Pre-Filtration Toolbox Options:
 - A) Presedimentation Basin with Coagulation. 0.5-log credit during any month that presedimentation basins achieve a monthly mean reduction of 0.5-log or greater in turbidity or alternative Agency-approved performance criteria. To be eligible, basins must be operated continuously with coagulant addition and all plant flow must pass through basins. Specific criteria are set forth in Section 611.1017(a).

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- B) Two-stage Lime Softening. 0.5-log credit for two-stage softening if where chemical addition and hardness precipitation occur in both stages. All plant flow must pass through both stages. Single-stage softening is credited as equivalent to conventional treatment. Specific criteria are set forth in Section 611.1017(b).
- C) Bank Filtration. 0.5-log credit for 25-foot setback or 1.0-log credit for 50-foot setback; the aquifer must be unconsolidated sand containing at least ten percent fines and average turbidity in the wells must be less than 1 NTU. A supplier using wells followed by filtration when conducting source water monitoring must sample the well to determine bin classification and is not eligible for additional credit. Specific criteria are set forth in Section 611.1017(c).
- 20451 3) Treatment Performance Toolbox Options
20452
- 20453 A) Combined Filter Performance. 0.5-log credit for combined filter
20454 effluent turbidity less than or equal to 0.15 NTU in at least 95
20455 percent of measurements each month. Specific criteria are set
20456 forth in Section 611.1018(a).
20457
- 20458 B) Individual Filter Performance. 0.5-log credit (in addition to 0.5-
20459 log combined filter performance credit) if individual filter effluent
20460 turbidity is less than or equal to 0.15 NTU in at least 95 percent of
20461 samples each month in each filter and is never greater than 0.3
20462 NTU in two consecutive measurements in any filter. Specific
20463 criteria are set forth in Section 611.1018(b).
20464
- 20465 C) Demonstration of Performance. Credit awarded to unit process or
20466 treatment train based on a demonstration to the Agency with an
20467 Agency-approved protocol. Specific criteria are set forth in
20468 Section 611.1018(c).
20469
- 20470 4) Additional Filtration Toolbox Options
20471
- 20472 A) Bag or Cartridge Filters (individual filters). Up to 2-log credit
20473 based on the removal efficiency demonstrated during challenge
20474 testing with a 1.0-log factor of safety. Specific criteria are set forth
20475 in Section 611.1019(a).
20476
- 20477 B) Bag or Cartridge Filters (in series). Up to 2.5-log credit based on
20478 the removal efficiency demonstrated during challenge testing with

- 20479 a 0.5-log factor of safety. Specific criteria are set forth in Section
20480 611.1019(a).
20481
20482 C) Membrane Filtration. Log credit equivalent to removal efficiency
20483 demonstrated in challenge test for device if supported by direct
20484 integrity testing. Specific criteria are set forth in Section
20485 611.1019(b).
20486
20487 D) Second Stage Filtration. 0.5-log credit for second separate
20488 granular media filtration stage if treatment train includes
20489 coagulation prior to first filter. Specific criteria are set forth in
20490 Section 611.1019(c).
20491
20492 E) Slow Sand Filters. 2.5-log credit as a secondary filtration step or
20493 3.0-log credit as a primary filtration process. No prior chlorination
20494 for either option. Specific criteria are set forth in Section
20495 611.1019(d).
20496
20497 5) Inactivation Toolbox Options
20498
20499 A) Chlorine Dioxide. Log credit based on measured CT in relation to
20500 CT table. Specific criteria are set forth in Section 611.1020(b).
20501
20502 B) Ozone. Log credit based on measured CT in relation to CT table.
20503 Specific criteria are set forth in Section 611.1020(b).
20504
20505 C) UV. Log credit based on validated UV dose in relation to UV dose
20506 table; reactor validation testing required to establish UV dose and
20507 associated operating conditions. Specific criteria are set forth in
20508 Section 611.1020(d).
20509

20510 BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.715.

20511 (Source: Amended at 47 Ill. Reg. _____, effective _____)

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20513
20514 SUBPART AA: REVISED TOTAL COLIFORM RULE

20515
20516 **Section 611.1052 Analytical Methods and Laboratory Certification**

- 20517 a) Analytical Methodology
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20519 1) The standard sample volume required for analysis is 100 mL, regardless of
20520 analytical method the supplier uses ~~used, is 100 mL~~.
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- 2) A supplier needs only determine the presence or absence of total coliforms and E. coli; a supplier needs not determine a determination of density is not required.
- 3) The time from sample collection to initiating initiation of test medium incubation may not exceed 30 hours. Suppliers should are encouraged but need not required to hold samples below 10 °C during transit.
- 4) If the supplier is to analyze water having residual chlorine (measured as free, combined, or total chlorine) is to be analyzed, the supplier must add sufficient sodium thiosulfate (Na₂S₂O₃) must be added to the sample bottle before sterilization to neutralize any residual chlorine in the water sample. Section Dechlorination procedures are addressed in section 2 of SM 9060 A (97), incorporated by reference in Section 611.102, addresses dichlorination procedures.
- 5) The supplier must conduct total coliform and E. coli analyses in using certain accordance with one of the following analytical methods, each incorporated by reference in Section 611.102:

BOARD NOTE: The supplier must monitor and analyze only using All monitoring and analyses must be done in accordance with the version of the approved method recited in this subsection (a) and incorporated by reference in Section 611.102. The methods listed are the only versions the supplier that may use be used for compliance with this Subpart AA. Laboratories should carefully be careful to use only the approved versions of the methods, as product package inserts may not be the same as the approved versions of the methods.

A) Total Coliforms, Lactose Fermentation Methods

- i) Total Coliform Fermentation Technique. Sections 1 and 2 of SM 9221 B (94) (only the 20th ed.), SM 9221 B (99), SM 9221 B (06), or sections 1 through 4 of SM 9221 B (14).

BOARD NOTE: The supplier may use commercially available lactose Lactose broth, as commercially available, may be used in lieu of lauryl tryptose broth; if the supplier conducts at least 25 parallel tests between lactose broth and lauryl tryptose broth using the water normally tested; and if the findings from this comparison demonstrates demonstrate that the false-positive rate and false-negative

20565 ~~rates rate~~ for total coliforms ~~are, using lactose broth, is~~ less
20566 than ten percent using lactose broth.

20567
20568 ii) Presence-Absence (P-A) Coliform Test. Sections 1 and 2
20569 of SM 9221 D (94), SM 9221 D (99), or sections 1 through
20570 3 of SM 9221 D (14).

20571
20572 BOARD NOTE: A supplier may use a multiple tube
20573 enumerative format, as ~~described in~~ SM 9221 D (94), SM
20574 9221 D (99), or SM 9221 D (14) describes, is approved for
20575 ~~this method~~ for ~~use in~~ presence-absence determination
20576 under this Subpart AA.

20577
20578 B) Total Coliforms, Membrane Filtration Methods

20579
20580 i) Standard Total Coliform Membrane Filter Procedure Using
20581 Endo Medium. SM 9222 B (97), SM 9222 B (15), SM
20582 9222 C (97), or SM 9222 C (15).

20583
20584 ii) Membrane Filtration Using MI Medium. USEPA 1604
20585 (02).

20586
20587 iii) Hach 10029 (99) (m-ColiBlue24[®]).

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20589 BOARD NOTE: A supplier must begin all All filtration
20590 series ~~must begin~~ with membrane filtration equipment the
20591 supplier that has been sterilized by autoclaving. Exposing
20592 ~~Exposure of~~ filtration equipment to UV light is not
20593 adequate to ensure sterilization. Subsequent to the initial
20594 autoclaving, the supplier may expose exposure of the
20595 filtration equipment to UV light ~~may be used~~ to sanitize the
20596 funnels between filtrations within a filtration series.
20597 Alternatively, the supplier may use manufacturer-pre-
20598 sterilized membrane filtration equipment ~~that is pre-~~
20599 ~~sterilized by the manufacturer~~ (i.e., disposable funnel units)
20600 ~~may be used~~.

20601
20602 iv) Chromocult[®] (00).

20603
20604 v) RAPID'E. coli (20).

20605
20606 BOARD NOTE: A supplier must begin all All filtration series
20607 ~~must begin~~ with membrane filtration equipment the supplier that

20608 ~~has been~~ sterilized by autoclaving. ~~Exposing~~ ~~Exposure of~~ filtration
20609 equipment to UV light is not adequate to ensure sterilization.
20610 Subsequent to the initial autoclaving, the supplier may expose
20611 ~~exposure of~~ the filtration equipment to UV light ~~may be used~~ to
20612 sanitize the funnels between filtrations within a filtration series.
20613 Alternatively, the supplier may use manufacturer-pre-sterilized
20614 membrane filtration equipment ~~that is pre-sterilized by the~~
20615 ~~manufacturer~~ (i.e., disposable funnel units) ~~may be used~~.
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20617 C) Total Coliforms, Enzyme Substrate Methods

- 20618
20619 i) Colilert[®]. SM 9223 B (97), SM 9223 B (04), or SM 9223
20620 B (16).

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20622 BOARD NOTE: A supplier may use multiple-tube
20623 ~~Multiple tube~~ and multi-well enumerative formats for this
20624 method ~~are approved for use~~ in presence-absence
20625 determination under this Subpart AA.
20626

- 20627 ii) Colilert[®]-18. SM 9223 B (97), SM 9223 B (04), or SM
20628 9223 B (16).

- 20629
20630 iii) Colisure[®]. SM 9223 B (97), SM 9223 B (04), or SM 9223
20631 B (16).

20632
20633 BOARD NOTE: A supplier may use multiple-tube
20634 ~~Multiple tube~~ and multi-well enumerative formats for this
20635 method ~~are approved for use~~ in presence-absence
20636 determination under this Subpart AA. A supplier may read
20637 Colisure[™] Test results ~~may be read~~ after an incubation
20638 time of 24 hours.
20639

- 20640 iv) E*Colite[®] (98).

- 20641
20642 v) ReadyCult[®] (07).

- 20643
20644 vi) Modified Colitag[™] (09) or Modified Colitag[™] (20).

- 20645
20646 vii) Tecta (14) or Tecta (17).

- 20647
20648 D) E. coli (following lactose fermentation methods), EC-MUG
20649 Medium. Section 1 of SM 9221 F (94), section 1 of SM 9221 F
20650 (01), section 1 of SM 9221 F (06), or section 1 of SM 9221 F (14).

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E) E. coli, Partition Methods (following membrane filtration methods)

- i) EC Broth with MUG (EC-MUG). Section 1.c(2) of SM 9222 G (97) or SM 9222 H (15).

BOARD NOTE: The supplier must make certain following changes ~~must be made~~ to the EC broth with MUG (EC-MUG) formulation: 1.5 g potassium dihydrogen phosphate (KH₂PO₄) ~~must be 1.5 g~~, and 0.05 g 4-methylumbelliferyl-β-D-glucuronide ~~must be 0.05 g~~.

- ii) NA-MUG Medium. Section 1.c(1) of SM 9222 G (97) or SM 9222 I (15).

F) E. coli, Membrane Filtration Methods

- i) Membrane Filtration Using MI Medium. USEPA 1604 (02).

- ii) Hach 10029 (99) (m-ColiBlue24[®]).

BOARD NOTE: A supplier must begin all All-filtration series ~~must begin~~ with membrane filtration equipment the supplier that has been sterilized by autoclaving. Exposing Exposure of filtration equipment to UV light is not adequate to ensure sterilization. Subsequent to the initial autoclaving, the supplier may expose exposure of the filtration equipment to UV light ~~may be used~~ to sanitize the funnels between filtrations within a filtration series. Exposure of filtration equipment to UV light is not adequate to ensure sterilization. Alternatively, the supplier may use manufacturer-pre-sterilized membrane filtration equipment ~~that is pre-sterilized by the manufacturer~~ (i.e., disposable funnel units) ~~may be used~~.

- iii) Chromocult[®] (00).

- iv) RAPID'E. coli (20).

BOARD NOTE: A supplier must begin all All-filtration series ~~must begin~~ with membrane filtration equipment the supplier that has been sterilized by autoclaving. Exposing Exposure of filtration

equipment to UV light is not adequate to ensure sterilization. Subsequent to the initial autoclaving, the supplier may expose exposure of the filtration equipment to UV light may be used to sanitize the funnels between filtrations within a filtration series. Exposure of filtration equipment to UV light is not adequate to ensure sterilization. Alternatively, the supplier may use manufacturer-pre-sterilized membrane filtration equipment ~~that is pre-sterilized by the manufacturer~~ (i.e., disposable funnel units) may be used.

G) E. coli, Enzyme Substrate Methods

- i) Colilert[®]. SM 9223 B (97), SM 9223 B (04), SM 9223 B (16).

BOARD NOTE: Multiple-tube and multi-well enumerative formats for this method are approved for use in presence-absence determination under this Subpart AA.

- ii) Colilert[®]-18. SM 9223 B (97), SM 9223 B (04), SM 9223 B (16).

- iii) Colisure[®]. SM 9223 B (97), SM 9223 B (04), SM 9223 B (16).

BOARD NOTE: A supplier may use multiple-tube Multiple tube and multi-well enumerative formats for this method ~~are approved for use~~ in presence-absence determination under this Subpart AA. A supplier may read Colisure[™] results may be read after an incubation time of 24 hours.

- iv) E*Colite[®] (98).

- v) ReadyCult[®] (07).

- vi) Modified Colitag[™] (09) or Modified Colitag[™] (20).

- vii) Tecta (14) or Tecta (17).

H) Simultaneous Detection of Total Coliforms and E. coli by Dual Chromogen Membrane Filter Procedure (using m-ColiBlue24[®] medium). SM 9222 J (15).

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- b) Laboratory Certification. A supplier must have a certified laboratory in one of the categories in Section 611.490(a) analyze all compliance samples required by this Subpart AA requires analyzed by a certified laboratory in one of the categories listed in Section 611.490(a). The laboratory used by the supplier uses for compliance monitoring under this Subpart AA must be certified for each method (and associated contaminants) that is used for compliance monitoring analyses under this Subpart AA.

- c) This subsection (c) corresponds with 40 CFR 141.1052(c), which is a centralized listing of incorporations by reference for the purposes of subpart Y to 40 CFR 141. The Board has centrally located all incorporations by reference in Section 611.102. This statement maintains structural consistency with the federal rules.

BOARD NOTE: This Section derives ~~Derived~~ from 40 CFR 141.852 and appendix A to subpart C of 40 CFR 141. The Board did has not separately list listed the following approved alternative methods from Standard Methods Online that are the same version as a method appearing that appears in a printed edition of Standard Methods. Using Use of the Standard Methods Online copy is acceptable.

Standard Methods Online, Methods 9221 B-99 and 9221 D-99 appear in the 21st edition as Methods 9221 B and D. This In this Section, this appears in this Section as Methods 9221 B and 9221 D. In this Section, these appear as SM 9221 B (99) and SM 9221 D (99).

Standard Methods Online, Methods 9221 B-06, 9221 D-06, and 9221 F-06 appear in the 22nd edition as Methods 9221 B, D, and F. These In this Section, these appear in this Section as SM 9221 B (06), 9221 D (06), and SM 9221 F (06).

Standard Methods Online, Methods 9222 B-97, 9222 C-97, and 9222 G-97 appear in the 20th edition as Methods 9222 B, 9222 C, and 9222 G. These In this Section, these appear in this Section as SM 9222 B (97), 9222 C (97), and SM 9222 G (97).

Standard Methods Online, Method 9223 B-97 appears in the 20th and 21st editions as Method 9223 B. This In this Section, this appears in this Section as SM 9223 B (97).

Standard Methods Online, Method 9223 B-04 appears in the 22nd edition as Method 9223 B. This In this Section, this appears in this Section as SM 9223 B (04).

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART AG: INTERIM LEAD AND COPPER RULES

Section 611.1350 General Requirements

a) Applicability and Scope

1) Applicability and Complying with this Subpart AG. Subpart G and this Subpart AG constitute NPDWRs for lead and copper. Subpart G and this Subpart AG apply to all community water systems (CWSs) and non-transient, non-community water systems (NTNCWSs).

A) A supplier must comply with this Subpart AG until the earlier of when the supplier complies with Subpart G or October 16, 2024.

B) If the Agency issued a SEP prior to December 16, 2021, exempting a supplier under any rule in former Subpart G (now this Subpart AG), the supplier must comply with this Subpart AG until that SEP expires.

C) The Agency may issue a SEP requiring a supplier to comply with specified rules in Subpart G before Section 611.350(a)(1)(A) or (a)(1)(B) otherwise requires or as necessary to address issues in a notice the Agency received from USEPA under 40 CFR 142.23 or 142.30. The SEP must specify the rules in Subpart G with which the supplier must comply and their counterparts in this Subpart AG with which the supplier needs no longer comply. The supplier must comply with the SEP-specified Subpart G rules in lieu of their counterparts in this Subpart AG.

D) Relationship Between Subpart G and Subpart AG Rules

i) The rules in this Subpart AG are based on Subpart G as it existed on December 16, 2021, the effective date of USEPA’s Lead and Copper Rule Revisions.

ii) Each rule in this Subpart AG corresponds with a rule in Subpart G by adding the digit “1” immediately after “611.” in the Section number. Removing that “1” from the Section number of a rule in this Subpart AG gives the corresponding rule in Subpart G.

20822 iii) Any action under a rule that was in Subpart G before
20823 December 16, 2021, satisfies the corresponding rule in this
20824 Subpart AG.

20825 BOARD NOTE: USEPA’s LCRR apply to all suppliers on December 16,
20826 2021. However, USEPA delays requiring compliance with LCRR until
20827 October 16, 2024, when any previously granted exemption expires, or as
20828 provided otherwise by any of several specified rules for corrosion control
20829 treatment; lead service line replacement; public education, supplemental
20830 monitoring, and mitigation; monitoring; and reporting (corresponding with
20831 35 Ill. Adm. Code 611.351, 611.354, 611.355, 611.356, or 611.360). Until
20832 a supplier must comply with the LCRR, USEPA requires the supplier to
20833 comply with subpart I of 40 CFR 141 (2020). This requires the Board to
20834 codify two versions of the Lead and Copper Rule: one in this Subpart AG,
20835 representing the Lead and Copper Rules prior to the LCRR (40 CFR 141
20836 (2020)), and the other in Subpart G, representing 40 CFR 141
20837 incorporating the LCRR.

20838
20839 2) Scope. This Subpart G establishes a treatment technique including
20840 corrosion control treatment, source water treatment, lead service line
20841 replacement, and public education. Lead and copper action levels the
20842 supplier measures in samples collected at consumers’ taps trigger some of
20843 these requirements.

20844
20845 b) Definitions. For this Subpart G only, this subsection (b) defines certain terms :

20846
20847 “Action level” means the computed concentration of lead or copper in
20848 water under subsection (c) determining applicability of some treatment
20849 requirements under this Subpart G. The action level for lead is 0.015
20850 mg/ℓ. The action level for copper is 1.3 mg/ℓ.

20851
20852 “Corrosion inhibitor” means a substance that can reduce corrosivity of
20853 water toward metal plumbing materials, especially lead and copper, by
20854 forming a protective film on the interior surface of those materials.

20855
20856 “Effective corrosion inhibitor residual” means a concentration of corrosion
20857 inhibitor in the drinking water sufficient to form a passivating film on the
20858 interior walls of pipe.

20859
20860 “Exceed” or “exceedance”, relative to either the lead or the copper action
20861 level, means that the 90th percentile level of the samples the supplier
20862 collected during a six-month monitoring period is greater than the lead or
20863 copper action level.

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“First-draw tap sample” means a one-liter sample of tap water, a supplier collects under Section 611.1356(b)(2), that stood in plumbing pipes for at least six hours and the supplier collects without flushing the tap.

“Large system” means a water system regularly serving water to more than 50,000 persons.

“Lead service line” means a service line made of lead connecting the water main to the building inlet, including any lead pigtail, gooseneck, or other fitting that is connected to such lead line.

“Maximum permissible concentration” or “MPC” means the concentration of lead or copper in finished water entering the supplier’s distribution system, which the Agency designates in a SEP based on the contaminant removal ability of the treatment properly operated and maintained.
BOARD NOTE: This definition derives from 40 CFR 141.83(b)(4) (2020). (See Section 611.1353(b)(4)(B).)

“Medium-sized water system” means a water system regularly serving water to 3,301 to 50,000 persons.

“Meet” or “comply with”, relating to either the lead or the copper action level, means that the 90th percentile level of the supplier’s samples collected during a six-month monitoring period is less than or equal to the lead or copper action level.

“Monitoring period” means any of the six-month periods during which a supplier must complete a cycle of monitoring under this Subpart G.

“Multiple-family residence” means a building in which multiple families currently reside, but not one that is also a “single-family structure”.

“90th percentile level” means the concentration of lead or copper that ten percent or fewer of all samples tap water samples under Section 611.1356 exceed during a six-month monitoring period (i.e., that contaminant concentration greater than or equal to the results obtained from 90 percent of the samples). The supplier must determine the 90th percentile levels for copper and lead under subsection (c)(3).
BOARD NOTE: This definition derives from 40 CFR 141.80(c) (2020).

“Optimal corrosion control treatment” means the corrosion control treatment minimizing the lead and copper concentrations at users’ taps

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while ensuring that the treatment will not violate any national primary drinking water regulations.

“Practical quantitation limit” or “PQL” means the lowest concentration of a contaminant that a well-operated laboratory can reliably analyze within specified limits of precision and accuracy during routine laboratory operating conditions. The PQL for lead is 0.005 mg/ℓ. The PQL for copper is 0.050 mg/ℓ.

BOARD NOTE: This definition derives from 40 CFR 141.89(a)(1)(ii) and (a)(1)(iv) (2020).

“Service line sample” means a one-liter sample of water under Section 611.1356(b)(3) that stood for at least six hours in a service line.

“Single-family structure” means a building constructed as a residence for a single-family that the occupant currently uses as a residence or place of business.

“Small system” means a water system regularly serving water to 3,300 or fewer persons.

BOARD NOTE: A small system for purposes of a small system variance under Section 611.131 is distinct from small-sized water system under this Subpart AG.

BOARD NOTE: This subsection (b) derives from 40 CFR 141.2 (2020).

c) Lead and Copper Action Levels

1) The supplier exceeds the lead action level if the 90th percentile lead level is greater than 0.015 mg/ℓ.

2) The supplier exceeds the copper action level if the 90th percentile copper level is greater than 1.3 mg/ℓ.

3) Suppliers must compute the 90th percentile lead and copper levels using the specified procedure:

A) The supplier must list the results of all lead or copper samples it took during the six-month monitoring period in ascending order, ranging from the sample with the lowest concentration to the sample with the highest concentration. The supplier must assign each sampling result an ordinal number, ascending by single integers, assigning the number 1 for the sample with the lowest

20950 contaminant level. The number the supplier assigns to the sample
20951 with the highest contaminant level must equal the total number of
20952 samples the supplier took.

20953
20954 B) To determine the 90th percentile sample, the supplier must
20955 multiply the total number of samples taken during the six-month
20956 monitoring period times 0.9.

20957
20958 C) The contaminant concentration in the sample corresponding with
20959 the ordinal number calculating under subsection (c)(3)(B) yields is
20960 the 90th percentile contaminant level.

20961
20962 D) For a supplier collecting five samples per six-month monitoring
20963 period, the 90th percentile is the average of the highest and second
20964 highest concentrations.

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20966 E) For a supplier the Agency allows to collect fewer than five samples
20967 under Section 611.1356(c), the result for the sample with the
20968 highest concentration is the 90th percentile value.

20969
20970 d) Corrosion Control Treatment Requirements

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20972 1) Every supplier must install and operate optimal corrosion control
20973 treatment.

20974
20975 2) Any supplier complying with the applicable corrosion control treatment
20976 requirements the Agency specifies under Sections 611.1351 and 611.1352
20977 is deemed as complying with subsection (d)(1).

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20979 e) Source Water Treatment Requirements. Any supplier whose system exceeds the
20980 lead or copper action level must implement all applicable source water treatment
20981 requirements the Agency specifies under Section 611.1353.

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20983 f) Lead Service Line Replacement Requirements. Any supplier whose system
20984 exceeds the lead action level after implementing applicable corrosion control and
20985 source water treatment must complete the lead service line replacement under
20986 Section 611.1354.

20987
20988 g) Public Education Requirements. Under Section 611.1355, the supplier must
20989 provide a consumer notice of the lead tap water monitoring results to the persons
20990 served at each tested site (tap). Any supplier exceeding the lead action level must
20991 implement the public education requirements.
20992

- 20993 h) Monitoring and Analytical Requirements. A supplier must complete all tap water
20994 monitoring for lead and copper, monitoring for water quality parameters, and
20995 source water monitoring for lead and copper and analyze the monitoring results
20996 under this Subpart G as Sections 611.1356, 611.1357, 611.1358, and 611.1359
20997 require.
- 20998
- 20999 i) Reporting Requirements. A supplier must report any information the treatment
21000 provisions of this Subpart G and Section 611.1360 require to the Agency.
- 21001
- 21002 j) Recordkeeping Requirements. A supplier must maintain records as Section
21003 611.1361 requires.
- 21004
- 21005 k) Violation of National Primary Drinking Water Regulations. Failing to comply
21006 with this Subpart G, including conditions the Agency imposes in a SEP, violates
21007 the lead or copper NPDWRs.

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21009 BOARD NOTE: This Section corresponds with Section 611.1350 and derives from 40 CFR
21010 141.80 (2020).

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21012 (Source: Added at 47 Ill. Reg. _____, effective _____)

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21014 **Section 611.1351 Applicability of Corrosion Control**

- 21015
- 21016 a) Corrosion Control Required. A supplier must complete the applicable corrosion
21017 control treatment under Section 611.1352 on or before the deadlines in this
21018 Section.
- 21019
- 21020 1) Large Systems. Each large system supplier (one regularly serving more
21021 than 50,000 persons) must complete the corrosion control treatment steps
21022 subsection (d) specifies, unless subsection (b)(2) or (b)(3) deems the
21023 supplier to have optimized corrosion control.
- 21024
- 21025 2) Small and Medium-Sized Systems. Each small system supplier (one
21026 regularly serving 3,300 or fewer persons) and each medium-sized water
21027 system (one regularly serving 3,301 to 50,000 persons) must complete the
21028 corrosion control treatment steps subsection (e) specifies, unless
21029 subsection (b)(1), (b)(2), or (b)(3) deems the supplier to have optimized
21030 corrosion control.
- 21031
- 21032 b) Suppliers Deemed to Have Optimized Corrosion Control. Subsection (b)(1),
21033 (b)(2), or (b)(3) deems a supplier to have optimized corrosion control treatment if
21034 the supplier satisfies the criterion the subsection specifies, freeing the supplier
21035 from the obligation to complete the applicable corrosion control treatment steps in

this Section. Any system subsection (b)(1), (b)(2), or (b)(3) deems to have optimized corrosion control having treatment in place must continue operating and maintaining optimal corrosion control treatment and meeting any requirements the Agency determines are appropriate to ensure that the supplier maintains optimal corrosion control treatment.

- 1) Small and Medium-Sized Systems Meeting Action Levels. Meeting the lead and copper action levels during each of two consecutive six-month monitoring periods under Section 611.1356 deems a small or medium-sized system supplier to have optimized corrosion control.

- 2) SEP for Activities Equivalent to Corrosion Control. The Agency must issue a SEP deeming a supplier to have optimized corrosion control treatment upon determining that the supplier conducts activities equivalent to the corrosion control steps under this Section. In making this determination, the Agency must specify the water quality control parameters representing optimal corrosion control under Section 611.1352(f). A water supplier the Agency deems as having optimized corrosion control under this subsection (b)(2) must operate in compliance with the Agency-designated optimal water quality control parameters under Section 611.1352(g) and must continue to conduct lead and copper tap and water quality parameter sampling under Sections 611.1356(d)(3) and 611.1357(d). A supplier must provide the Agency with the following information to support the Agency issuing a SEP under this subsection (b)(2):
 - A) The results of all test samples the supplier collected for each of the water quality parameters in Section 611.1352(c)(3);

 - B) A report explaining the test methods the supplier used to evaluate the corrosion control treatments in Section 611.1352(c)(1), the results of all tests conducted, and the basis for the supplier selecting the optimal corrosion control treatment;

 - C) A report explaining how the supplier installed corrosion control and how the supplier maintains the corrosion control to insure minimal lead and copper concentrations at consumers' taps; and

 - D) The results of tap water samples the supplier collected under Section 611.1356 at least once every six months for one year after the supplier installed corrosion control.

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- 3) Results Less Than Practical Quantitation Level (PQL) for Lead. Monitoring results deem supplier to have optimized corrosion control if the supplier submits results of tap water monitoring under Section 611.1356 and source water monitoring under Section 611.1358 demonstrating that for two consecutive six-month monitoring periods the difference between the 90th percentile tap water lead level, computed under Section 611.1350(c)(3), and the highest source water lead concentration is less than the PQL that Section 611.1359(a)(2)(A) specifies.
- A) Having a highest source water lead level below the MDL deems a supplier to have optimized corrosion control under this subsection (b)(3) if the 90th percentile tap water lead level is less than or equal to the lead PQL for two consecutive six-month monitoring periods.
- B) Any supplier this subsection (b)(3) deems to have optimized corrosion control must continue tap water monitoring for lead and copper no less frequently than once every three calendar years using the reduced number of sites Section 611.1356(c) specifies and collecting the samples at times and locations Section 611.1356(d)(4)(D) specifies.
- C) Any supplier this subsection (b)(3) deems to have optimized corrosion control must notify the Agency in writing under Section 611.1360(a)(3) of any upcoming long-term change in treatment or the addition of a new source, as that Section describes. The Agency must review and approve the addition of a new source or any long-term change in water treatment before the supplier adds the source or implements the long-term change.
- D) A supplier is not deemed to have optimized corrosion control under this subsection (b)(3) and must implement corrosion control treatment under subsection (b)(3)(E), unless the supplier meets the copper action level.
- E) Any supplier this subsection (b)(3) no longer deems to have optimized corrosion control must implement corrosion control treatment under subsection (e). Any large system supplier this subsection (b)(3) no longer deems to have optimized corrosion control must adhere to the schedule that subsection (e) specifies for a medium-sized water system supplier, with the time periods for completing each step being triggered by the date the supplier is no

longer deemed to have optimized corrosion control under this subsection (b)(3).

c) Suppliers Not Required to Complete Corrosion Control Steps for Having Met Both Action Levels

1) Any small or medium-sized water system supplier, otherwise required to complete the corrosion control steps because it exceeded the lead or copper action level, may cease completing the treatment steps after fulfilling specific conditions:

A) The supplier meets both the copper and lead action levels during each of two consecutive six-month monitoring periods under Section 611.1356; and

B) The supplier submits the results for those two consecutive six-month monitoring periods to the Agency.

2) A supplier that ceases completing the corrosion control steps under subsection (c)(1) (or the Agency, if appropriate) must resume completion of the applicable treatment steps, beginning with the first treatment step that the supplier previously did not complete in its entirety, if the supplier thereafter exceeds the lead or copper action level during any monitoring period.

3) The Agency may issue a SEP requiring a supplier to repeat treatment steps the supplier previously completed if the Agency determines that this is necessary to properly implement the treatment requirements of this Section. The Agency must explain the basis for its decision in any SEP.

4) A small or medium-sized water system supplier exceeding the lead or copper action level triggers the requirement to implement corrosion control treatment steps under subsection (e) (including systems deemed to have optimized corrosion control under subsection (b)(1)).

d) Treatment Steps for Large Systems. Except as subsections (b)(2) and (b)(3) provide otherwise, a large system must complete certain corrosion control treatment steps as specific rules provide).

1) Step 1: Initial monitoring during two consecutive six-month monitoring periods (under Sections 611.1356(d)(1) and 611.1357(b)).

2) Step 2: Corrosion control studies (under Section 611.1352(c)).

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- 3) Step 3: The Agency approving optimal corrosion control treatment in a SEP (under Section 611.1352(d)).
- 4) Step 4: Installing optimal corrosion control treatment (under Section 611.1352(e)).
- 5) Step 5: Completing follow-up sampling (under Sections 611.1356(d)(2) and 611.1357(c)).
- 6) Step 6: The Agency reviewing installed treatment and approving optimal water quality control parameters (under Section 611.1352(f)).
- 7) Step 7: Complying with the Agency-specified optimal water quality control parameters (under Section 611.1352(g)) and continuing tap sampling (under Sections 611.1356(d)(3) and 611.1357(d)).

e) Treatment Steps and Deadlines for Small and Medium-Sized Water Systems. Except as subsection (b) provides otherwise, a small and medium-sized system supplier must complete certain corrosion control treatment steps as specific rules provide before the indicated time periods.

- 1) Step 1: The supplier must conduct initial tap sampling (under Sections 611.1356(d)(1) and 611.1357(b)) until the supplier either exceeds the lead or copper action level or becomes eligible for reduced monitoring under Section 611.1356(d)(4). A supplier exceeding the lead or copper action level must recommend optimal corrosion control treatment (under Section 611.1352(a)) within six months after the end of the monitoring period during which the exceedance occurred.
- 2) Step 2: Within 12 months after the end of the monitoring period during which a supplier exceeds the lead or copper action level, the Agency may require the supplier to perform corrosion control studies (under Section 611.1352(b)). If the Agency does not require the supplier to perform corrosion control studies, the Agency must issue a SEP specifying optimal corrosion control treatment (under Section 611.1352(d)) within the appropriate of specific timeframes:
 - A) For a medium-sized water system, within 18 months after the end of the monitoring period during which the supplier exceeded the lead or copper action level; or

- 21206 B) For a small system, within 24 months after the end of the
21207 monitoring period during which the supplier exceeded the lead or
21208 copper action level.
- 21209
- 21210 3) Step 3: If the Agency requires a supplier to perform corrosion control
21211 studies under step 2 (subsection (e)(2)), the supplier must complete the
21212 studies (under Section 611.1352(c)) within 18 months after the Agency
21213 requires the supplier to conduct the studies.
- 21214
- 21215 4) Step 4: If a supplier performs corrosion control studies under step 2
21216 (subsection (e)(2)), the Agency must issue a SEP approving optimal
21217 corrosion control treatment (under Section 611.1352(d)) within six months
21218 after the supplier completes step 3 (under subsection (e)(3)).
- 21219
- 21220 5) Step 5: The supplier must install optimal corrosion control treatment
21221 (under Section 611.1352(e)) within 24 months after the Agency approves
21222 that treatment.
- 21223
- 21224 6) Step 6: The supplier must complete follow-up sampling (under Sections
21225 611.1356(d)(2) and 611.1357(c)) within 36 months after the Agency
21226 approves optimal corrosion control treatment.
- 21227
- 21228 7) Step 7: The Agency must review the supplier's installation of treatment
21229 and issue a SEP approving optimal water quality control parameters
21230 (under Section 611.1352(f)) within six months after the supplier completes
21231 step 6 (under subsection (e)(6)).
- 21232
- 21233 8) Step 8: The supplier must comply with the Agency-approved optimal
21234 water quality control parameters (under Section 611.1352(g)) and continue
21235 tap sampling (under Sections 611.1356(d)(3) and 611.1357(d)).
- 21236

21237 BOARD NOTE: This Section corresponds with Section 611.1351 and derives from 40 CFR
21238 141.81 (2020).

21239
21240 (Source: Added at 47 Ill. Reg. _____, effective _____)

21241
21242 **Section 611.1352 Corrosion Control Treatment**

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21244 Each supplier must complete the corrosion control treatment requirements this Section describes
21245 that applying to the supplier under Section 611.1351.

- 21246
21247 a) System Recommendation Regarding Corrosion Control Treatment
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1) Based on the results of lead and copper tap monitoring and water quality parameter monitoring, a small- or medium-sized system exceeding the lead or copper action level must recommend to the Agency that the supplier install one or more of the corrosion control treatments in subsection (c)(1) that the supplier believes constitutes optimal corrosion control for its system.

2) The Agency may issue a SEP requiring the supplier to conduct additional water quality parameter monitoring under Section 611.1357(b) to assist the Agency in reviewing the supplier's recommendation.

b) Agency-Required Studies of Corrosion Control Treatment. The Agency may issue a SEP requiring a small or medium-sized system supplier exceeding the lead or copper action level to perform corrosion control studies under subsection (c) to identify optimal corrosion control treatment for the supplier's system.

c) Performance of Studies

1) Any supplier performing corrosion control studies must evaluate the effectiveness of each of certain treatments and combinations of those treatments if appropriate to identify the optimal corrosion control treatment for the supplier's system:

- A) Adjusting alkalinity and pH;
- B) Adjusting calcium hardness; and
- C) Adding a phosphate- or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

2) The supplier must evaluate each of the corrosion control treatments using pipe rig/loop tests; metal coupon tests; partial-system tests; or analyses based on documented analogous treatments in other systems of similar size, water chemistry, and distribution system configuration.

3) The supplier must measure specific water quality parameters in any tests the supplier conducts under this subsection (c) before and after evaluating the corrosion control treatments in subsection (c)(1):

- A) Lead;
- B) Copper;

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- C) pH;
- D) Alkalinity;
- E) Calcium;
- F) Conductivity;
- G) Orthophosphate (when the supplier uses an inhibitor containing a phosphate compound);
- H) Silicate (when the supplier uses an inhibitor containing a silicate compound); and
- I) Water temperature.

4) The supplier must identify all chemical or physical constraints that limit or prohibit using any particular corrosion control treatment and document those constraints:

- A) With data and documentation showing that a particular corrosion control treatment adversely affects other water treatment processes when another supplier uses that treatment in a system with water having comparable water quality characteristics; or
- B) With data and documentation demonstrating that the supplier previously evaluated a particular corrosion control treatment, finding either that the treatment is ineffective or adversely affects other water quality treatment processes.

5) The supplier must evaluate the effect of the evaluated corrosion control treatment chemicals on other water quality treatment processes.

6) Based on an analysis of the data the supplier generated during each evaluation, the supplier must recommend in writing to the Agency the treatment option the corrosion control studies indicate constitutes optimal corrosion control treatment for the supplier's system. The supplier must give a rationale for its recommendation together with all supporting documentation subsections (c)(1) through (c)(5) specify.

d) Agency Approval of Treatment

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- 1) Based on consideration of available information, including applicable studies the supplier performed under subsection (c) and a supplier's recommended treatment alternative, the Agency must either issue a SEP requiring the corrosion control treatment option the supplier recommended or deny a SEP and require the supplier to further investigate and recommend alternative corrosion control treatments from among those in subsection (c)(1). When approving optimal corrosion control treatment, the Agency must consider the effects that additional corrosion control treatment will have on water quality parameters and other water quality treatment processes.
 - 2) The Agency must notify the supplier of the basis for this determination in any SEP it issues under subsection (d)(1).
 - e) Installing Optimal Corrosion Control. A supplier must properly install and operate the optimal corrosion control treatment throughout its distribution system that the Agency approved under subsection (d).
 - f) Agency Review of Treatment and Specification of Optimal Water Quality Control Parameters. The Agency must evaluate the results of all lead and copper tap samples and water quality parameter samples the supplier submits and determine whether the supplier properly installs and operates the optimal corrosion control treatment the Agency approves under subsection (d).
 - 1) Upon reviewing the results of the supplier's tap water and water quality parameter monitoring, both before and after installing optimal corrosion control treatment, the Agency must issue a SEP specifying operating parameters:
 - A) A minimum value or range of values for pH at each entry point to the distribution system;
 - B) A minimum pH value for all tap samples. This value must be equal to or greater than 7.0, unless the Agency determines that a pH 7.0 is not technologically feasible or is not necessary for the supplier to optimize corrosion control;
 - C) If the supplier uses a corrosion inhibitor, a minimum inhibitor concentration or range of concentrations, for each entry point to the distribution system and in all tap samples, that the Agency determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system;

21378 D) If the supplier adjusts alkalinity as part of optimal corrosion
21379 control treatment, a minimum concentration or a range of
21380 concentrations for alkalinity for each entry point to the distribution
21381 system and in all tap samples;

21382
21383 E) If the supplier uses calcium carbonate stabilization as part of
21384 corrosion control, a minimum concentration or a range of
21385 concentrations for calcium in all tap samples.

21386
21387 2) The values for the applicable water quality control parameters in
21388 subsection (f)(1) must be those the Agency determines reflect optimal
21389 corrosion control treatment for the supplier.

21390
21391 3) The Agency may issue a SEP approving values for additional water
21392 quality control parameters the Agency determines reflect optimal
21393 corrosion control for the supplier's system.

21394
21395 4) The Agency must explain these determinations giving the basis for its
21396 decisions when issuing a SEP.

21397
21398 g) Continued Operation and Monitoring. All suppliers optimizing corrosion control
21399 must continue to operate and maintain optimal corrosion control treatment,
21400 including maintaining water quality parameter values at or above minimum values
21401 or within ranges the Agency approved under subsection (f), under this subsection
21402 (g) for all samples the supplier collects under Section 611.1357(d) through (f).
21403 The supplier must determine whether it complies with this subsection (g) every
21404 six months, as Section 611.1357(d) specifies. A water system does not comply
21405 with this subsection (g) in any six-month period during which the supplier has
21406 excursions from any Agency-specified parameter on more than nine days. An
21407 excursion occurs whenever the daily value for one or more of the water quality
21408 parameters measured at a sampling location is below the Agency-designated
21409 minimum value or outside the Agency-designated range. The supplier calculates
21410 daily values as subsections (g)(1) through (g)(3) provide. The Agency must
21411 delete results from this calculation that it determines are obvious sampling errors.

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21413 1) On days when the supplier collects more than one measurement for a
21414 water quality parameter at a sampling location, the daily value is the
21415 average of all results the supplier collected during the day, regardless of
21416 whether the supplier collected the samples through continuous monitoring,
21417 grab sampling, or a combination of both.

21418
21419 BOARD NOTE: Corresponding 40 CFR 141.82(g)(1) (2020) further
21420 provides as follows: If USEPA approves an alternative formula under 40

21421 CFR 142.16 in the State's application for a program revision submitted
21422 under 40 CFR 142.12, the approved formula is used to aggregate multiple
21423 measurements at a sampling point for the water quality parameter in lieu
21424 of the formula in this subsection (g).

21425
21426 2) On days when the supplier collects only one measurement for a water
21427 quality parameter at a sampling location, the daily value is that
21428 measurement.

21429
21430 3) On days when the supplier collects no measurement for a water quality
21431 parameter at a sampling location, the daily value is the daily value
21432 calculated on the most recent day on which the supplier measured the
21433 water quality parameter at the sample site.

21434
21435 h) Modifying Agency Treatment Decisions

21436
21437 1) On its own initiative or in response to a request by the supplier, the
21438 Agency may issue a SEP modifying its determination of the optimal
21439 corrosion control treatment under subsection (d) or of the optimal water
21440 quality control parameters under subsection (f).

21441
21442 2) A supplier must request modification in writing, explaining the propriety
21443 of the modification and providing supporting documentation.

21444
21445 3) The Agency may modify its determination if it determines that a change
21446 will ensure that the supplier continues optimizing corrosion control
21447 treatment. A revised determination must give the new treatment
21448 requirements, explain the basis for the Agency's decision, and provide an
21449 implementation schedule for completing the treatment modifications.

21450
21451 4) Any interested person may submit information to the Agency bearing on
21452 whether the Agency should exercise its discretion and issue a SEP
21453 modifying its determination under subsection (h)(1). An Agency
21454 determination not to act on information an interested person submits is not
21455 an Agency determination for the purposes of Sections 39 and 40 of the
21456 Act.

21457
21458 i) USEPA Treatment Decisions. Under 40 CFR 142.19, USEPA reserves the
21459 prerogative to review Agency treatment determinations under subsections (d), (f),
21460 or (h) and issue federal treatment determinations consistent with 40 CFR
21461 141.82(d), (e), or (h) (2020) if USEPA finds that certain conditions exist:
21462

- 21463 1) The Agency fails to issue a treatment determination by the applicable
21464 deadlines in Section 611.1351 (corresponding with 40 CFR 141.81
21465 (2020));
- 21466
- 21467 2) The Agency abuses its discretion in a substantial number of instances or in
21468 instances affecting a substantial population; or
- 21469
- 21470 3) The technical aspects of the Agency's determination would be
21471 indefensible in a federal enforcement action taken against the supplier.
21472

21473 BOARD NOTE: This Section corresponds with Section 611.1352 and derives from 40 CFR
21474 141.82 (2020).

21475
21476 (Source: Added at 47 Ill. Reg. _____, effective _____)

21477 Section 611.1353 Source Water Treatment

21478 A supplier must complete source water monitoring and treatment requirements (under subsection
21479 (b) and Sections 611.1356 and 611.1358) before specific deadlines.

21480 a) Deadlines for Completing Source Water Treatment Steps

- 21481 1) Step 1: A supplier exceeding the lead or copper action level must
21482 complete lead and copper and source water monitoring (under Section
21483 611.1358(b)) and recommend treatment to the Agency (under subsection
21484 (b)(1)) within 180 days after the end of the monitoring period during
21485 which the supplier exceeded the action level.
- 21486
- 21487 2) Step 2: The Agency must issue a SEP determining source water treatment
21488 (under subsection (b)(2)) within six months after the supplier submits
21489 monitoring results under step 1.
- 21490
- 21491 3) Step 3: If the Agency requires source water treatment, the supplier must
21492 install that treatment (under subsection (b)(3)) within 24 months after the
21493 Agency completes step 2.
- 21494
- 21495 4) Step 4: The supplier must complete follow-up tap water monitoring
21496 (under Section 611.1356(d)(2)) and source water monitoring (under
21497 Section 611.1358(c)) within 36 months after completion of step 2.
- 21498
- 21499 5) Step 5: The Agency must issue a SEP reviewing the supplier's installation
21500 and operation of source water treatment and specify MPCs for lead and
21501
21502
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21505 copper (under subsection (b)(4)) within six months after the Agency
21506 completes step 4.

21507
21508 6) Step 6: The supplier must comply with the Agency-specified lead and
21509 copper MPCs (under subsection (b)(4)) and continue source water
21510 monitoring (under Section 611.1358(d)).

21511
21512 b) Source Water Treatment Requirements

21513
21514 1) System Treatment Recommendation. Any supplier exceeding the lead or
21515 copper action level must recommend to the Agency in writing one of the
21516 source water treatments in subsection (b)(2). A supplier may recommend
21517 no treatment based on a demonstration that source water treatment is not
21518 necessary to minimize lead and copper levels at users' taps.

21519
21520 2) Agency Determination Regarding Source Water Treatment

21521
21522 A) The Agency must evaluate the results of all source water samples
21523 the supplier submitted to determine whether source water treatment
21524 is necessary to minimize lead or copper levels in water the supplier
21525 delivers to users' taps.

21526
21527 B) If the Agency determines treatment necessary, the Agency must
21528 issue a SEP requiring the supplier to install and operate either the
21529 source water treatment the supplier recommended (if any) or
21530 another from among specific source water treatment techniques:

21531
21532 i) ion exchange;

21533
21534 ii) reverse osmosis;

21535
21536 iii) lime softening; or

21537
21538 iv) coagulation/filtration.

21539
21540 C) The Agency may require the supplier to submit, on or before a
21541 certain date, any additional information as the Agency determines
21542 is necessary to aid its review.

21543
21544 D) The Agency must notify the supplier in writing of its
21545 determination, stating the basis for its decision.
21546

- 21547 3) Installing Source Water Treatment. A supplier must properly install and
21548 operate the source water treatment the Agency approves under subsection
21549 (b)(2).
21550
- 21551 4) Agency Reviewing Source Water Treatment and Specifying Maximum
21552 Permissible Source Water Levels (MPCs)
21553
- 21554 A) The Agency must review the source water samples the supplier
21555 took both before and after the supplier installs source water
21556 treatment and determine whether the supplier properly installs and
21557 operates the approved source water treatment.
21558
- 21559 B) Based on its review, the Agency must issue a SEP approving the
21560 lead and copper MPCs for finished water entering the supplier's
21561 distribution system. The MPC levels must reflect the contaminant
21562 removal capability of the treatment when properly operated and
21563 maintained.
21564
- 21565 C) The Agency must explain the basis for its decision under
21566 subsection (b)(4)(B).
21567
- 21568 5) Continued Operation and Maintenance. A supplier must maintain lead
21569 and copper levels below the MPCs the Agency approved at every
21570 sampling point the supplier monitors under Section 611.1358. The
21571 supplier does not comply with this subsection (b) if the level of lead or
21572 copper at any sampling point is greater than the MPC the Agency
21573 approved under subsection (b)(4)(B).
21574
- 21575 6) Modifying Agency Treatment Decisions
21576
- 21577 A) On its own initiative, or in response to a request by the supplier,
21578 the Agency may issue a SEP modifying its determination of the
21579 source water treatment under subsection (b)(2) or the lead and
21580 copper MPCs under subsection (b)(4).
21581
- 21582 B) A supplier must make a request to modify in writing, explaining
21583 the propriety of the modification, and providing supporting
21584 documentation.
21585
- 21586 C) The Agency may issue a SEP modifying its determination if it
21587 concludes that the change is necessary to ensure that the supplier
21588 continues minimizing lead and copper concentrations in source
21589 water.

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D) A revised determination under subsection (b)(6)(C) must state the new treatment requirements, explain the basis for the Agency’s decision, and provide a schedule for completing the treatment modifications.

E) Any interested person may submit information to the Agency in writing bearing on whether the Agency should exercise its discretion and issue a SEP modifying its determination under subsection (b)(2). An Agency determination not to act on information an interested person submits is not an Agency determination for the purposes of Sections 39 and 40 of the Act.

7) USEPA Treatment Decisions. Under 40 CFR 142.19, USEPA reserves the prerogative to review Agency treatment determinations under subsections (b)(2), (b)(4), or (b)(6) and issue federal treatment determinations consistent with 40 CFR 141.83(b)(2), (b)(4), and (b)(6) (2020) if USEPA finds that certain conditions exist:

A) the Agency fails to issue a treatment determination by the applicable deadline in subsection (a);

B) the Agency abuses its discretion in a substantial number of instances or in instances affecting a substantial population; or

C) the technical aspects of the Agency’s determination would be indefensible in a federal enforcement action taken against the supplier.

BOARD NOTE: This Section corresponds with Section 611.1353 and derives from 40 CFR 141.83 (2020).

(Source: Added at 47 Ill. Reg. _____, effective _____)

Section 611.1354 Lead Service Line Replacement

a) Suppliers That Must Replace Lead Service Lines

1) If the results from tap samples the supplier took under Section 611.1356(d)(2) exceed the lead action level after the supplier installs corrosion control or source water treatment (whichever sampling occurs later), the supplier must recommence replacing lead service lines under subsection (b).

21633 2) If a supplier violates Section 611.1351 or 611.1353 by failing to install
21634 source water or corrosion control treatment, the Agency may issue a SEP
21635 requiring the supplier to begin lead service line replacement under this
21636 Section after the date when Section 611.1356(d)(2) required the supplier
21637 to conduct monitoring.

21638
21639 b) Annually Replacing Lead Service Lines

21640
21641 1) Initiating a Lead Service Line Replacement Program

21642
21643 A) A supplier that subsection (a) requires to begin replacing lead
21644 service lines must annually replace at least seven percent of the
21645 initial number of lead service lines in its distribution system.

21646
21647 B) The initial number of lead service lines in a distribution system is
21648 the number of lead lines in place when the supplier begins its
21649 replacement program.

21650
21651 C) The supplier must identify the initial number of lead service lines
21652 in its distribution system, indicating the portions of the system the
21653 supplier owns, based on a materials evaluation, including the
21654 evaluation Section 611.1356(a) requires and relevant legal
21655 authorities (e.g., contracts, local ordinances, etc.) regarding the
21656 portion the supplier owns.

21657
21658 D) The first year of lead service line replacement must begin on the
21659 first day after the end of the monitoring period during which the
21660 supplier exceeded the action level under subsection (a).

21661
21662 E) If the supplier must monitor annually or less frequently, the end of
21663 the monitoring period is September 30 of the calendar year in
21664 which the supplier took the sample exceeding the action level.

21665
21666 F) If the Agency establishes an alternative monitoring period in a
21667 SEP, the end of the monitoring period is the last day of that period.

21668
21669 2) Resuming a Lead Service Line Replacement Program after Cessation

21670
21671 A) A supplier resuming after ceasing its lead service line replacement
21672 program, as subsection (f) allows, must update its remaining lead
21673 service lines inventory to include the sites the supplier previously
21674 determined did not require replacement under subsection (c).

21675

21676 B) The supplier must divide its updated remaining lead service lines
21677 inventory by the number of remaining years in the program to
21678 determine the number of lines that the supplier must replace each
21679 year. (Seven percent lead service line replacement is based on a
21680 15-year replacement program, so that, for example, a supplier
21681 resuming lead service line replacement after previously conducting
21682 two years of replacement would divide its updated inventory by
21683 13.)

21684
21685 C) For a supplier completing a 15-year lead service line replacement
21686 program, the Agency must issue a SEP determining a schedule for
21687 replacing or retesting lines under the completed program that the
21688 supplier previously tested, whenever the supplier re-exceeds the
21689 action level.

21690
21691 c) Service Lines Not Needing Replacement. A supplier is not required to replace
21692 any individual lead service line for which the lead concentrations in all tap
21693 samples taken under Section 611.1356(b)(3) are less than or equal to the lead
21694 action level (0.015 mg/ℓ).

21695
21696 d) A water supplier must replace that portion of the lead service line that it owns. If
21697 the supplier does not own the entire lead service line, the supplier must notify the
21698 owner of the line, or the owner's authorized agent, that the supplier will replace
21699 the portion of the service line that it owns and offer to replace the owner's portion
21700 of the line at the owner's expense. A supplier needs not bear the cost of replacing
21701 the privately-owned portion of the service line, nor needs the supplier replace the
21702 privately-owned portion of the service line if the owner chooses not to pay the
21703 cost of replacing that portion of the line or if State, local, or common law
21704 precludes replacing the privately-owned portion of the line. A water supplier that
21705 does not replace the entire length of the service line also must complete certain
21706 tasks:

21707
21708 1) Notice Prior to Beginning Work

21709
21710 A) At least 45 days prior to beginning partial replacement of a lead
21711 service line, the water supplier must notify the residents of all
21712 buildings the line serves explaining that the residents may
21713 experience a temporary increase of lead levels in their drinking
21714 water, along with guidance on measures consumers can take to
21715 minimize their exposure to lead.

21716
21717 B) The Agency may issue a SEP allowing the water supplier to
21718 provide notice under the previous sentence less than 45 days before

21719 beginning partial lead service line replacement if the Agency
21720 determines that the replacement is together with emergency
21721 repairs.

21722
21723 C) The supplier must also inform the residents the line serves that the
21724 supplier will, at the supplier's expense, collect a representative
21725 sample of the water from the partially replaced service line for
21726 analysis of lead content, as Section 611.1356(b)(3) requires, within
21727 72 hours after partially replacing the service line. The supplier
21728 must collect the sample and report the results of the analysis to the
21729 owner and the residents the line serves within three business days
21730 after receiving the results.

21731
21732 D) Mailed notices post-marked within three business days after the
21733 supplier receives the results are timely.

21734
21735 2) The water supplier must provide the information subsection (d)(1) requires
21736 to the residents of individual dwellings by mail or by other methods the
21737 Agency approved in a SEP. If the service line serves multi-family
21738 dwellings, the Agency must allow the water supplier to post the
21739 information at a conspicuous location.

21740
21741 e) Agency Determining a Shorter Replacement Schedule

21742
21743 1) The Agency must issue a SEP requiring a supplier to replace lead service
21744 lines on a shorter schedule than this Section otherwise requires if the
21745 Agency determines, taking into account the number of lead service lines in
21746 the system, that the supplier's shorter replacement schedule is feasible.

21747
21748 2) The Agency must notify the supplier of its finding under subsection (e)(1)
21749 within six months after monitoring triggers the supplier into beginning
21750 lead service line replacement under subsection (a).

21751
21752 f) Ceasing Service Line Replacement

21753
21754 1) Any supplier may cease replacing lead service lines whenever the supplier
21755 fulfills both two conditions:

21756
21757 A) First-draw tap samples the supplier collected under Section
21758 611.1356(b)(2) meet the lead action level during each of two
21759 consecutive six-month monitoring periods; and

21760
21761 B) The supplier submitted those results to the Agency.

21762
21763 2) If any of the supplier's first-draw tap samples later exceeds the lead action
21764 level, the supplier must resume replacing lead service lines under
21765 subsection (b)(2).
21766

21767 g) To demonstrate that it complies with subsections (a) through (d), a supplier must
21768 report to the Agency the information Section 611.1360(e) specifies.
21769

21770 BOARD NOTE: This Section corresponds with Section 611.1354 and derives from 40 CFR
21771 141.84 (2020).
21772

21773 (Source: Added at 47 Ill. Reg. _____, effective _____)
21774

21775 **Section 611.1355 Public Education and Supplemental Monitoring**
21776

21777 A supplier exceeding the lead action level based on tap water samples under Section 611.1356
21778 must deliver the public education materials subsection (a) requires under subsection (b). A
21779 supplier exceeding the lead action level must sample the tap water of any customer requesting
21780 sampling under subsection (c). A supplier must deliver a consumer notice of lead tap water
21781 monitoring results to persons the supplier serves at each site that the supplier tests, as subsection
21782 (d) specifies.
21783

21784 a) Content of Written Public Education Materials
21785

21786 1) Community Water Systems and Non-Transient Non-Community Water
21787 Systems. A CWS or NTNCWS supplier must include the following
21788 elements in printed materials (e.g., brochures and pamphlets) in the same
21789 order as listed in subsections (a)(1)(A) through (a)(1)(F). In addition, the
21790 supplier must use the verbatim language in subsections (a)(1)(A),
21791 (a)(1)(B), and (a)(1)(F), except for replacing the text in brackets with the
21792 system-specific information. Any additional information a supplier
21793 presents must be consistent with the information in subsections (a)(1)(A)
21794 through (a)(1)(F), and the supplier must present the additional information
21795 in plain language that the general public can understand. The supplier
21796 must submit all written public education materials to the Agency.
21797

21798 A) IMPORTANT INFORMATION ABOUT LEAD IN YOUR
21799 DRINKING WATER. [INSERT NAME OF SUPPLIER] found
21800 elevated levels of lead in drinking water in some homes/buildings.
21801 Lead can cause serious health problems, especially for pregnant
21802 women and young children. Please read this information closely to
21803 see what you can do to reduce lead in your drinking water.
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B) Health Effects of Lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother’s bones, which may affect brain development.

C) Sources of Lead

- i) Explain what lead is.
- ii) Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home and building plumbing materials and service lines that may contain lead.
- iii) Discuss other important sources of lead exposure in addition to drinking water (e.g., paint).

BOARD NOTE: The supplier must use text providing the information this subsection (a)(1)(C) describes.

D) Discuss the steps the consumer can take to reduce exposure to lead in drinking water.

- i) Encourage running the water to flush out the lead.
- ii) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.
- iii) Explain that boiling water does not reduce lead levels.
- iv) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or water treatment.

21848 v) Suggest that parents have their child's blood tested for lead.
21849

21850 BOARD NOTE: The supplier must use text providing the
21851 information this (a)(1)(D) describes.
21852

21853 E) Explain why there are elevated levels of lead in the supplier's
21854 drinking water (if known) and what the supplier is doing to reduce
21855 the lead levels in homes and buildings in this area.
21856

21857 BOARD NOTE: The supplier must use text providing the
21858 information this (a)(1)(E) describes.
21859

21860 F) For more information, call us at [INSERT THE SUPPLIER'S
21861 NUMBER] [(IF APPLICABLE), or visit our Web site at [INSERT
21862 THE SUPPLIER'S WEB SITE HERE]]. For more information on
21863 reducing lead exposure around your home/building and the health
21864 effects of lead, visit USEPA's Web site at www.epa.gov/lead or
21865 contact your health care provider.
21866

21867 2) Community Water Systems. In addition to including the elements
21868 subsection (a)(1) specifies, a CWS supplier must include two information
21869 items:
21870

21871 A) The supplier must tell consumers how to get their water tested; and
21872

21873 B) The supplier must discuss lead in plumbing components and the
21874 difference between low-lead and lead-free components.
21875

21876 BOARD NOTE: At corresponding 40 CFR 141.85(a)(1) (2020), USEPA allowed
21877 the State to require prior approval of written public information materials. Rather
21878 than require prior Agency approval, the Board chooses to allow the Agency to
21879 raise any deficiencies that it may perceive using its existing procedure for review
21880 of public education materials. The Agency outlines its standard practice for
21881 review of public information materials: The Agency provides a comprehensive
21882 public education packet to the supplier together with the notice that the supplier
21883 exceeds the lead action level. That packet includes guidance and templates for the
21884 supplier to use in preparing and distributing its public education materials. The
21885 supplier must send a copy of the public education materials that it distributes to
21886 the Agency, and the Agency reviews the copy of the materials after their
21887 distribution to the public. The Agency directly communicates to the supplier any
21888 perceived defects in the materials. The Agency will request correction when it
21889 perceives minor defects in future distributions of the public education materials,

21890 or the Agency will request a redistribution of corrected public education materials
21891 when it perceives major defects in the materials the supplier already distributed.

21892
21893 b) Delivering Public Education Materials
21894

21895 1) The public education materials of a supplier serving a large proportion of
21896 non-English-speaking consumers must contain information in the
21897 appropriate languages regarding the importance of the notice, or the
21898 materials must contain a telephone number or address where a water
21899 consumer may contact the supplier to obtain a translated copy of the
21900 public education materials or to request assistance in the appropriate
21901 language.

21902
21903 2) A CWS supplier exceeding the lead action level on the basis of tap water
21904 samples under Section 611.1356 not already conducting public education
21905 tasks under this Section must complete public education tasks within 60
21906 days after the end of the monitoring period in which the exceedance
21907 occurred:

21908
21909 A) The CWS supplier must deliver printed materials complying with
21910 subsection (a) to all of its bill-paying customers.

21911
21912 B) Methods of Delivery for a CWS Supplier
21913

21914 i) The CWS supplier must contact customers who are most at
21915 risk by delivering education materials complying with
21916 subsection (a) to local public health agencies, even if those
21917 agencies not located within the supplier's service area,
21918 along with an informational notice encouraging distribution
21919 to all of the agencies' potentially affected customers or the
21920 supplier's consumers. The supplier must contact the local
21921 public health agencies directly by phone or in person. The
21922 local public health agencies may provide a specific list of
21923 additional community-based organizations serving the
21924 target populations, which may include organizations
21925 outside the service area of the supplier. If local health
21926 agencies provide lists, the supplier must deliver education
21927 materials that comply with subsection (a) to each of the
21928 organizations on the provided lists.

21929
21930 ii) The CWS supplier must contact customers who are most at
21931 risk by delivering materials complying with subsection (a)
21932 to the organizations in subsections (b)(2)(H)(i) through

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(b)(2)(H)(vi) that are located within the supplier’s service area, along with an informational notice encouraging distribution to all the organization’s potentially affected customers or supplier’s users.

BOARD NOTE: The Board moved the text of 40 CFR 141.85(b)(2)(ii)(B)(1) through (b)(2)(ii)(B)(6) (2020) to appear as subsections (b)(2)(H)(i) through (b)(2)(H)(vi) to comport with allowed indent levels.

iii) The CWS supplier must make a good faith effort to locate the organizations in subsections (b)(2)(I)(i) through (b)(2)(I)(iii) that are located within the service area and deliver materials complying with subsection (a) to those organizations, along with an informational notice encouraging distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of these organizations from the local public health agencies, even if those organizations are not located within the supplier’s service area.

BOARD NOTE: The Board moved the text of 40 CFR 141.85(b)(2)(ii)(C)(1) through (b)(2)(ii)(C)(3) (2020) to appear as subsections (b)(2)(I)(i) through (b)(2)(I)(iii) to comport with allowed indent levels.

C) No less often than quarterly, the CWS supplier must provide information on or in each water bill as long as the system exceeds the action level for lead. The message on the water bill must include the verbatim text of the paragraph below, except replacing the text in brackets with system-specific information:

[INSERT NAME OF SUPPLIER] found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information please call [INSERT NAME OF SUPPLIER] [or visit (INSERT SUPPLIER’S WEB SITE HERE)]. The message or delivery mechanism can be modified in consultation with the Illinois Environmental Protection Agency, Division of Public Water Supply; specifically, the Agency may allow a separate mailing of public education materials to customers

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if the water system cannot place the information on water bills.

D) The CWS supplier must post material complying with subsection (a) on the supplier's website if the CWS supplier serves a population greater than 100,000.

E) The CWS supplier must submit a press release to newspaper, television, and radio stations.

F) In addition to subsections (b)(2)(A) through (b)(2)(E), the CWS supplier must implement at least three activities from one or more of the categories listed below. The supplier must determine the educational content and selection of these activities consulting with the Agency.

i) Public service announcements.

ii) Paid advertisements.

iii) Public area information displays.

iv) E-mails to customers.

v) Public meetings.

vi) Household deliveries.

vii) Targeted individual customer contact.

viii) Direct material distribution to all multi-family homes and institutions.

ix) Other Agency-approved methods.

G) For a CWS supplier that must monitor annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or on the last day of an alternative monitoring period the Agency sets in a SEP.

H) Organizations That the CWS Supplier Must Contact When Required to Do So under Subsection (b)(2)(B)(iii)

- i) Public and private schools or school boards.
- ii) Women, Infants and Children (WIC) and Head Start programs.
- iii) Public and private hospitals and medical clinics.
- iv) Pediatricians.
- v) Family planning clinics.
- vi) Local welfare agencies.

BOARD NOTE: This subsection (b)(2)(H) derives from 40 CFR 141.85(b)(2)(ii)(B)(1) through (b)(2)(ii)(B)(6) (2020), moved here to comport with allowed indent levels.

D) Organizations That the CWS Supplier Must Contact When Required to Do So Under Subsection (b)(2)(B)(iii)

- i) Licensed childcare centers.
- ii) Public and private preschools.
- iii) Obstetricians-gynecologists and midwives.

BOARD NOTE: This subsection (b)(2)(H) derives from 40 CFR 141.85(b)(2)(ii)(C)(1) through (b)(2)(ii)(C)(3) (2020), moved here to comport with allowed indent levels.

3) As long as a CWS supplier exceeds the action level, it must repeat the activities in subsection (b)(2), as subsections (b)(3)(A) through (b)(3)(D) require.

- A) The CWS supplier must repeat the tasks in subsections (b)(2)(A), (b)(2)(B), and (b)(2)(D) every 12 months.
- B) The CWS supplier must repeat tasks in subsection (b)(2)(C) with each billing cycle.
- C) The CWS supplier serving a population greater than 100,000 must post and retain material on a publicly accessible website under subsection (b)(2)(D).

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D) The CWS supplier must repeat the task in subsection (b)(2)(E) twice every 12 months on a schedule agreed by the Agency in a SEP. The Agency must, on a case-by-case basis, issue a SEP extending the time for the supplier to complete the public education tasks in subsection (b)(2) beyond the 60-day limit if the Agency determines that the supplier needs the extended time to implement; however, the Agency must issue the SEP granting any extension before the 60-day deadline expires.

4) Within 60 days after the end of the monitoring period in which a NTNCWS supplier exceeds the lead action level (unless it already is repeating public education tasks under subsection (b)(5)), the supplier must deliver the public education materials subsection (a) specifies.

A) The supplier must deliver the public education materials by certain means:

i) The NTNCWS supplier must post informational posters on lead in drinking water in a public place or common area in each of the buildings the supplier serves; and

ii) The NTNCWS supplier must distribute informational pamphlets or brochures on lead in drinking water to each person the NTNCWS supplier serves. The Agency may issue a SEP allowing the system to use electronic transmission in lieu of or combined with printed materials as long as the electronic transmission achieves the same or better coverage.

B) For a NTNCWS supplier that must monitor annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or on the last day of an alternative monitoring period the Agency sets in a SEP.

5) A NTNCWS supplier must repeat the tasks in subsection (b)(4) at least once during each calendar year in which the supplier exceeds the lead action level. The Agency must, on a case-by-case basis, issue a SEP extending the time for the supplier to complete the public education tasks in subsection (b)(2) beyond the 60-day limit if the Agency determines that the extended time is needed for implementation purposes; however, the Agency must issue any SEP granting any extension prior to when the 60-day deadline expires.

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- 6) A supplier may stop delivering public education materials after the supplier meets the lead action level during the most recent six-month monitoring period under Section 611.1356. The supplier must begin public education anew under this Section if the supplier subsequently exceeds the lead action level during any six-month monitoring period.

- 7) A CWS supplier may apply to the Agency in writing to use only the text in subsection (a)(1) in lieu of the text in subsections (a)(1) and (a)(2) and to perform the tasks in subsections (b)(4) and (b)(5) in lieu of the tasks in subsections (b)(2) and (b)(3) under specific circumstances:
 - A) The supplier is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and

 - B) The supplier provides water as part of the cost of services provided, not separately charging for water consumption.

- 8) A CWS supplier serving 3,300 or fewer people may limit certain aspects of its public education programs:
 - A) For notice under subsection (b)(2)(F), a supplier serving 3,300 or fewer people must implement at least one of the activities.

 - B) For notice under subsection (b)(2)(B), a supplier serving 3,300 or fewer people may limit the distribution of the public education materials to facilities and organizations pregnant women and children are most likely to visit.

 - C) For notice under subsection (b)(2)(E), the Agency may issue a SEP waiving this requirement for a supplier serving 3,300 or fewer persons, as long as the supplier distributes notices to every household the supplier serves.

- c) Supplemental Monitoring and Notification of Results. A supplier failing to meet the lead action level in tap samples under Section 611.1356 must offer to sample the tap water of any customer requesting it. The supplier needs not pay for collecting or analyzing the sample, nor must the supplier itself collect and analyze the sample.

- d) Requirement for Consumer Notice of Tap Water Monitoring Results

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- 1) Consumer Notice Requirement. A supplier must provide a notice of the individual tap results from lead tap water monitoring under Section 611.1356 to the persons the water system serves at the specific sampling site from which the supplier took the sample (e.g., the occupants of the residence where the supplier tested the tap).
 - 2) Timing of Consumer Notice. The supplier must provide the consumer notice as soon as practical, but no later than 30 days after the supplier learns of the tap monitoring results.
 - 3) Content of Consumer Notice. The consumer notice must include the results of lead tap water monitoring for the tap the supplier tested, an explanation of the health effects of lead, a list of steps consumers can take to reduce exposure to lead in drinking water, and contact information for the water utility. The notice must also provide the maximum contaminant level goal and the action level for lead and the definitions for these two terms from Section 611.883(c).
 - 4) Delivery of Consumer Notice. The supplier must provide the consumer notice to persons it serves at the tap the supplier tested, either by mail or by another method the Agency approves in a SEP. For example, upon Agency approval, a NTNCWS supplier could post the results on a bulletin board in the facility enabling users to review the information. The supplier must provide the notice to customers at sample taps the supplier tested, including consumers who do not receive water bills.

22174 BOARD NOTE: This Section corresponds with Section 611.1355 and derives from 40 CFR
22175 141.85 (2020).
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22177 (Source: Added at 47 Ill. Reg. _____, effective _____)
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22179 **Section 611.1356 Tap Water Monitoring for Lead and Copper**
22180

22181 a) Sampling Site Location
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22183 1) Selecting a Pool of Targeted Sampling Sites
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- 22185 A) Before the applicable date for beginning monitoring under
22186 subsection (d)(1), a supplier must complete evaluating the
22187 materials in its distribution system to identify a pool of targeted
22188 sampling sites complying with this Section.
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- B) The pool of targeted sampling sites must be large enough to ensure that the supplier can collect the number of lead and copper tap that the supplier can collect the number of lead and copper tap samples subsection (c) requires.
- C) The supplier must select the sites for collecting first-draw tap samples from this pool of targeted sampling sites.
- D) The supplier must not select as sampling sites any faucets having point-of-use or point-of-entry treatment devices designed to remove or capable of removing inorganic contaminants.

2) Materials Evaluation

- A) A supplier must use the information on lead, copper, and galvanized steel it collected under 40 CFR 141.42(d) (special monitoring for corrosivity characteristics) when conducting a materials evaluation.
- B) When evaluating the information collected under 40 CFR 141.42(d) is insufficient to locate the requisite number of lead and copper sampling sites under subsection (a), the supplier must review other sources of information to identify sufficient sampling sites:
 - i) All plumbing codes, permits, and records in building department files indicating the installed plumbing materials in publicly- and privately-owned structures connected to the distribution system;
 - ii) All inspections and records of the distribution system indicating the material composition of the service connections connecting a structure to the distribution system;
 - iii) All existing water quality information, including the results of all prior analyses of the system or individual structures connected to the system, that would indicate locations particularly susceptible to high lead or copper concentrations; and
 - iv) The supplier must seek to collect this information when possible in the course of its normal operations (e.g.,

checking service line materials when reading water meters or performing maintenance activities).

3) Tiers of Sampling Sites. A supplier must categorize the sampling sites within its pool according to tiers:

A) CWS Tier 1 Sampling Sites. “CWS Tier 1 sampling sites” must include certain single-family structures:

- i) Those containing copper pipes with lead solder installed after 1982 or containing lead pipes; or
- ii) Those having a lead service line.

BOARD NOTE: This subsection (a)(3)(A) derives from segments of 40 CFR 141.86(a)(3) (2020). This allows the pool of CWS tier 1 sampling sites to consist exclusively of structures having lead service lines.

B) CWS Tier 2 Sampling Sites. “CWS Tier 2 sampling sites” must include certain buildings, including multiple-family structures:

- i) Those containing copper pipes with lead solder installed after 1982 or containing lead pipes; or
- ii) Those having a lead service line.

BOARD NOTE: This subsection (a)(3)(B) derives from segments of 40 CFR 141.86(a)(4) (2020). This allows the pool of CWS tier 2 sampling sites to consist exclusively of structures having lead service lines.

C) CWS Tier 3 Sampling Sites. “CWS Tier 3 sampling sites” must include certain single-family structures: those containing copper pipes with lead solder installed before 1983.

BOARD NOTE: This subsection (a)(3)(C) derives from segments of 40 CFR 141.86(a)(5) (2020).

D) NTNCWS Tier 1 Sampling Sites. “NTNCWS Tier 1 sampling sites” must include certain buildings:

22275 i) Those containing copper pipes with lead solder installed
22276 after 1982 or containing lead pipes; or

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22278 ii) Those having a lead service line.
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22280 BOARD NOTE: This subsection (a)(3)(D) derives from segments
22281 of 40 CFR 141.86(a)(6) (2020). This allows the pool of NTNCWS
22282 tier 1 sampling sites to consist exclusively of buildings having lead
22283 service lines.
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22285 E) Alternative NTNCWS Sampling Sites. “Alternative NTNCWS
22286 sampling sites” must include certain buildings: those containing
22287 copper pipes with lead solder installed before 1983.
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22289 BOARD NOTE: This subsection (a)(3)(E) derives from segments
22290 of 40 CFR 141.86(a)(7) (2020).
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22292 4) Selection of Sampling Sites. A supplier must select sampling sites for its
22293 sampling pool using specific criteria:
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22295 A) CWS Suppliers. A CWS supplier must use CWS tier 1 sampling
22296 sites, except that the supplier may include CWS tier 2 or CWS tier
22297 3 sampling sites in its sampling pool under certain circumstances:
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22299 i) If multiple-family residences comprise at least 20 percent
22300 of the structures the supplier serves, the supplier may use
22301 CWS tier 2 sampling sites in its sampling pool; or
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22303 BOARD NOTE: This subsection (a)(4)(A)(i) derives from
22304 a segment of 40 CFR 141.86(a)(3)(ii) (2020).
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22306 ii) If the CWS supplier does not have a sufficient number of
22307 CWS tier 1 sampling sites on its distribution system, the
22308 supplier may use CWS tier 2 sampling sites in its sampling
22309 pool; or
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22311 BOARD NOTE: This subsection (a)(4)(A)(ii) derives from
22312 a segment of 40 CFR 141.86(a)(4) (2020).
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22314 iii) If the CWS supplier does not have a sufficient number of
22315 CWS tier 1 and CWS tier 2 sampling sites on its
22316 distribution system, the supplier may complete its sampling
22317 pool with CWS tier 3 sampling sites.

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BOARD NOTE: This subsection (a)(4)(A)(iii) derives from a segment of 40 CFR 141.86(a)(5) (2020).

- iv) If the CWS supplier does not have a sufficient number of CWS tier 1 sampling sites, CWS tier 2 sampling sites, and CWS tier 3 sampling sites, the supplier must use those CWS tier 1 sampling sites, CWS tier 2 sampling sites, and CWS tier 3 sampling sites that it has and complete its sampling pool with representative sites throughout its distribution system for the balance of its sampling sites. For this subsection (a)(4)(A)(iv), a representative site is a site having plumbing materials commonly found at other sites the water system serves.

BOARD NOTE: This subsection (a)(4)(A)(iv) derives from segments of 40 CFR 141.86(a)(5) (2020).

B) NTNCWS Suppliers

- i) An NTNCWS supplier must select NTNCWS tier 1 sampling sites for its sampling pool.

BOARD NOTE: This subsection (a)(4)(B)(i) derives from segments of 40 CFR 141.86(a)(6) (2020).

- ii) If the NTNCWS supplier has an insufficient number of NTNCWS tier 1 sampling sites, the supplier may complete its sampling pool with alternative NTNCWS sampling sites.

BOARD NOTE: This subsection (a)(4)(B)(ii) derives from segments of 40 CFR 141.86(a)(7) (2020).

- iii) If the NTNCWS supplier has an insufficient number of NTNCWS tier 1 sampling sites and NTNCWS alternative sampling sites, the supplier must use representative sites throughout its distribution system. For the purpose of this subsection (a)(4)(B)(ii), a representative site is a site where the plumbing materials are commonly found at other sites served by the water system serves.

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BOARD NOTE: This subsection (a)(4)(B)(iii) derives from segments of 40 CFR 141.86(a)(7) (2020).

C) Suppliers with Lead Service Lines. Any supplier whose distribution system contains lead service lines must draw samples during each six-month monitoring period from specific sampling sites:

- i) 50 percent of the samples from sampling sites containing lead pipes or having copper pipes with lead solder; and
- ii) 50 percent of those samples from sites having a lead service line.
- iii) A supplier that cannot identify a sufficient number of sampling sites having a lead service line must collect first-draw tap samples from all of the sites identified as having lead service lines.

BOARD NOTE: This subsection (a)(4)(C) derives from segments of 40 CFR 141.86(a)(8) (2020). This allows the pool of sampling sites to consist exclusively of structures or buildings having lead service lines.

b) Sample Collection Methods

1) All tap samples a supplier collects for lead and copper under this Subpart G, with the exception of lead service line samples under Section 611.1354(d) and samples under subsection (b)(5), must be first-draw tap samples.

2) First-Draw Tap Samples

A) Every first-draw tap sample for lead and copper must be one liter in volume and have stood motionless in the plumbing system of the sampling site for at least six hours.

B) For residential buildings, the supplier must collect first-draw tap samples from residential housing from the cold-water kitchen or bathroom sink tap.

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- C) For non-residential buildings, the supplier must collect first-draw tap samples one-liter in volume from an interior tap occupants typically use for consuming water.

 - D) The supplier must collect non-first-draw tap samples that it collects in lieu of first-draw tap samples under subsection (b)(5) one liter in volume from an interior tap occupants typically use for consuming water.

 - E) The supplier may collect first-draw tap samples or allow residents to collect first-draw tap samples after instructing the residents in the sampling procedures this subsection (b) specifies.
 - i) To avoid problems of residents handling nitric acid, the supplier may acidify first-draw tap samples up to 14 days after the supplier or a resident collects the sample.

 - ii) After adding acid to resolubilize the metals, a sample must stand in its original container for the time the USEPA-approved method specifies before the laboratory analyzes the sample.

 - F) If a supplier allows residents to perform sampling under subsection (b)(2)(D), the supplier may not challenge the accuracy of sampling results based on alleged errors in sample collection.
- 3) Service Line Samples
- A) Each service line sample must be one liter in volume and have stood motionless in the lead service line for at least six hours.

 - B) Lead service line samples must be collected in one of three ways:
 - i) At the tap after flushing the calculated volume of water between the tap and the lead service line (based on the interior diameter and length of the pipe between the tap and the lead service line);

 - ii) Tapping directly into the lead service line; or

 - iii) If the sampling site is a single-family structure, allowing the water to run until there is a significant change in

temperature indicating water that stood in the lead service line.

4) Follow-Up First-Draw Tap Samples

A) A supplier must collect each follow-up first-draw tap sample from the same sampling site where the previous samples originated.

B) If, for any reason, the supplier cannot access a sampling site to collect a follow-up tap sample, the supplier may collect the follow-up tap sample from another sampling site in its sampling pool, as long as the new site meets the same targeting criteria and is within reasonable proximity of the original site.

5) Substitute Non-First-Draw Tap Samples

A) A NTNCWS supplier or a CWS supplier meeting the criteria in Sections 611.1355(b)(7)(A) and (b)(7)(B) not having enough taps for first-draw tap samples, as Section 611.102 defines the term, may apply to the Agency in writing for a SEP allowing the supplier to substitute non-first-draw tap samples.

B) A supplier approved to substitute non-first-draw tap samples must collect as many first-draw tap samples from appropriate taps as possible and identify sampling times and locations that likely give the longest standing time for the remaining sites.

C) The Agency may grant a SEP waiving the requirement for prior Agency approval of a supplier's chosen non-first-draw sampling sites.

c) Number of Samples

1) A supplier must collect at least one sample each from the number of sites in the first column of Table D (labelled "standard monitoring") during each six-month monitoring period subsection (d) specifies.

2) A supplier conducting reduced monitoring under subsection (d)(4) must collect one sample each from the number of sites in the second column of Table D (labelled "reduced monitoring") during each reduced monitoring period subsection (d)(4) specifies. The reduced monitoring sites must represent the sites standard monitoring requires. A supplier whose system has fewer than five drinking water taps capable of use for human

22486 consumption that meet the sampling site criteria of subsection (a) must
22487 collect multiple samples from individual taps to reach the required number
22488 of sampling sites Table D requires. To accomplish this, the supplier must
22489 collect at least one sample from each tap, then additional samples from
22490 those taps on different days during the monitoring period, to collect a total
22491 number of samples meeting the required number of sampling sites.
22492 Alternatively, the Agency may issue a SEP allowing the supplier whose
22493 system has fewer than five drinking water taps to collect a number of
22494 samples that is fewer than the number of sites this subsection (c) specifies
22495 if the Agency determines that the supplier samples 100 percent of all taps
22496 capable of use for human consumption and that the reduced number of
22497 samples will produce the same results as collecting multiple samples from
22498 some taps. The Agency must base any approval of reducing the minimum
22499 number of samples on a request from the supplier or Agency on on-site
22500 verification. The Agency may specify sampling locations in a SEP when a
22501 system conducts reduced monitoring.
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22503 d) Timing of Monitoring

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22505 1) Six-Month Sampling Periods. Six-month sampling periods begin on
22506 January 1 and July 1 of each year.

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22508 A) A large system must monitor during each consecutive six-month
22509 period, except as subsection (d)(4)(B) provides otherwise.

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22511 B) A small or medium-sized system must monitor during each
22512 consecutive six-month monitoring period until either of two
22513 occurrences:

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22515 i) The supplier exceeds the lead or copper action level and
22516 must, therefore, implement the corrosion control treatment
22517 requirements under Section 611.1351 and continue
22518 monitoring under subsection (d)(2); or

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22520 ii) The supplier meets the lead and copper action levels during
22521 each of two consecutive six-month monitoring periods,
22522 which allows the supplier to reduce monitoring under
22523 subsection (d)(4).

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22525 2) Monitoring after Installation of Corrosion Control and Source Water
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- A) Any large system supplier installing optimal corrosion control treatment under Section 611.1351(d)(4) must monitor during two consecutive six-month monitoring periods.

 - B) Any small or medium-sized system supplier installing optimal corrosion control treatment under Section 611.1351(e)(5) must monitor during two consecutive six-month monitoring periods within 36 months after the Agency approves optimal corrosion control treatment, as Section 611.1351(e)(6) specifies.

 - C) Any supplier installing source water treatment under Section 611.1353(a)(3) must monitor during two consecutive six-month monitoring periods within 36 months after completing step 2, as Section 611.1353(a)(4) specifies.
- 3) Monitoring after the Agency Specifies Water Quality Parameter Values for Optimal Corrosion Control. After the Agency specifies the values for water quality control parameters under Section 611.1352(f), the supplier must monitor during each subsequent six-month monitoring period, with the first six-month monitoring period beginning on the date the Agency specifies the optimal values.
- 4) Reduced Monitoring
- A) Reducing to Annual Monitoring for Small and Medium-Sized System Suppliers Meeting the Lead and Copper Action Levels. A small or medium-sized system supplier meeting the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the number of samples under subsection (c) and sampling frequency to once per year. A small or medium-sized system supplier collecting fewer than five samples as subsection (c) specifies and meeting the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce its frequency of sampling to once per year. In no instance may the supplier reduce the number of samples below the minimum of one sample per available tap. The supplier may begin this reduced sampling only during the calendar year immediately following the end of the second consecutive six-month monitoring period.

 - B) SEP Allowing Reduction to Annual Monitoring for Suppliers Maintaining Water Quality Control Parameters

- i) The Agency may issue a SEP allowing a supplier meeting the lead action level and maintaining the range of values for water quality control parameters reflecting optimal corrosion control treatment that the Agency specifies under Section 611.1352(f) during each of two consecutive six-month monitoring periods to reduce its monitoring frequency to once per year and its number of lead and copper samples to that subsection (c) specifies. This reduced sampling may only begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.
- ii) The Agency must review monitoring, treatment, and other relevant information the supplier submits under Section 611.1360, and the Agency must issue a SEP upon determining that the supplier is eligible to reduce its monitoring frequency to once every three years under this subsection (d)(4).
- iii) The Agency must review its determination under subsection (d)(4)(B)(i) when the supplier submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available to the Agency. The Agency must revise its determination if the Agency deems this appropriate based on its review.

C) Reduction to Triennial for Small and Medium-Sized System Suppliers

- i) Small- and Medium-Sized Water System Suppliers Meeting Lead and Copper Action Levels. A small or medium-sized system supplier meeting the lead and copper action levels during three consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three years.
- ii) SEP for Suppliers Meeting Optimal Corrosion Control Treatment. The Agency may issue a SEP allowing any supplier meeting the range of values for the water quality control parameters reflecting optimal corrosion control treatment the Agency specifies under Section 611.1352(f) during three consecutive years of monitoring may reduce

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its monitoring frequency from annual to once every three years. A supplier collecting samples once every three years must collect the samples no later than every third calendar year.

iii) The Agency must review its determination under subsection (d)(4)(C)(ii) when the supplier submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available to the Agency. The Agency must revise its determination if the Agency deems this appropriate based on its review.

D) Sampling at a Reduced Frequency. A supplier reducing the number and frequency of sampling must collect these samples from the pool of targeted sampling sites the supplier selected under subsection (a), preferentially using those sampling sites from the highest tier first. A supplier sampling annually or less frequently must conduct lead and copper tap sampling during June, July, August, or September, unless the Agency approves a different sampling period under subsection (d)(4)(D)(i).

i) The Agency may grant a SEP approving a different period for a supplier to conduct lead and copper tap sampling to a system collecting a reduced number of samples. The duration of the period must not exceed four consecutive months and must represent a time of normal operation when the highest lead levels are most likely to occur. For a NTNCWS supplier not operating during any of June through September and whose normal operating period when the highest levels of lead are most likely to occur is not known, the Agency must designate a period that represents a time of normal operation for the system. This reduced sampling may only begin during the Agency-designated period in the calendar year immediately following the end of the second consecutive six-month monitoring period, for a system initiating annual monitoring, or in the three-year period following the end of the third consecutive calendar year of annual monitoring, for a supplier initiating triennial monitoring.

ii) A supplier monitoring annually and collecting samples during the months of June through September that receives

22657 Agency approval to alter its sampling period under
 22658 subsection (d)(4)(D)(i) must collect its next round of
 22659 samples during a time period ending no later than 21
 22660 months after its previous round of sampling. A supplier
 22661 monitoring once every three years and collecting samples
 22662 during the months of June through September that receives
 22663 Agency approval to alter the sampling collection period
 22664 under subsection (d)(4)(D)(i) must collect its next round of
 22665 samples during a time period ending no later than 45
 22666 months after the previous round of sampling. The supplier
 22667 must collect subsequent rounds of sampling annually or
 22668 once every three years, as this Section requires. A small
 22669 system supplier collecting samples during the months of
 22670 June through September, receiving a waiver under
 22671 subsection (g) and receiving Agency approval to alter its
 22672 sample collection period under subsection (d)(4)(D)(i) must
 22673 collect its next round of samples before the end of the nine-
 22674 year compliance cycle (as Section 611.101 defines the
 22675 term).

22677 E) Any water system demonstrating for two consecutive six-month
 22678 monitoring periods that the tap water lead level computed under
 22679 Section 611.1350(c)(3) is less than or equal to 0.005 mg/ℓ and that
 22680 the tap water copper level computed under Section 611.1350(c)(3)
 22681 is less than or equal to 0.65 mg/ℓ may reduce its number of
 22682 samples under subsection (c) and reduce its sampling frequency to
 22683 once every three calendar years.

22684 F) Resumption of Standard Monitoring
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 22686 i) Small or Medium-Sized Suppliers Exceeding the Lead or
 22687 Copper Action Level. A small or medium-sized system
 22688 supplier subject to reduced monitoring exceeding the lead
 22689 or copper action level must resume sampling under
 22690 subsection (d)(3) and collect the number of samples that
 22691 subsection (c) specifies for standard monitoring. The small
 22692 or medium-sized system supplier exceeding the lead or
 22693 copper action level must also conduct water quality
 22694 parameter monitoring under Section 611.1357 (b), (c), or
 22695 (d) (as appropriate) during the six-month monitoring period
 22696 during which the supplier exceeded the action level. The
 22697 small or medium-sized system supplier may resume annual
 22698 tap monitoring for lead and copper at the reduced number
 22699 of samples.

22700 of sites subsection (c) specifies after the supplier completes
22701 two subsequent consecutive six-month rounds of
22702 monitoring complying with subsection (d)(4)(A). The
22703 small or medium-sized system supplier may resume
22704 monitoring once every three years for lead and copper at
22705 the reduced number of sites after demonstrating through
22706 subsequent rounds of monitoring that comply with
22707 subsection (d)(4)(C) or (d)(4)(E).

22708
22709 ii) Suppliers Failing to Operate within Water Quality Control
22710 Parameters. Any supplier subject to reduced monitoring
22711 frequency failing to meet the lead action level during any
22712 four-month monitoring period or failing to operate within
22713 the range of values for the water quality control parameters
22714 Section 611.1352(f) specifies for more than nine days in
22715 any six-month period Section 611.1357(d) specifies must
22716 conduct tap water sampling for lead and copper at the
22717 frequency subsection (d)(3) specifies, must collect the
22718 number of samples subsection (c) specifies for standard
22719 monitoring, and must resume monitoring for water quality
22720 parameters within the distribution system under Section
22721 611.1357(d). This standard tap water sampling must begin
22722 no later than the six-month period beginning January 1 of
22723 the calendar year after the supplier exceeds the lead action
22724 level or deviates from a water quality parameter. A
22725 supplier may resume reduced monitoring for lead and
22726 copper at the tap and for water quality parameters within
22727 the distribution system only if the supplier fulfills the
22728 conditions in subsection (d)(4)(H).

22729
22730 BOARD NOTE: The Board moved the last sentence of 40 CFR
22731 141.86(d)(4)(vi)(B) and 40 CFR 141.86(d)(4)(vi)(B)(I) through
22732 (d)(4)(vi)(B)(3) (2020) to subsections (d)(4)(H) and (d)(4)(H)(i)
22733 through (d)(4)(H)(iii) to comport with allowed indent levels.

22734
22735 G) Any supplier subject to reduced monitoring under subsection (d)(4)
22736 must notify the Agency in writing under Section 611.1360(a)(3) of
22737 any upcoming long-term change in treatment or adding a new
22738 source as that Section describes. The Agency must review and
22739 approve the addition of a new source or long-term change in water
22740 treatment before the supplier may implement it. The Agency may
22741 issue a SEP requiring the system to resume sampling under
22742 subsection (d)(3) and collecting the number of samples for

22743 standard monitoring under subsection (c) or take other appropriate
22744 steps, like increased water quality parameter monitoring or re-
22745 evaluating its corrosion control treatment, considering the
22746 potentially different water quality considerations.

22747
22748 H) A supplier that subsection (d)(4)(F) requires to resume monitoring
22749 under Section 611.1357(d) may resume reduced monitoring for
22750 lead and copper at the tap and water quality parameters within the
22751 distribution system under the specific conditions:

22752
22753 i) The supplier may resume annual monitoring for lead and
22754 copper at the tap at the reduced number of sites subsection
22755 (c) specifies after the supplier completes two subsequent
22756 six-month rounds of monitoring complying with subsection
22757 (d)(4)(B) and the supplier receives written approval from
22758 the Agency in a SEP appropriate to resuming reduced
22759 monitoring on an annual frequency. The supplier must
22760 begin this sampling during the calendar year immediately
22761 following the end of the second consecutive six-month
22762 monitoring period.

22763
22764 ii) The supplier may resume tap monitoring for lead and
22765 copper once every three years at the reduced number of
22766 sites after demonstrating through subsequent rounds of
22767 monitoring that the supplier complies with either
22768 subsection (d)(4)(C) or (d)(4)(E) and the Agency issues a
22769 SEP allowing the supplier to resume monitoring once every
22770 three years.

22771
22772 iii) The supplier may reduce the number of water quality
22773 parameter tap water samples it collects under Section
22774 611.1357(e)(1) and its sampling frequency under Section
22775 611.1357(e)(2). The supplier may not resume triennial tap
22776 water monitoring for water quality parameters until after
22777 the supplier demonstrates requalifying for triennial
22778 monitoring under Section 611.1357(e)(2).

22779
22780 BOARD NOTE: Subsections (d)(4)(H) and (d)(4)(H)(i) through
22781 (d)(4)(H)(iii) derive from the last sentence of 40 CFR
22782 141.86(d)(4)(vi)(B) and (d)(4)(vi)(B)(I) through (d)(4)(vi)(B)(3)
22783 (2020), moved here to comport with allowed indent levels.
22784

- 22785 e) Additional Monitoring. The supplier and the Agency must consider the results of
22786 any monitoring the supplier conducts in addition to the minimum requirements in
22787 this Section in making any determinations (i.e., calculating the 90th percentile
22788 lead action level or the copper level) under this Subpart G.
22789
- 22790 f) Invalidation of Lead or Copper Tap Water Samples. A sample the Agency
22791 invalidates under this subsection (f) does not count toward determining lead or
22792 copper 90th percentile levels under Section 611.1350(c)(3) or toward complying
22793 with subsection (c).
22794
- 22795 1) The Agency must invalidate a lead or copper tap water sample if it
22796 determines that any of certain conditions exists:
22797
- 22798 A) The laboratory establishes that improper sample analysis caused
22799 erroneous results;
22800
- 22801 B) The supplier took the sample from a site that did not meet the site
22802 selection criteria in this Section;
22803
- 22804 C) The sample container sustained damage in transit; or
22805
- 22806 D) There is substantial reason to believe that someone tampered with
22807 the sample.
22808
- 22809 2) The supplier must report the results from all samples to the Agency and
22810 submit all supporting documentation for samples the supplier believes the
22811 Agency should invalidate.
22812
- 22813 3) To invalidate a sample under subsection (f)(1), the Agency must document
22814 its decision and rationale for the decision in writing. The Agency may not
22815 invalidate a sample solely because a follow-up sample result is higher or
22816 lower than that of the original sample.
22817
- 22818 4) The supplier must collect replacement samples for any samples the
22819 Agency invalidates under this Section if the supplier has too few samples
22820 to meet the minimum requirements of subsection (c) after the Agency
22821 invalidates samples. The supplier must take any replacement samples as
22822 soon as possible but no later than the latter of 20 days after the Agency
22823 invalidates the original sample or before the end of the applicable
22824 monitoring period. The supplier must not use replacement samples it
22825 takes after the end of the applicable monitoring period to meet the
22826 monitoring requirements of a subsequent monitoring period. The supplier
22827 must take replacement samples at the same locations where it took the

invalidated samples or, if that is not possible, at other locations the supplier did not use for sampling during the monitoring period.

g) Monitoring Waivers for Small System Suppliers. Any small system supplier complying with the criteria in this subsection (g) may apply to the Agency for a SEP reducing its lead and copper monitoring frequency under this Section to once every nine years (i.e., a “full waiver”) if the supplier meets all of the materials criteria subsection (g)(1) specifies and all of the monitoring criteria subsection (g)(2) specifies. Any small system supplier that meets the criteria subsections (g)(1) and (g)(2) only for lead or copper may apply to the Agency for a SEP reducing its tap water monitoring frequency to once every nine years for that contaminant only (i.e., a “partial waiver”).

1) Materials Criteria. The supplier must demonstrate that its distribution system, service lines, and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials or copper-containing materials, as this subsection (g)(1) defines these terms:

A) Lead. To qualify for a SEP granting a full waiver or a partial waiver of the tap water monitoring requirements for lead (i.e., a “lead waiver”), the supplier must provide certification and supporting documentation to the Agency demonstrating that its system is free of all lead-containing materials:

- i) The system has no plastic pipes or service lines containing lead plasticizers; and
- ii) The system is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass- or bronze-alloy fittings and fixtures, unless those fittings and fixtures comply with Section 611.126(b).

BOARD NOTE: Corresponding 40 CFR 141.86(g)(1)(i)(B) (2020) specifies “any standard established pursuant to 42 USC 300g-6(e) (SDWA section 1417(e))”. Congress changed the lead standards for fittings and fixtures in the Reduction of Lead in Drinking Water Act, P.L. 111-380, section 2(a)(2) and (b), 124 Stat. 4131 (Jan. 4, 2011). The Board incorporated the statutory changes into this Section by referencing Section 611.126(b).

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B) Copper. To qualify for a SEP granting a full waiver or a partial waiver of the tap water monitoring requirements for copper (i.e., a “copper waiver”), the supplier must provide certification and supporting documentation to the Agency demonstrating that its system contains no copper pipes or copper service lines.

2) Monitoring Criteria for Waiver Issuance. The supplier must have completed at least one six-month round of standard tap water monitoring for lead and copper at Agency-approved sites and from the number of sites subsection (c) requires and demonstrate to the Agency that the 90th percentile levels for any and all rounds of monitoring conducted since the system became free of all lead-containing or copper-containing materials, as appropriate, meet certain criteria:

A) Lead Levels. To qualify for a full waiver or a lead partial waiver, the supplier must demonstrate that its 90th percentile lead level does not exceed 0.005 mg/l.

B) Copper Levels. To qualify for a full waiver or a copper partial waiver, the supplier must demonstrate that its 90th percentile copper level does not exceed 0.65 mg/l.

3) Agency Approval of Waiver Application. The Agency must notify the supplier of its waiver determination in a SEP stating the basis of its decision and any condition on the waiver. As a condition on the waiver, the Agency may require the supplier to perform specific activities (e.g., limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver, etc.) to avoid the risk of lead or copper concentration of concern in tap water. The small system supplier must continue monitoring for lead and copper at the tap as subsections (d)(1) through (d)(4) require, as appropriate, until the supplier receives written notification from the Agency approving the waiver.

4) Monitoring Frequency for Suppliers with Waivers

A) A supplier with a full waiver must conduct tap water monitoring for lead and copper under subsection (d)(4)(D) at the reduced number of sampling sites subsection (c) identifies at least once every nine years and provide to the Agency the materials certification subsection (g)(1) specifies for both lead and copper together with the monitoring results. The supplier must collect samples every nine years no later than the ninth calendar year.

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- B) A supplier with a partial waiver must conduct tap water monitoring for the waived contaminant under subsection (d)(4)(D) at the reduced number of sampling sites subsection (c) specifies at least once every nine years and provide to the Agency the materials certification subsection (g)(1) specifies pertaining to the waived contaminant together with the monitoring results. Such a supplier also must continue to monitor for the non-waived contaminant in under the applicable of subsections (d)(1) through (d)(4).

- C) A supplier with a full or partial waiver must notify the Agency in writing under Section 611.1360(a)(3) of any upcoming long-term change in treatment or adding a new source, as that rule describes. The Agency must review and approve adding a new source or long-term change in water treatment before the supplier implements it. The Agency may add or modify waiver conditions (e.g., require recertification that the supplier’s system is free of lead-containing or copper-containing materials, require additional rounds of monitoring, etc.) if the Agency determines that the modifications are necessary to address system treatment or source water changes.

- D) If a supplier with a full or partial waiver becomes aware that its system is no longer free of lead- or copper-containing materials, as appropriate (e.g., as a result of new construction or repairs), the supplier must notify the Agency in writing no later than 60 days after becoming aware of the change.

- 5) Continued Eligibility. If the supplier continues to comply with subsection (g)(4), the waiver will renew automatically, unless any of the conditions in subsections (g)(5)(A) through (g)(5)(C) occur. A supplier whose waiver the Agency revokes may re-apply for a waiver when the supplier again meets the appropriate materials and monitoring criteria of subsections (g)(1) and (g)(2).
 - A) A full waiver or a lead partial waiver does not renew if the supplier no longer satisfies the materials criteria of subsection (g)(1)(A) or has a 90th percentile lead level greater than 0.005 mg/ℓ.

 - B) A full waiver or a copper partial waiver does not renew if the supplier no longer satisfies the materials criteria of subsection (g)(1)(B) or has a 90th percentile copper level greater than 0.65 mg/ℓ.

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C) A waiver terminates when the Agency notifies the supplier that the Agency revokes the waiver, in writing and describing the basis of its decision.

6) Requirements Following Waiver Revocation. A supplier whose full or partial waiver the Agency revokes must comply with specific corrosion control treatment and lead and copper tap water monitoring requirements:

A) If the supplier exceeds the lead or copper action level, the supplier must implement corrosion control treatment within the deadlines Section 611.1351(e) specifies and any other applicable requirements under this Subpart G.

B) If the supplier meets both the lead and the copper action levels, the supplier must monitor for lead and copper at the tap no less frequently than once every three years using the reduced number of sampling sites subsection (c) specifies.

7) Pre-Existing Waivers. A small system supplier waiver the Agency granted in writing prior to April 11, 2000 remains in effect under certain conditions:

A) If the supplier demonstrates that its system is free of both lead-containing and copper-containing materials, as subsection (g)(1) requires, and that its 90th percentile lead levels and 90th percentile copper levels comply with subsection (g)(2), the waiver remains in effect so long as the supplier continues eligible for a waiver under subsection (g)(5). The supplier must complete its first round of tap water monitoring under subsection (g)(4) no later than nine years after the supplier last monitored for lead and copper at the tap.

B) If the supplier complies with the materials criteria of subsection (g)(1) but has not complied with the monitoring criteria of subsection (g)(2), the supplier must conduct a round of monitoring for lead and copper at the tap demonstrating that it complied with subsection (g)(2). Thereafter, the waiver remains in effect as long as the supplier complies with the continued eligibility criteria in subsection (g)(5). The supplier must complete its first round of tap water monitoring under subsection (g)(4) no later than nine years after the supplier conducts the monitoring under subsection (g)(2).

BOARD NOTE: This Section corresponds with Section 611.1356 and derives from 40 CFR 141.86 (2020).

(Source: Added at 47 Ill. Reg. _____, effective _____)

Section 611.1357 Monitoring for Water Quality Parameters

A large system supplier or any small or medium-sized system supplier exceeding the lead or copper action level must monitor water quality parameters in addition to lead and copper under this Section.

a) General Requirements

1) Sample Collection Methods

A) Using Tap Samples. In totality, all tap samples a supplier collects must represent water quality throughout the supplier’s distribution system, considering the number of persons served, the different sources of water, the different treatment methods the supplier employs, and seasonal variability. Although a supplier may conveniently conduct tap sampling for water quality parameters at sites it uses for coliform sampling under Subpart L, the supplier needs not do so, and the supplier needs not perform tap sampling under this Section at taps it targeted for lead and copper sampling under Section 611.1356(a).

B) Using Entry Point Samples. A supplier must collect samples at entry points to the distribution system from locations representing each source after treatment. If a supplier draws water from more than one source and combines the sources before distribution, the supplier must sample at an entry point to the distribution system during normal operating conditions (i.e., when the supplier uses water representing all sources).

2) Number of Samples

A) Tap Samples. A supplier must collect two tap samples for applicable water quality parameters during each six-month monitoring period under subsections (b) through (e) from the number of sites the first column of Table F (labelled “standard monitoring”) indicates.

B) Entry Point Samples

23042 i) Initial Monitoring. Except as subsection (c)(3) provides
23043 otherwise, a supplier must collect two samples for each
23044 applicable water quality parameter at each entry point to its
23045 distribution system during each six-month monitoring
23046 period subsection (b) specifies.

23047
23048 ii) Subsequent Monitoring. A supplier must collect one
23049 sample for each applicable water quality parameter at each
23050 entry point to its distribution system during each six-month
23051 monitoring period subsections (c) through (e) specify.
23052

23053 b) Initial Sampling
23054

23055 1) Large Systems. A large system supplier must measure the applicable
23056 water quality parameters subsection (b)(3) specifies at taps and at each
23057 entry point to its distribution system during each six-month monitoring
23058 period Section 611.1356(d)(1) specifies.
23059

23060 2) Small and Medium-Sized Systems. A small or medium-sized water
23061 system supplier must measure the applicable water quality parameters
23062 subsection (b)(3) specifies at the locations this subsection (b) specifies
23063 during each six-month monitoring period Section 611.1356(d)(1) specifies
23064 during which the supplier exceeds the lead or copper action level.
23065

23066 3) Water Quality Parameters
23067

23068 A) pH;
23069

23070 B) Alkalinity;
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23072 C) Orthophosphate, when the supplier uses an inhibitor containing a
23073 phosphate compound;
23074

23075 D) Silica, when the supplier uses an inhibitor containing a silicate
23076 compound;
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23078 E) Calcium;
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23080 F) Conductivity; and
23081

23082 G) Water temperature.
23083

23084 c) Monitoring after Installing Corrosion Control

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- 1) Large Systems. A large system supplier installing optimal corrosion control treatment under Section 611.1351(d)(4) must measure the water quality parameters at the locations and frequencies subsections (c)(4) and (c)(5) specify during each six-month monitoring period Section 611.1356(d)(2)(A) specifies.

- 2) Small and Medium-Sized Systems. A small or medium-sized system installing optimal corrosion control treatment under Section 611.1351(e)(5) must measure the water quality parameters at the locations and frequencies subsections (c)(4) and (c)(5) specify during each six-month monitoring period Section 611.1356(d)(2)(B) specifies during which the supplier exceeds the lead or copper action level.

- 3) Groundwater Systems. A groundwater system supplier can limit entry point sampling under subsection (c)(5) to those entry points representing water quality and treatment conditions throughout the system. If water from untreated groundwater sources mixes with water from treated groundwater sources, the system must monitor for water quality parameters at both representative entry points receiving treatment and representative entry points not receiving treatment. Prior to starting monitoring under this subsection (c)(3), the supplier must provide written information to the Agency identifying the selected entry points and documentation sufficient to demonstrate that the sites represent water quality and treatment conditions throughout the system, including information on seasonal variability.

- 4) Tap Water Samples. The supplier must collect two water samples at each tap for each of five water quality parameters:
 - A) pH;
 - B) Alkalinity;
 - C) Orthophosphate if the supplier uses an inhibitor containing a phosphate compound;
 - D) Silica if the supplier uses an inhibitor containing a silicate compound; and
 - E) Calcium if the supplier uses calcium carbonate stabilization as part of corrosion control.

23128 5) Entry Point Samples. Except as subsection (c)(3) provides otherwise, a
23129 supplier must collect one sample at each entry point to its distribution
23130 system every two weeks (bi-weekly) for three water quality parameters:

23131
23132 A) pH;

23133
23134 B) If the supplier adjusts alkalinity as part of optimal corrosion
23135 control, a reading of the chemical dosage rate the supplier uses to
23136 adjust alkalinity and the alkalinity concentration; and

23137
23138 C) If the supplier uses a corrosion inhibitor as part of optimal
23139 corrosion control, a reading of the inhibitor dosage rate the
23140 supplier uses and the orthophosphate or silica concentration.

23141
23142 BOARD NOTE: Subsections (c)(1) and (c)(2) derive from 40 CFR 141.87(c)
23143 (2020), subsection (c)(3) derives from 40 CFR 141.87(c)(3) (2020), subsection
23144 (c)(4) derives from 40 CFR 141.87(c)(1) (2020), and subsection (c)(5) derives
23145 from 40 CFR 141.87(c)(2) (2020).

23146
23147 d) Monitoring after the Agency Specifies Water Quality Parameter Values for
23148 Optimal Corrosion Control

23149
23150 1) Large-Sized Water Systems. After the Agency specifies the values for
23151 water quality control parameters reflecting optimal corrosion control
23152 treatment under Section 611.1352(f), a large-sized water system supplier
23153 must monitor the applicable water quality parameters under subsection (c)
23154 and determine whether the supplier complies with Section 611.1352(g)
23155 every six months, with the first six-month period to begin on the sooner of
23156 January 1 or July 1 after the Agency specifies the optimal values under
23157 Section 611.1352(f).

23158
23159 2) Small and Medium-Sized System Suppliers. A small or medium-sized
23160 system supplier must monitor during each six-month monitoring period
23161 this subsection (d) specifies during which the supplier exceeds the lead or
23162 copper action level. For a small or medium-sized system supplier subject
23163 to a reduced monitoring frequency under Section 611.1356(d)(4) at the
23164 time it exceeds the action level, the start of the applicable six-month
23165 monitoring period under this subsection (d) coincides with the start of the
23166 applicable monitoring period under Section 611.1356(d)(4).

23167
23168 3) A supplier must determine whether it complies with Agency-designated
23169 optimal water quality parameter as Section 611.1352(g) specifies.
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e) Reduced Monitoring

1) Reduced Tap Monitoring. A supplier maintaining the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of two consecutive six-month monitoring periods under subsection (d) must continue monitoring at the entry points to the distribution system as subsection (c)(5) specifies. The supplier may collect two samples from each tap for applicable water quality parameters from the reduced number of sites the second column of Table F (Standard Monitoring) indicates during each subsequent six-month monitoring period.

2) Reduced Monitoring Frequency

A) Staged Reductions in Monitoring Frequency

i) Annual Monitoring. A supplier maintaining the range of values for the water quality parameters reflecting optimal corrosion control treatment under Section 611.1352(f) during three consecutive years of monitoring may reduce its tap sampling frequency for applicable water quality parameters subsection (e)(1) specifies from every six months to annually. The supplier may only begin this reduced sampling during the calendar year immediately following the end of the monitoring period in which the third consecutive year of six-month monitoring occurs.

ii) Triennial Monitoring. A supplier maintaining the range of values for the water quality parameters reflecting optimal corrosion control treatment under Section 611.1352(f) during three consecutive years of annual monitoring under subsection (e)(2)(A)(i) may reduce its tap sampling frequency for applicable water quality parameters subsection (e)(1) specifies from annually to once every three years. The supplier must conduct this triennial monitoring no later than every third calendar year.

B) A supplier may reduce its tap sampling frequency for applicable water quality parameters in subsection (e)(1) to once every three years if the supplier demonstrates that it complies with subsections (e)(2)(B)(i) through (e)(2)(B)(iii) during two consecutive monitoring periods, subject to subsection (e)(2)(B)(iv).

- 23214 i) The supplier must demonstrate that its tap water 90th
- 23215 percentile level for lead is less than or equal to the PQL for
- 23216 lead in Section 611.1359(a)(1)(B).
- 23217
- 23218 ii) The supplier must demonstrate that its tap water 90th
- 23219 percentile level for copper is less than or equal to 0.65 mg/ℓ
- 23220 for copper in Section 611.1350(c)(2).
- 23221
- 23222 iii) The supplier must demonstrate that it maintains the range
- 23223 of values for the water quality parameters reflecting
- 23224 optimal corrosion control treatment the Agency specified
- 23225 under Section 611.1352(f).
- 23226
- 23227 iv) The supplier must complete triennial monitoring no later
- 23228 than every third calendar year.
- 23229
- 23230 3) A supplier sampling annually or triennially must collect these samples
- 23231 evenly throughout the calendar year to reflect seasonal variability.
- 23232
- 23233 4) A supplier on a reduced monitoring frequency under this subsection (e)
- 23234 failing to operate at or above the minimum value or within the range of
- 23235 values for the water quality parameters the Agency specifies under Section
- 23236 611.1352(f) for more than nine days in any six-month period Section
- 23237 611.1352(g) specifies must resume tap water sampling complying with the
- 23238 number and frequency of samples subsection (d) requires. A supplier thus
- 23239 ceasing reduced monitoring may resume annual monitoring for water
- 23240 quality parameters at the tap at the reduced number of sites subsection
- 23241 (e)(1) specifies after completing two subsequent consecutive six-month
- 23242 rounds of monitoring complying with subsection (e)(1). The supplier may
- 23243 resume triennial tap water monitoring for water quality parameters at the
- 23244 reduced number of sites after demonstrating through subsequent rounds of
- 23245 monitoring that the supplier complies with subsection (e)(2)(A) or
- 23246 (e)(2)(B).
- 23247
- 23248 f) Additional Monitoring by Suppliers. The supplier and the Agency must consider
- 23249 any monitoring results and what this Section requires in making any
- 23250 determinations (i.e., determining concentrations of water quality parameters)
- 23251 under this Section or Section 611.1352.
- 23252

23253 BOARD NOTE: This Section corresponds with Section 611.357 and derives from 40 CFR

23254 141.87 (2020).

23255

23256 (Source: Added at 47 Ill. Reg. _____, effective _____)

23257
23258 Section 611.1358 Monitoring for Lead and Copper in Source Water
23259

23260 a) Sampling Location, Collection Methods, and Number of Samples
23261

23262 1) A supplier failing to meet the lead or copper action level on the basis of
23263 tap samples under Section 611.1356 must collect lead and copper source
23264 water samples under specific requirements for sample location, number of
23265 samples, and collection methods:

23266
23267 A) A groundwater supplier must take a minimum of one sample at
23268 every entry point to the distribution system representing each well
23269 after treatment (a “sampling point”). The supplier must take one
23270 sample at the same sampling point unless conditions make another
23271 sampling point more closely represent a source or treatment plant.

23272
23273 B) A surface water supplier must take a minimum of one sample at
23274 every entry point to the distribution system after treatment or in the
23275 distribution system at a sampling point. The supplier must take
23276 each sample at the same sampling point unless conditions make
23277 another sampling point more closely represent a source or
23278 treatment plant.

23279
23280 BOARD NOTE: For this subsection (a)(1)(B), a system using a
23281 combination of surface water and groundwater sources is a surface
23282 water system.

23283
23284 C) If a supplier draws water from more than one source and combines
23285 the sources before distribution, the supplier must sample at an
23286 entry point to the distribution system during periods of normal
23287 operating conditions (i.e., when water represents all sources being
23288 used).

23289
23290 D) The Agency may issue a SEP reducing the total number of samples
23291 a supplier must analyze by allowing the supplier to composite
23292 samples. Certified laboratory personnel must composite the
23293 samples. A composite sample may include a maximum of five
23294 samples. However, if the lead concentration in the composite
23295 sample is greater than or equal to 0.001 mg/ℓ or the copper
23296 concentration is greater than or equal to 0.160 mg/ℓ, the supplier
23297 must do either of two things:
23298

23299 i) The supplier must take and analyze a follow-up sample
23300 within 14 days at each sampling point included in the
23301 composite sample; or

23302
23303 ii) If duplicate samples or sufficient volumes of the original
23304 samples are available from each sampling point the
23305 certified laboratory used in the composite sample, the
23306 supplier may use those instead of resampling.
23307

23308 2) SEP Requiring an Additional Sample
23309

23310 A) Upon determining that sampling indicates exceedance of the lead
23311 or copper MPC under Section 611.1353(b)(4), the Agency must
23312 issue a SEP requiring the supplier to collect one additional sample
23313 as soon as possible after the initial sample at the same sampling
23314 point but before two weeks after the supplier took the initial
23315 sample.
23316

23317 B) If a supplier takes an Agency-required confirmation sample for
23318 lead or copper, the supplier must average the results obtained from
23319 the initial sample with those from the confirmation sample to
23320 determine whether it complies with the Agency-specified lead and
23321 copper MPCs.
23322

23323 i) For averaging, consider any analytical result below the
23324 MDL as zero.
23325

23326 ii) Consider any value above the MDL but below the PQL
23327 either as the measured value or one-half the PQL.
23328

23329 b) Monitoring Frequency after System Exceeds Tap Water Action Level. A supplier
23330 exceeding the lead or copper action level in tap sampling must collect one source
23331 water sample from each entry point to its distribution system no later than six
23332 months after the end of the monitoring period during which the supplier exceeds
23333 the lead or copper action level. For annual or less frequent monitoring periods,
23334 the end of the monitoring period is September 30 of the calendar year during
23335 which the sampling occurs or the last day of any alternate period the Agency
23336 establishes in a SEP.
23337

23338 c) Monitoring Frequency after Installation of Source Water Treatment. A supplier
23339 installing source water treatment under Section 611.1353(a)(3) must collect an
23340 additional source water sample from each entry point to its distribution system

23341 during each of two consecutive six-month monitoring periods on or before 36
23342 months after completing step 2, as Section 611.1353(a)(4) specifies.

23343
23344 d) Monitoring Frequency after the Agency Specifies the Lead and Copper MPCs or
23345 Determines That Source Water Treatment Is Not Needed

23346
23347 1) A supplier must monitor at the frequency subsection (d)(1)(A) or (d)(1)(B)
23348 specifies if the Agency specifies the MPCs under Section 611.1353(b)(4)
23349 or determines that the supplier needs not install source water treatment
23350 under Section 611.1353(b)(2).

23351
23352 A) GWS Suppliers

23353
23354 i) A GWS supplier sampling under subsection (d)(1) must
23355 collect samples once during the three-year compliance
23356 period (as Section 611.101 defines the term) during which
23357 the Agency makes its determination under Section
23358 611.1353(b)(4) or 611.1353(b)(2).

23359
23360 ii) A GWS supplier sampling under subsection (d)(1) must
23361 sample once during each subsequent compliance period.

23362
23363 iii) A supplier must collect triennial samples every third
23364 calendar year.

23365
23366 B) A SWS or mixed system supplier must collect samples once during
23367 each calendar year, the first annual monitoring period to begin
23368 during the year in which the Agency makes its determination under
23369 Section 611.1353(b)(4) or 611.1353(b)(2).

23370
23371 2) A supplier needs not sample source water for lead or copper if the supplier
23372 meets the action level for the specific contaminant in all tap water samples
23373 during the entire source water sampling period under subsection (d)(1)(A)
23374 or (d)(1)(B).

23375
23376 e) Reduced Monitoring Frequency

23377
23378 1) A GWS supplier may reduce its source water monitoring frequency for
23379 lead and copper to once during each nine-year compliance cycle (as
23380 Section 611.101 defines the term), provided the supplier collects the
23381 samples no later than every ninth calendar year, and only if the supplier
23382 meets one of certain criteria:
23383

- 23384 A) The supplier demonstrates that finished drinking water entering the
23385 distribution system remains below the MPCs for lead and copper
23386 the Agency specifies under Section 611.1353(b)(4) during at least
23387 three consecutive compliance periods under subsection (d)(1); or
23388
- 23389 B) The Agency determines in a SEP that the supplier does not need
23390 source water treatment, and the supplier demonstrates that its
23391 source water concentrations of lead was less than or equal to 0.005
23392 mg/ℓ and copper was less than or equal to 0.65 mg/ℓ during at least
23393 three consecutive compliance periods during which the supplier
23394 sampld under subsection (d)(1).
23395
- 23396 2) A SWS or mixed system supplier may reduce its monitoring frequency
23397 subsection (d)(1) requires to once during each nine-year compliance cycle
23398 (as Section 611.101 defines the term) if the supplier collects the samples
23399 no later than every ninth calendar year, and only if the supplier meets one
23400 of certain criteria:
23401
- 23402 A) The supplier demonstrates that finished drinking water entering its
23403 distribution system remains below the MPCs for lead and copper
23404 the Agency specifies under Section 611.1353(b)(4) for at least
23405 three consecutive years; or
23406
- 23407 B) The Agency issues a SEP determining that the supplier does not
23408 need source water treatment, and the supplier demonstrates that its
23409 source water concentrations of lead was less than or equal to 0.005
23410 mg/ℓ and copper was less than or equal to 0.65 mg/ℓ during at least
23411 three consecutive years.
23412
- 23413 3) A supplier using a new source of water may not reduce its monitoring for
23414 lead or copper until after the supplier demonstrates by samples it collected
23415 from the new source during three consecutive monitoring periods of the
23416 appropriate duration subsection (d)(1) provides that lead or copper levels
23417 are below the MPC the Agency specifies under Section 611.1353(a)(4).
23418

23419 BOARD NOTE: This Section corresponds with Section 611.358 and derives from 40 CFR
23420 141.88 (2020).

23421 (Source: Added at 47 Ill. Reg. _____, effective _____)

23422 **Section 611.1359 Analytical Methods**
23423
23424
23425

23426 The supplier must conduct analyses for lead, copper, pH, conductivity, calcium, alkalinity,
23427 orthophosphate, silica, and temperature using the methods in Section 611.611(a).

23428
23429 a) Only a certified laboratory in one of the categories in Section 611.490(a) may
23430 conduct analyses for lead and copper to demonstrate that a supplier complies with
23431 this Subpart G. To obtain certification for conducting analyses for lead and
23432 copper, a laboratory must fulfill specific conditions:

23433
23434 1) The laboratory must analyze lead- and copper-containing performance
23435 evaluation samples provided by USEPA or the Agency;

23436
23437 2) The laboratory must achieve certain quantitative acceptance limits:

23438
23439 A) For lead: ±30 percent of the actual amount in the performance
23440 evaluation sample when the actual amount is greater than or equal
23441 to 0.005 mg/l (the PQL for lead is 0.005 mg/l);

23442
23443 B) For copper: ±10 percent of the actual amount in the performance
23444 evaluation sample when the actual amount is greater than or equal
23445 to 0.050 mg/l (the PQL for copper is 0.050 mg/l);

23446
23447 3) The laboratory must achieve the method detection limit (MDL) for lead of
23448 0.001 mg/l using the procedures in 35 Ill. Adm. Code 186 and appendix B
23449 to 40 CFR 136: “Definition and Procedure for the Determination of the
23450 Method Detection Limit—Revision 1.11”, incorporated by reference in
23451 Section 611.102(c). The laboratory needs only accomplish this if the
23452 laboratory will process source water composite samples under Section
23453 611.1358(a)(1)(D); and

23454
23455 4) The laboratory must have current certification to perform analyses under
23456 the specifications this subsection (a)(1) describes.

23457
23458 BOARD NOTE: This subsection (a) corresponds with Section 611.359(a) and
23459 derives from 40 CFR 141.89(a) and (a)(1) (2020).

23460
23461 b) The Agency must issue a SEP allowing a supplier to use previously collected
23462 monitoring data under this Subpart G if the supplier collected and analyzed the
23463 data complying with this Subpart G.

23464
23465 BOARD NOTE: This subsection (b) corresponds with Section 611.359(b) and
23466 derives from 40 CFR 141.89(a)(2) (2020).

23467
23468 c) Reporting Lead and Copper Levels

- 23469
- 23470
- 23471 1) The supplier must report all lead and copper levels greater than or equal to
- 23472 the lead and copper PQL ($Pb \geq 0.005 \text{ mg/l}$ and $Cu \geq 0.050 \text{ mg/l}$) as
- 23473 measured.
- 23474
- 23475 2) The supplier must report all lead and copper levels less than the PQL but
- 23476 greater than the MDL ($0.005 \text{ mg/l} > Pb > MDL$ and $0.050 \text{ mg/l} > Cu >$
- 23477 MDL) either as measured or as one-half the PQL in subsection (a) (i.e.,
- 23478 0.0025 mg/l for lead or 0.025 mg/l for copper).
- 23479
- 23480 3) The supplier must report all lead and copper levels below the lead and
- 23481 copper MDL ($MDL > Pb$) as zero.

23482 BOARD NOTE: This subsection (c) corresponds with Section 611.359(c) and

23483 derives from 40 CFR 141.89(a)(3) and (a)(4) (2020).

23484

23485 (Source: Added at 47 Ill. Reg. _____, effective _____)

23486

23487 Section 611.1360 Reporting

23488

23489 A supplier must report specific information to the Agency as this Section provides.

23490

23491 a) Reporting for Tap, Lead, and Copper, and Water Quality Parameter Monitoring

23492

- 23493 1) Except as subsection (a)(1)(H) provides otherwise, a supplier must report
- 23494 certain information for all samples Section 611.1356 specifies and for all
- 23495 water quality parameter samples Section 611.1357 specifies within ten
- 23496 days after the end of each applicable sampling period Sections 611.1356
- 23497 and 611.1357 specify (i.e., every six months, annually, triennially, or
- 23498 every nine years). For a monitoring period shorter than six months, the
- 23499 end of the monitoring period is the last date on which the supplier may
- 23500 collect samples during that period, as Sections 611.1356 and 611.1357
- 23501 specify.

23502

- 23503 A) The results of all tap samples for lead and copper, including the
- 23504 location of each site and the criteria under Section 611.1356(a)(3)
- 23505 through (a)(7) under which the supplier selected the site for the
- 23506 supplier's sampling pool;

23507

- 23508 B) Supporting documents for each tap water lead or copper sample the
- 23509 supplier requests the Agency invalidate under Section
- 23510 611.1356(f)(2);

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- C) This subsection (a)(1)(C) corresponds with 40 CFR 141.90(a)(1)(iii) (2020), a provision that USEPA removed and marked “reserved”. This statement preserves structural parity with the federal rules;
 - D) The 90th percentile lead and copper concentrations the supplier measures from among all lead and copper tap samples the supplier collects during each sampling period (calculated under Section 611.1350(c)(3)), unless the Agency calculates the system’s 90th percentile lead and copper levels under subsection (h);
 - E) With the exception of initial tap sampling under Section 611.1356(d)(1), the supplier must designate any site it did not sample during previous sampling periods and explain why sampling sites have changed;
 - F) The results of all tap samples for pH and the applicable of alkalinity, calcium, conductivity, temperature, and orthophosphate, and silica the supplier collects under Section 611.1357(b) through (e);
 - G) The results of all samples the supplier collects at entry points for applicable water quality parameters under Section 611.1357(b) through (e); and
 - H) A supplier must report the results of all water quality parameter samples the supplier collects under Section 611.1357(c) through (f) during each six-month monitoring period Section 611.1357(d) specifies within the first ten days following the end of the monitoring period, unless the Agency specifies a more frequent reporting requirement in a SEP.
- 2) For an NTNCWS supplier, or a CWS supplier in Section 611.1355(b)(7)(A) and (b)(7)(B) that does not have enough taps for first-draw tap samples, the supplier must do one of two things:
- A) The supplier must identify to the Agency in writing standing times and locations for enough non-first-draw tap samples to make up its sampling pool under Section 611.1356(b)(5), unless the Agency waives prior Agency approval of non-first-draw sampling sites the supplier selects under Section 611.1356(b)(5); or

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B) If the Agency waives prior approval of non-first-draw sampling sites the supplier selects, the supplier must identify each site that did not meet the six-hour minimum standing time and the length of standing time for that particular substitute sample collected under Section 611.1356(b)(5) in writing and include this information with the lead and copper tap sample results the supplier must submit under subsection (a)(1)(A).

3) At a time the Agency specifies in a SEP, a supplier deemed by rule to have optimized corrosion control under Section 611.1351(b)(3), a water supplier subject to reduced monitoring under Section 611.1356(d)(4), or a water supplier the Agency grants a monitoring waiver under Section 611.1356(g), must document adding a new source or any change in water treatment to the Agency describing the change or addition. If the Agency does not specify a time in a SEP, the supplier must document the changes to the Agency as early as possible prior to adding a new source or any change in water treatment.

4) A small system supplier applying for a monitoring waiver under Section 611.1356(g) or subject to a waiver granted under Section 611.1356(g)(3) must provide certain information to the Agency in writing before the applicable deadline:

A) Before the start of the first applicable monitoring period in Section 611.1356(d), any small water system supplier applying for a monitoring waiver must provide the documents demonstrating that the supplier qualifies for a waiver under Section 611.1356(g)(1) and (g)(2).

B) No later than nine years after the monitoring the supplier previously conducted under Section 611.1356(g)(2) or Section 611.1356(g)(4)(A), a small system supplier wanting to maintain its monitoring waiver must provide the information Section 611.1356(g)(4)(A) and (g)(4)(B) requires.

C) No later than 60 days after the small-sized system water supplier becomes aware that it is no longer free of lead-containing or copper-containing material, a small system supplier having a monitoring waiver must notify the Agency in writing, stating the circumstances introducing lead- or copper-containing materials into the system and describing any corrective action the supplier plans to remove these materials.

- 23597 5) A GWS supplier limiting its water quality parameter monitoring to a
23598 subset of entry points under Section 611.1357(c)(3) must identify its
23599 selected entry points to the Agency in writing, including information
23600 sufficiently demonstrating that the sites represent water quality and
23601 treatment conditions throughout the supplier's system.
- 23602
- 23603 b) Reporting for Source Water Monitoring
- 23604
- 23605 1) A supplier must report its sampling results for all source water samples it
23606 collects under Section 611.1358 within ten days after the end of each
23607 source water sampling period (i.e., annually, per compliance period
23608 (triennially), per compliance cycle (every nine years)) Section 611.1358
23609 specifies.
- 23610
- 23611 2) With the exception of the first round of source water sampling a supplier
23612 conducts under Section 611.1358(b), a supplier must specify any site it did
23613 not sample during previous sampling periods, explaining why the supplier
23614 changed the sampling point.
- 23615
- 23616 c) Reporting for Corrosion Control Treatment. Before the applicable dates under
23617 Section 611.1351, a supplier must report certain information:
- 23618
- 23619 1) A supplier demonstrating that it already optimized corrosion control must
23620 provide the information Section 611.1352(b)(2) or (b)(3) requires.
- 23621
- 23622 2) A supplier that must optimize corrosion control must provide its
23623 recommendation regarding optimal corrosion control treatment under
23624 Section 611.1352(a).
- 23625
- 23626 3) A supplier that must evaluate the effectiveness of corrosion control
23627 treatments under Section 611.1352(c) must provide the information
23628 Section 611.1352(c) requires.
- 23629
- 23630 4) A supplier that must install optimal corrosion control the Agency approves
23631 under Section 611.1352(d) must provide a copy of the Agency permit
23632 letter, which acts as certification that the supplier completed installing the
23633 permitted treatment.
- 23634
- 23635 d) Reporting for Source Water Treatment. Before the applicable dates in Section
23636 611.1353, a supplier must provide certain information to the Agency:
- 23637
- 23638 1) If Section 611.1353(b)(1) requires, the supplier must provide its
23639 recommendation on source water treatment; or

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- 2) A supplier that must install source water treatment under Section 611.1353(b)(2) must provide a copy of the Agency permit letter, which acts as certification that the supplier completed installing the Agency-approved treatment within 24 months after Agency approval.

- e) Reporting for Lead Service Line Replacement. A supplier must report certain information to the Agency demonstrating it complies with Section 611.1354:
 - 1) No later than 12 months after the end of a monitoring period during which a supplier exceeds the lead action level in sampling under Section 611.1354(a), the supplier must submit documents to the Agency:
 - A) The material evaluation the supplier conducted as Section 611.1356(a) requires;
 - B) Identify the initial number of lead service lines in its distribution system at the time the supplier exceeds the lead action level; and
 - C) The supplier’s schedule for annually replacing at least seven percent of the initial number of lead service lines in its distribution system.

 - 2) No later than 12 months after the end of a monitoring period during which a supplier exceeds the lead action level in monitoring under Section 611.1354(a) and every 12 months after that, the supplier must demonstrate either of two things to the Agency in writing:
 - A) That the supplier replaced at least seven percent of the initial number of lead service lines in its distribution system during the previous 12 months (or any greater number of lines the Agency specifies under Section 611.1354(e)); or

 - B) That the supplier conducted sampling demonstrating that the lead concentration in all service line samples from individual lines under Section 611.1356(b)(3) is less than or equal to 0.015 mg/l. This requires that the total number of lines that the supplier replaced, combined with the total number meeting the criteria of Section 611.1354(c), must equal at least seven percent of the initial number of lead lines the supplier identified under subsection (e)(1) (or the percentage the Agency specifies under Section 611.1354(e)).

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- 3) The annual letter the supplier submits to the Agency under subsection (e)(2) must contain certain information:
 - A) The number of lead service lines the supplier originally scheduled to replace be replaced during the previous year of its replacement schedule;
 - B) The number and location of each lead service line the supplier actually replaced during the previous year of its replacement schedule; and
 - C) If measured, the tap water lead concentration from each lead service line the supplier sampled under Section 611.1356(b)(3), the location of each lead service line sampled, the sampling method used, and the sampling date.
- 4) Any supplier collecting lead service line samples following partial lead service line replacement Section 611.1354 requires must report the results to the Agency before the tenth day of the next month after the supplier receives the laboratory results or as the Agency specifies in a SEP. The Agency may issue a SEP waiving the supplier reporting these monitoring results. A supplier must also report any additional information the Agency specifies in a time and manner the Agency prescribes to verify that the supplier completed all partial lead service line replacement activities.

f) Reporting for Public Education Program

- 1) A supplier subject to Section 611.1355 must send documents to the Agency containing certain items within ten days after the end of each period in which the supplier must perform public education under Section 611.1355(b):
 - A) Documents showing that the supplier delivered the public education materials complying with the content requirements in Sections 611.1355(a) and the delivery requirements in Section 611.1355(b); and
 - B) A list of all newspapers, radio stations, television stations, and facilities and organizations to which the supplier delivered public education materials when this Subpart G required the supplier to perform public education tasks.

- 23725 2) Unless the Agency issues a SEP requiring a supplier to do so, a supplier
23726 that previously submitted the information subsection (f)(1)(B) requires
23727 need not resubmit the information subsection (f)(1)(B) requires, as long as
23728 no changes in the distribution list occurred, and the supplier certifies that it
23729 distributed the public education materials to the same list the supplier
23730 previously submitted.
- 23731
- 23732 3) No later than three months after the end of the monitoring period, each
23733 supplier must mail a sample copy of the consumer notification of tap water
23734 monitoring results to the Agency, certifying that the supplier distributed
23735 the notification in a manner complying with Section 611.1355(d).
- 23736
- 23737 g) Reporting Additional Monitoring Data. Any supplier collecting sampling data in
23738 addition to what this Subpart G requires must report those sampling data to the
23739 Agency within the first ten days following the end of the applicable sampling
23740 periods Sections 611.1356 through 611.1358 specify during which the supplier
23741 collected the samples.
- 23742
- 23743 h) Reporting 90th Percentile Lead and Copper Concentrations If the Agency
23744 Calculates a System's 90th Percentile Concentrations. A water supplier needs not
23745 report its 90th percentile lead and copper concentrations during each monitoring
23746 period, as subsection (a)(1)(D) requires, under certain circumstances:
- 23747
- 23748 1) The Agency previously notified the supplier that the Agency will calculate
23749 the water system's 90th percentile lead and copper concentrations based
23750 on the lead and copper tap results the supplier submitted under subsection
23751 (h)(2)(A), and the Agency specifies a date before the end of the applicable
23752 monitoring period when the supplier must provide the results from lead
23753 and copper tap water samples;
- 23754
- 23755 2) The supplier provides the specific information to the Agency before the
23756 date subsection (h)(1) specifies:
- 23757
- 23758 A) The results from of all tap water samples for lead and copper,
23759 including the location of each site and the Section 611.1356(a)(3),
23760 (a)(4), (a)(5), (a)(6), or (a)(7) criteria under which the supplier
23761 selected the site for its sampling pool under subsection (a)(1)(A);
23762 and
- 23763
- 23764 B) The supplier must identify sampling sites it used during the current
23765 monitoring period that it did not sample during previous
23766 monitoring periods, explaining why the supplier changed sampling
23767 sites; and

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3) The Agency provides the written results of the 90th percentile lead and copper calculations to the supplier before the end of the monitoring period.

BOARD NOTE: This Section corresponds with Section 611.360 and derives from 40 CFR 141.90 (2020).

(Source: Added at 47 Ill. Reg. _____, effective _____)

Section 611.1361 Recordkeeping

Any supplier subject to this Subpart G must retain original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Agency determinations, and any other information Sections 611.1351 through Section 611.1360 require. Each supplier must retain the records this Section requires on its premises for at least 12 years.

BOARD NOTE: This Section corresponds with Section 611.361 and derives from 40 CFR 141.91 (2020).

(Source: Added at 47 Ill. Reg. _____, effective _____)

23789 **Section 611.APPENDIX G NPDWR Violations and Situations Requiring Public Notice**

23790
23791 See note 1 at the end of this Appendix G for an explanation of the Agency's authority to alter the
23792 magnitude of a violation from that set forth in the following table.
23793

Contaminant	MCL/MRDL/TT violations ²		Monitoring and testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation

23794
23795 I. Violations of National Primary Drinking Water Regulations (NPDWR):³

23796
23797 A. Microbiological Contaminants

1a. Corresponding row 1a in appendix A to subpart Q to 40 CFR 141 no longer applies by its own terms. This statement maintains structural consistency with the federal regulations.				
1b. Total coliform (TT violations resulting from failure to perform assessments or corrective actions, monitoring violations, and reporting violations)	2	611.1060(b)(1)	3	611.1060(c)(1) 611.1060(d)(1)
1c. Seasonal system failure to follow State-approved start-up plan prior to serving water to the public or failure to provide certification to the Agency	2	611.1060(b)(2)	3	611.1060(d)(3)
2a. Corresponding row 2a in appendix A to subpart Q to 40 CFR 141 no longer applies by its own terms. This statement maintains structural consistency with the federal regulations.				

2b. E. coli (MCL, monitoring, and reporting violations)	1	611.1060(a)	3	611.1060(c), 611.1060(d)(2)
2c. E. coli (TT violations resulting from failure to perform Level 2 assessments or corrective action)	2	611.1060(b)(1)		
<u>3. This entry relates to the obsolete MCL for turbidity in 40 CFR 141.13 that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.</u>				
3. Turbidity MCL	2	611.320(a)	3	611.560
<u>4. This entry relates to the obsolete MCL for turbidity in 40 CFR 141.13 that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.</u>				
4. Turbidity MCL (average of two days' samples greater than 5 NTU)	⁵ 2, 1	611.320(b)	3	611.560
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	⁶ 2, 1	611.231(b), 611.233(b)(1), 611.250(a)(2), 611.250(b)(2), 611.250(c)(2), 611.250(d), 611.743(a)(2), 611.743(b), 611.955(b)(2)	3	611.531(a), 611.532(b), 611.533(a), 611.744, 611.956(a)(1)- (a)(3), 611.956(b)
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT)	2	611.211, 611.213, 611.220, 611.230- 611.233, 611.240- 611.242, 611.250	3	611.531- 611.533
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	2	⁷ 611.740- 611.743, 611.950- 611.955	3	611.742, 611.744, 611.953, 611.954, 611.956
8. Filter Backwash Recycling Rule violations	2	611.276(c)	3	611.276(b), (d)

9. Long Term 1 Enhanced Surface Water Treatment Rule violations	2	611.950-611.955	3	611.953, 611.954, 611.956
10. LT2ESWTR violations	2	611.1010-611.1020	¹⁹ 2, 3	611.1001-611.1005 and 611.1008-611.1009
11. Groundwater Rule violations	2	611.804	3	611.802(h)

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B. Inorganic Chemicals (IOCs)

1. Antimony	2	611.301(b)	3	611.600, 611.601, 611.603
2. Arsenic	2	611.301(b)	3	611.601, 611.603
3. Asbestos (fibers greater than 10 µm)	2	611.301(b)	3	611.600, 611.601, 611.602
4. Barium	2	611.301(b)	3	611.600, 611.601, 611.603
5. Beryllium	2	611.301(b)	3	611.600, 611.601, 611.603
6. Cadmium	2	611.301(b)	3	611.600, 611.601, 611.603
7. Chromium (total)	2	611.301(b)	3	611.600, 611.601, 611.603
8. Cyanide	2	611.301(b)	3	611.600, 611.601, 611.603
9. Fluoride	2	611.301(b)	3	611.600, 611.601, 611.603
10. Mercury (inorganic)	2	611.301(b)	3	611.600, 611.601, 611.603

11. Nitrate	1	611.301(b)	⁸ 1, 3	611.600, 611.601, 611.604, 611.606
12. Nitrite	1	611.301(b)	⁸ 1, 3	611.600, 611.601, 611.605, 611.606
13. Total Nitrate and Nitrite	1	611.301(b)	3	611.600, 611.601
14. Selenium	2	611.301(b)	3	611.600, 611.601, 611.603
15. Thallium	2	611.301(b)	3	611.600, 611.601, 611.603

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C. Lead and Copper Rule (Action Level for lead is 0.015 mg/l, for copper is 1.3 mg/l)

1. Lead and Copper Rule (TT)	2	611.350 <u>(except 611.350(c))-611.354, 611.355(a)-(c) and (h), and 611.363-611.355</u>	3	611.356- 611.360 <u>611.359</u>
<u>2. Exceeding the lead action level</u>	<u>1</u>	<u>611.350(c)</u>		

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D. Synthetic Organic Chemicals (SOCs)

1. 2,4-D	2	611.311(c)	3	611.648
2. 2,4,5-TP (silvex)	2	611.311(c)	3	611.648
3. Alachlor	2	611.311(c)	3	611.648
4. Atrazine	2	611.311(c)	3	611.648
5. Benzo(a)pyrene (PAHs)	2	611.311(c)	3	611.648
6. Carbofuran	2	611.311(c)	3	611.648
7. Chlordane	2	611.311(c)	3	611.648
8. Dalapon	2	611.311(c)	3	611.648
9. Di(2-ethylhexyl)adipate	2	611.311(c)	3	611.648
10. Di(2-ethylhexyl)phthalate	2	611.311(c)	3	611.648
11. Dibromochloropropane (DBCP)	2	611.311(c)	3	611.648
12. Dinoseb	2	611.311(c)	3	611.648

13. Dioxin (2,3,7,8-TCDD)	2	611.311(c)	3	611.648
14. Diquat	2	611.311(c)	3	611.648
15. Endothall	2	611.311(c)	3	611.648
16. Endrin	2	611.311(c)	3	611.648
17. Ethylene dibromide	2	611.311(c)	3	611.648
18. Glyphosate	2	611.311(c)	3	611.648
19. Heptachlor	2	611.311(c)	3	611.648
20. Heptachlor epoxide	2	611.311(c)	3	611.648
21. Hexachlorobenzene	2	611.311(c)	3	611.648
22. Hexachlorocyclopentadiene	2	611.311(c)	3	611.648
23. Lindane	2	611.311(c)	3	611.648
24. Methoxychlor	2	611.311(c)	3	611.648
25. Oxamyl (Vydate)	2	611.311(c)	3	611.648
26. Pentachlorophenol	2	611.311(c)	3	611.648
27. Picloram	2	611.311(c)	3	611.648
28. Polychlorinated biphenyls (PCBs)	2	611.311(c)	3	611.648
29. Simazine	2	611.311(c)	3	611.648
30. Toxaphene	2	611.311(c)	3	611.648

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E. Volatile Organic Chemicals (VOCs)

1. Benzene	2	611.311(a)	3	611.646
2. Carbon tetrachloride	2	611.311(a)	3	611.646
3. Chlorobenzene (monochlorobenzene)	2	611.311(a)	3	611.646
4. o-Dichlorobenzene	2	611.311(a)	3	611.646
5. p-Dichlorobenzene	2	611.311(a)	3	611.646
6. 1,2-Dichloroethane	2	611.311(a)	3	611.646
7. 1,1-Dichloroethylene	2	611.311(a)	3	611.646
8. cis-1,2-Dichloroethylene	2	611.311(a)	3	611.646
9. trans-1,2-Dichloroethylene	2	611.311(a)	3	611.646
10. Dichloromethane	2	611.311(a)	3	611.646
11. 1,2-Dichloropropane	2	611.311(a)	3	611.646
12. Ethylbenzene	2	611.311(a)	3	611.646
13. Styrene	2	611.311(a)	3	611.646
14. Tetrachloroethylene	2	611.311(a)	3	611.646
15. Toluene	2	611.311(a)	3	611.646
16. 1,2,4-Trichlorobenzene	2	611.311(a)	3	611.646
17. 1,1,1-Trichloroethane	2	611.311(a)	3	611.646
18. 1,1,2-Trichloroethane	2	611.311(a)	3	611.646
19. Trichloroethylene	2	611.311(a)	3	611.646

20. Vinyl chloride	2	611.311(a)	3	611.646
21. Xylenes (total)	2	611.311(a)	3	611.646

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F. Radioactive Contaminants

1. Beta/photon emitters	2	611.330(d)	3	611.720(a), 611.732
2. Alpha emitters	2	611.330(c)	3	611.720(a), 611.731
3. Combined radium (226 and 228)	2	611.330(b)	3	611.720(a), 611.731
4. Uranium	2	611.330(e)	3	611.720(a), 611.731

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G. Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals. If ~~Where~~ disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). USEPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs).¹³

1. Total trihalomethanes (TTHMs)	2	¹¹ 611.312(b)	3	Subparts W and Y
2. Haloacetic Acids (HAA5)	2	611.312(b)	3	Subpart Y
3. Bromate	2	611.312(a)	3	611.382(a)-(b)
4. Chlorite	2	611.312(a)	3	611.382(a)-(b)
5. Chlorine (MRDL)	2	611.313(a)	3	611.382(a), (c)
6. Chloramine (MRDL)	2	611.313(a)	3	611.382(a), (c)
7. Chlorine dioxide (MRDL), <u>if where</u> any two consecutive daily samples at entrance to distribution system only are above MRDL	2	611.313(a), 611.383(c)(3)	2 ¹² , 3	611.382(a), (c), 611.383(c)(2)
8. Chlorine dioxide (MRDL), <u>if where</u> samples in distribution system the next day are also above MRDL	¹³ 1	611.313(a), 611.383(c)(3)	1	611.382(a), (c), 611.383(c)(2)
9. Control of DBP precursors – TOC (TT)	2	611.385(a)-(b)	3	611.382(a), (d)
10. Benchmarking and disinfection profiling	N/A	N/A	3	611.742, 611.953, 611.954

11. Development of monitoring plan	N/A	N/A	3	611.382(f)
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H. Other Treatment Techniques

1. Acrylamide (TT)	2	611.296	N/A	N/A
2. Epichlorohydrin (TT)	2	611.296	N/A	N/A

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II. Unregulated Contaminant Monitoring: ¹⁴

A. Unregulated contaminants	N/A	N/A	3	as required by USEPA under 40 CFR 141.40
B. Nickel	N/A	N/A	3	611.603, 611.611

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III. Public Notification for Relief Equivalent to a SDWA section 1415 Variance or a section 1416 Exemption.

A. Operation under relief equivalent to a SDWA section 1415 variance or a section 1416 exemption	3	¹⁵ 1415, 1416	N/A	N/A
B. Violation of conditions of relief equivalent to a SDWA section 1415 variance or a section 1416 exemption	2	1415, 1416, ¹⁶ 611.111, 611.112	N/A	N/A

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IV. Other Situations Requiring Public Notification.

A. Fluoride secondary maximum contaminant level (SMCL) exceedance	3	611.858	N/A	N/A
B. Exceedance of nitrate MCL for a non-CWS supplier, as allowed by the Agency	1	611.300(d)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	as required by USEPA under 40 CFR 141.40	N/A	N/A
D. Waterborne disease outbreak	1	611.101, 611.233(b)(2)	N/A	N/A
E. Other waterborne emergency ¹⁷	1	N/A	N/A	N/A

F. Source water sample positive for Groundwater Rule fecal indicators: E. coli, enterococci, or coliphage	1	611.802(g)	N/A	N/A
G. Other situations as determined by the Agency in by a SEP issued under Section 611.110	¹⁸ 1, 2, 3	N/A	N/A	N/A

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Appendix G – Endnotes

- Violations and other situations not listed in this table (e.g., failure to prepare Consumer Confidence Reports) do not require notice, unless ~~otherwise determined by~~ the Agency ~~issues by~~ a SEP requiring otherwise. The Agency may ~~issue, by~~ a SEP, further requiring require a more stringent public notice tier (e.g., Tier 1 instead of Tier 2 or Tier 2 instead of Tier 3) for specific violations and situations listed in this Appendix, as authorized under Sections 611.902(a) and 611.903(a).
- Definition of the abbreviations used: "MCL" means maximum contaminant level, "MRDL" means maximum residual disinfectant level, and "TT" means treatment technique.
- The term "violations of National Primary Drinking Water Regulations (NPDWR)" is used here to include violations of MCL, MRDL, treatment technique, monitoring, and testing procedure requirements.
- Failure to test for fecal coliform or E. coli is a Tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are Tier 3 violations.
- In the corresponding USEPA rule, this note relates to an entry for the obsolete MCL for turbidity that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule. A supplier that violates the turbidity MCL of 5 NTU based on an average of measurements over two consecutive days must consult with the Agency within 24 hours after learning of the violation. Based on this consultation, the Agency may subsequently decide to issue a SEP that elevates the violation to a Tier 1 violation. If a supplier is unable to make contact with the Agency in the 24-hour period, the violation is automatically elevated to a Tier 1 violation.
- A supplier with a treatment technique violation involving a single exceedance of a maximum turbidity limit under the Surface Water Treatment Rule (SWTR), the Interim Enhanced Surface Water Treatment Rule (IESWTR), or the Long Term 1 Enhanced

- 23858 Surface Water Treatment Rule are required to consult with the Agency within 24 hours
 23859 after learning of the violation. Based on this consultation, the Agency may subsequently
 23860 decide to issue a SEP ~~elevating that elevates~~ the violation to a Tier 1 violation. If a
 23861 supplier is unable to make contact with the Agency in the 24-hour period, the violation is
 23862 automatically elevated to a Tier 1 violation.
 23863
- 23864 7. The Surface Water Treatment Rule (SWTR) remains in effect for a supplier ~~servicing that~~
 23865 ~~serves~~ at least 10,000 persons; the Interim Enhanced Surface Water Treatment Rule adds
 23866 additional requirements and does not in many cases supersede the SWTR.
 23867
 - 23868 8. Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial
 23869 sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate are
 23870 Tier 3.
 23871
 - 23872 9. Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial
 23873 sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate are
 23874 Tier 3.
 23875
 - 23876 10. A Subpart B community or non-transient non-community system supplier must comply
 23877 with new DBP MCLs, disinfectant MRDLs, and related monitoring requirements. A
 23878 Subpart B transient non-community system supplier ~~servicing that serves~~ 10,000 or more
 23879 persons ~~using that uses~~ chlorine dioxide as a disinfectant or oxidant or a Subpart B
 23880 transient non-community system supplier ~~servicing that serves~~ fewer than 10,000 persons,
 23881 ~~that which~~ uses only groundwater not under the direct influence of surface water, and ~~that~~
 23882 ~~which~~ uses chlorine dioxide as a disinfectant or oxidant must comply with the chlorine
 23883 dioxide MRDL.
 23884
 - 23885 11. Sections 611.312(b)(1) and 611.382(a) and (b) apply until Subpart Y takes effect under
 23886 the schedule set forth in Section 611.970(c).
 23887
 - 23888 12. Failure to monitor for chlorine dioxide at the entrance to the distribution system the day
 23889 after exceeding the MRDL at the entrance to the distribution system is a Tier 2 violation.
 23890
 - 23891 13. If any daily sample taken at the entrance to the distribution system exceeds the MRDL
 23892 for chlorine dioxide and one or more samples taken in the distribution system the next
 23893 day exceed the MRDL, Tier 1 notification is required. A failure to take the required
 23894 samples in the distribution system after the MRDL is exceeded at the entry point also
 23895 triggers Tier 1 notification.
 23896
 - 23897 14. Some water suppliers must monitor for certain unregulated contaminants as required by
 23898 USEPA under 40 CFR 141.40.
 23899
 - 23900 15. This citation refers to sections 1415 and 1416 of the federal Safe Drinking Water Act.

23901 sections 1415 and 1416 require that "a schedule prescribed...for a public water system
23902 granted relief equivalent to a SDWA section 1415 variance or a section 1416 exemption
23903 must require compliance by the system...."
23904

23905 16. In addition to sections 1415 and 1416 of the federal Safe Drinking Water Act, 40 CFR
23906 142.307 specifies the items and schedule milestones that must be included in relief
23907 equivalent to a SDWA section 1415 small system variance. In granting any form of relief
23908 from an NPDWR, the Board will consider all applicable federal requirements for and
23909 limitations on the State's ability to grant relief consistent with federal law.
23910

23911 17. Other waterborne emergencies require a Tier 1 public notice under Section 611.902(a) for
23912 situations that do not meet the definition of a waterborne disease outbreak given in
23913 Section 611.101, but ~~that which~~ still have the potential to have serious adverse effects on
23914 health as a result of short-term exposure. These could include outbreaks not related to
23915 treatment deficiencies, as well as situations that have the potential to cause outbreaks,
23916 such as failures or significant interruption in water treatment processes, natural disasters
23917 that disrupt the water supply or distribution system, chemical spills, or unexpected
23918 loading of possible pathogens into the source water.
23919

23920 18. The Agency may place any other situation in any tier it deems appropriate in writing,
23921 based on the prospective threat which it determines that the situation poses to public
23922 health, and subject to Board review under Section 40 of the Act.
23923

23924 19. A failure to collect three or more samples for Cryptosporidium analysis is a Tier 2
23925 violation requiring special notice, as specified in Section 611.911. All other monitoring
23926 and testing procedure violations are Tier 3.
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23928 BOARD NOTE: This Appendix G derives ~~Derived~~ from appendix A to subpart Q of 40 CFR
23929 141.
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23931 (Source: Amended at 47 Ill. Reg. _____, effective _____)
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Section 611.APPENDIX H Standard Health Effects Language for Public Notification

Contaminant	MCLG ¹ mg/ℓ	MCL ² mg/ℓ	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR):			
A. Microbiological Contaminants			
1a. Corresponding row 1a in appendix B to subpart Q to 40 CFR 141 no longer applies by its own terms. This statement maintains structural consistency with the federal regulations.			
1b. Corresponding row 1b in appendix B to subpart Q to 40 CFR 141 no longer applies by its own terms. This statement maintains structural consistency with the federal regulations.			
1c. Fecal indicators (GWR): i. E. coli ii. enterococci iii. coliphage	Zero None None	TT TT TT	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
1d. Groundwater Rule TT Violations	None	TT	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

<p>1e. Subpart Y Coliform Assessment and/or Corrective Action Violations</p>	<p>N/A</p>	<p>TT</p>	<p>Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found. (The system must use the following applicable sentences:) We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment(s).</p>
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<p>1f. Subpart Y E. coli Assessment and/or Corrective Action Violations</p>	<p>N/A</p>	<p>TT</p>	<p>E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for E. coli, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. (The system must use the following applicable sentences:) We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment that we conducted.</p>
<p>1g. E. coli</p>	<p>Zero</p>	<p>See footnote 22</p>	<p>E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.</p>

1h. Subpart Y Seasonal System TT Violations	N/A	TT	When this violation includes the failure to monitor for total coliforms or E. coli prior to serving water to the public, the mandatory language found at Section 611.905(d)(2) must be used. When this violation includes failure to complete other actions, the appropriate elements found in Section 611.905(a) to describe the violation must be used.
<p><u>2a. This entry relates to the obsolete MCL for turbidity in 40 CFR 141.13 that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.</u></p>			
2a. Turbidity (MCL)⁴	None	1 NTU^{5/5} NTU	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
2b. Turbidity (SWTR TT)	None	TT ⁷	Turbidity has no health effects. However, ⁶ turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

2c. Turbidity (IESWTR TT and LT1ESWTR TT)	None	TT	Turbidity has no health effects. However, ⁸ turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
B. Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR), and Filter Backwash Recycling Rule (FBRR) violations:			
3. Giardia lamblia (SWTR/IESWTR/ LT1ESWTR)	Zero	TT ¹⁰	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
4. Viruses (SWTR/IESWTR/ LT1ESWTR)			Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
5. Heterotrophic plate count (HPC) bacteria ⁹ (SWTR/IESWTR/ LT1ESWTR)			Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
6. Legionella (SWTR/IESWTR/ LT1ESWTR)			Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

7. Cryptosporidium (IESWTR/FBRR/LT1ESWTR)			Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
C. Inorganic Chemicals (IOCs)			
8. Antimony	0.006	0.006	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
9. Arsenic	0	0.010	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
10. Asbestos (10 µm)	7 MFL ¹¹	7 MFL	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
11. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
12. Beryllium	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
13. Cadmium	0.005	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
14. Chromium (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

15. Cyanide	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
16. Fluoride	4.0	4.0	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
17. Mercury (inorganic)	0.002	0.002	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
18. Nitrate	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
19. Nitrite	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

20. Total Nitrate and Nitrite	10	10	Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
21. Selenium	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
22. Thallium	0.0005	0.002	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
D. Lead and Copper Rule			

23. Lead	Zero	TT ¹²	<p><u>Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Children could show slight deficits in attention span and learning abilities. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems who drink this water over many years could develop kidney problems or high blood pressure.</u></p>
24. Copper	1.3	TT ¹³	<p>Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.</p>
E. Synthetic Organic Chemicals (SOCs)			

25. 2,4-D	0.07	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
26. 2,4,5-TP (silvex)	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
27. Alachlor	Zero	0.002	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
28. Atrazine	0.003	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
29. Benzo(a)pyrene (PAHs).	Zero	0.0002	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
30. Carbofuran	0.04	0.04	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
31. Chlordane	Zero	0.002	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.

32. Dalapon	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
33. Di(2-ethylhexyl)adipate	0.4	0.4	Some people who drink water containing di(2-ethylhexyl)adipate well in excess of the MCL over many years could experience toxic effects, such as weight loss, liver enlargement, or possible reproductive difficulties.
34. Di(2-ethylhexyl)-phthalate	Zero	0.006	Some people who drink water containing di(2-ethylhexyl)-phthalate well in excess of the MCL over many years may have problems with their liver or experience reproductive difficulties, and they may have an increased risk of getting cancer.
35. Dibromochloropropane (DBCP)	Zero	0.0002	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
36. Dinoseb	0.007	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
37. Dioxin (2,3,7,8-TCDD)	Zero	3×10^{-8}	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
38. Diquat	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.

39. Endothall	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
40. Endrin	0.002	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
41. Ethylene dibromide	Zero	0.00005	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
42. Glyphosate	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
43. Heptachlor	Zero	0.0004	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
44. Heptachlor epoxide	Zero	0.0002	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
45. Hexachlorobenzene	Zero	0.001	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.

46. Hexachlorocyclopentadiene	0.05	0.05	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
47. Lindane	0.0002	0.0002	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
48. Methoxychlor	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
49. Oxamyl (Vydate)	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
50. Pentachlorophenol	Zero	0.001	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
51. Picloram	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
52. Polychlorinated biphenyls (PCBs)	Zero	0.0005	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.

53. Simazine	0.004	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
54. Toxaphene	Zero	0.003	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
F. Volatile Organic Chemicals (VOCs)			
55. Benzene	Zero	0.005	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
56. Carbon tetrachloride	Zero	0.005	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
57. Chlorobenzene (monochlorobenzene)	0.1	0.1	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
58. o-Dichlorobenzene	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
59. p-Dichlorobenzene	0.075	0.075	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.

60. 1,2-Dichloroethane	Zero	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
61. 1,1-Dichloroethylene	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
62. cis-1,2-Dichloroethylene	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
63. trans-1,2-Dichloroethylene	0.1	0.1	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
64. Dichloromethane	Zero	0.005	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
65. 1,2-Dichloropropane	Zero	0.005	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
66. Ethylbenzene	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
67. Styrene	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

68. Tetrachloroethylene	Zero	0.005	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
69. Toluene	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
70. 1,2,4-Trichlorobenzene	0.07	0.07	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
71. 1,1,1-Trichloroethane	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
72. 1,1,2-Trichloroethane	0.003	0.005	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
73. Trichloroethylene	Zero	0.005	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
74. Vinyl chloride	Zero	0.002	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.

75. Xylenes (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
G. Radioactive Contaminants			
76. Beta/photon emitters	Zero	4 mrem/yr ¹⁴	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
77. Alpha emitters	Zero	15 pCi/ℓ ¹⁵	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
78. Combined radium (226 and 228)	Zero	5 pCi/ℓ	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
79. Uranium	Zero	30 µg/ℓ	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
<p>H. Disinfection Byproducts (DBPs), Byproduct Precursors, and Disinfectant Residuals: <u>If</u> Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). USEPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAA5) ¹⁶</p>			

80. Total trihalomethanes (TTHMs)	N/A	0.080 ^{17,18}	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
81. Haloacetic Acids (HAA5)	N/A	0.060 ¹⁹	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
82. Bromate	Zero	0.010	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
83. Chlorite	0.08	1.0	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
84. Chlorine	4 (MRDLG) ²⁰	4.0 (MRDL) ²¹	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

<p>85. Chloramines</p>	<p>4 (MRDLG)</p>	<p>4.0 (MRDL)</p>	<p>Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.</p>
<p>85a. Chlorine dioxide, <u>if</u> where any two consecutive daily samples taken at the entrance to the distribution system are above the MRDL</p>	<p>0.8 (MRDLG)</p>	<p>0.8 (MRDL)</p>	<p>Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.</p> <p>Add for public notification only: The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only, not within the distribution system that delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers.</p>

<p>86a. Chlorine dioxide, <u>if</u> where one or more distribution system samples are above the MRDL</p>	<p>0.8 (MRDLG)</p>	<p>0.8 (MRDL)</p>	<p>Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.</p> <p>Add for public notification only: The chlorine dioxide violations reported today include exceedances of the USEPA standard within the distribution system that delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.</p>
<p>87. Control of DBP precursors (TOC)</p>	<p>None</p>	<p>TT</p>	<p>Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.</p>
<p>I. Other Treatment Techniques:</p>			

88. Acrylamide	Zero	TT	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
89. Epichlorohydrin	Zero	TT	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

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Appendix H – Endnotes

1. "MCLG" means maximum contaminant level goal.
2. "MCL" means maximum contaminant level.
3. This endnote corresponds with endnote 3 to appendix B to subpart Q to 40 CFR 14, which applied only to paragraph 1a in the table, which no longer has operative effect. This statement maintains structural consistency with the corresponding federal rules.
4. In the corresponding USEPA rule, this note relates to an entry for the obsolete MCL for turbidity that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.~~There are various regulations that set turbidity standards for different types of systems, including Section 611.320, the 1989 Surface Water Treatment Rule (SWTR), the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR), and the 2002 Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR). The MCL for the monthly turbidity average is 1 NTU; the MCL for the 2-day average is 5 NTU for a supplier that is required to filter but has not yet installed filtration (Section 611.320).~~
5. In the corresponding USEPA rule, this note relates to an entry for the obsolete MCL for turbidity that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.~~"NTU" means nephelometric turbidity unit.~~
6. There are various regulations that set turbidity standards for different types of systems, including ~~Section 611.320~~, the 1989 SWTR, the 1998 IESWTR, and the 2002 LT1ESWTR. A supplier subject to the SWTR (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered systems, 95 percent of samples each month must

- 23965 not exceed 0.5 NTU in systems using conventional or direct filtration and must not
 23966 exceed 1 NTU in systems using slow sand or diatomaceous earth filtration or other
 23967 filtration technologies approved by the Agency.
 23968
- 23969 7. "TT" means treatment technique.
 23970
- 23971 8. There are various regulations that set turbidity standards for different types of systems,
 23972 including ~~Section 611.320~~, the 1989 SWTR, the 1998 IESWTR, and the 2002
 23973 LT1ESWTR. For a supplier subject to the IESWTR (a supplier ~~servicing that serves~~ at
 23974 least 10,000 people, using surface water or groundwater under the direct influence of
 23975 surface water), that use conventional filtration or direct filtration, the turbidity level of a
 23976 system's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of
 23977 monthly measurements, and the turbidity level of a system's combined filter effluent must
 23978 not exceed 1 NTU at any time. A supplier subject to the IESWTR using technologies
 23979 other than conventional, direct, slow sand, or diatomaceous earth filtration must meet
 23980 turbidity limits set by the Agency. For a supplier subject to the LT1ESWTR (a supplier
 23981 ~~servicing that serves~~ fewer than 10,000 people, using surface water or groundwater under
 23982 the direct influence of surface water) ~~using that uses~~ conventional filtration or direct
 23983 filtration, the turbidity level of the supplier's combined filter effluent may not exceed 0.3
 23984 NTU in at least 95 percent of monthly measurements, and the turbidity level of the
 23985 supplier's combined filter effluent must not exceed 1 NTU at any time. A supplier
 23986 subject to the LT1ESWTR using technologies other than conventional, direct, slow sand,
 23987 or diatomaceous earth filtration must meet turbidity limits set by the Agency.
 23988
- 23989 9. The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful.
 23990 HPC is simply an alternative method of determining disinfectant residual levels. The
 23991 number of such bacteria is an indicator of whether there is enough disinfectant in the
 23992 distribution system.
 23993
- 23994 10. SWTR, IESWTR, and LT1ESWTR treatment technique violations that involve turbidity
 23995 exceedances may use the health effects language for turbidity instead.
 23996
- 23997 11. Millions of fibers per liter.
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- 23999 12. Action Level = 0.015 mg/l.
 24000
- 24001 13. Action Level = 1.3 mg/l.
 24002
- 24003 14. Millirems per year.
 24004
- 24005 15. Picocuries per liter.
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- 24007 16. A surface water system supplier or a groundwater system supplier under the direct

24008 influence of surface water is regulated under Subpart B. A Subpart B community water
24009 system supplier or a non-transient non-community system supplier must comply with
24010 Subpart I DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs).
24011 A Subpart B transient non-community system supplier using that uses chlorine dioxide as
24012 a disinfectant or oxidant must comply with the chlorine dioxide MRDL.

- 24013
- 24014 17. Community and non-transient non-community systems must comply with Subpart Y
24015 TTHM and HAA5 MCLs of 0.080 mg/ℓ and 0.060 mg/ℓ, respectively (with compliance
24016 calculated as a locational running annual average) on the schedule in Section 611.970.
24017
- 24018 18. The MCL for total trihalomethanes is the sum of the concentrations of the individual
24019 trihalomethanes.
- 24020
- 24021 19. The MCL for haloacetic acids is the sum of the concentrations of the individual
24022 haloacetic acids.
- 24023
- 24024 20. "MRDLG" means maximum residual disinfectant level goal.
- 24025
- 24026 21. "MRDL" means maximum residual disinfectant level.
- 24027
- 24028 22. The supplier is in compliance unless one of the following conditions occurs: (1) the
24029 supplier's system has an E. coli-positive repeat sample following a total coliform-positive
24030 routine sample; (2) the supplier's system has a total coliform-positive repeat sample
24031 following an E. coli-positive routine sample; (3) the supplier fails to take all required
24032 repeat samples following an E. coli-positive routine sample; or (4) the supplier fails to
24033 test for E. coli when any repeat sample tests positive for total coliform.

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24035 BOARD NOTE: This Appendix H derives ~~Derived~~ from appendix B to subpart Q to 40 CFR 141
24036 ~~(2016)~~.

24037

24038 (Source: Amended at 47 Ill. Reg. _____, effective _____)

24039

24040 **Section 611.TABLE F Number of Water Quality Parameter Sampling Sites**

24041

System Size (<u>Number of</u> Persons Served)	<u>Minimum</u> Number of Sites	
	(Standard Monitoring)	(Reduced Monitoring)
more than 100,000	25	10
10,001 to 100,000	10	7
3,301 to 10,000	3	3
501 to 3,300	2	2
101 to 500	1	1
100 or fewer	1	1

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24043 BOARD NOTE: This Table F derives ~~Derived~~ from 40 CFR 141.87(a)(2)(i) and (e)(1)-(2012).

24044
24045 (Source: Amended at 47 Ill. Reg. _____, effective _____)

24046

24047 **Section 611.TABLE G Summary of Section 611.357 Monitoring Requirements for Water**
 24048 **Quality Parameters (Repealed)**

24049
 24050 See end note 1 below.

Monitoring Period	Parameters ²	Location	Frequency
Initial Monitoring	pH, alkalinity, orthophosphate or silica ³ , calcium, conductivity, temperature	Taps and at entry points to the distribution system	Every six months
After installation of corrosion control	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴	Taps	Every six months
	pH, alkalinity dosage rate and concentration (if alkalinity is adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁵	Entry points to the distribution system ⁶	No less frequently than every two weeks
After the Agency specifies parameter values for optimal corrosion control	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴	Taps	Every six months
	pH, alkalinity dosage rate and concentration (if alkalinity is adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁵	Entry points to the distribution system ⁶	No less frequently than every two weeks
Reduced monitoring	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴	Taps	Every six months, annually ⁷ or every three years ⁸ ; reduced number of sites

<p>pH, alkalinity dosage rate and concentration (if alkalinity is adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual⁵</p>	<p>Entry points to the distribution system⁶</p>	<p>No less frequently than every two weeks</p>
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¹ This Table G is for illustrative purposes; consult the text of Section 611.357 for precise regulatory requirements.

² Small and medium sized systems have to monitor for water quality parameters only during monitoring periods in which the system exceeds the lead or copper action level.

³ Orthophosphate must be measured only when an inhibitor containing a phosphate compound is used. Silica must be measured only when an inhibitor containing silicate compound is used.

⁴ Calcium must be measured only when calcium carbonate stabilization is used as part of corrosion control.

⁵ Inhibitor dosage rates and inhibitor residual concentrations (orthophosphate or silica) must be measured only when an inhibitor is used.

⁶ A groundwater system supplier may limit monitoring to representative locations throughout the system.

⁷ A water supplier may reduce frequency of monitoring for water quality parameters at the tap from every six months to annually if it has maintained the range of values for water quality parameters reflecting optimal corrosion control during three consecutive years of monitoring.

⁸ A water supplier may further reduce the frequency of monitoring for water quality parameters at the tap from annually to once every three years if it has maintained the range of values for water quality parameters reflecting optimal corrosion control during three consecutive years of annual monitoring. A water supplier may accelerate to triennial monitoring for water quality parameters at the tap if it has maintained 90th percentile lead levels less than or equal to 0.005 mg/l, 90th percentile copper levels less than or equal to 0.65 mg/l, and the range of water quality parameters designated by the Agency under Section 611.352(f) as representing optimal corrosion control during two consecutive six month monitoring periods.

BOARD NOTE: Derived from the table to 40 CFR 141.87 (2012).

(Source: Repealed at 47 Ill. Reg. _____, effective _____)

24089	<u>Section 611.TABLE R Radionuclide Conversion Factors</u>	
24090		
24091	<u>Derived Concentrations (pCi•ℓ⁻¹) of Beta and Photon Emitters in Drinking Water Yielding a</u>	
24092	<u>Dose of 4 mrem•y⁻¹ to the Total Body or to Any Critical Organ as Defined in NBS Handbook 69</u>	
24093		
24094		<u>Conversion Factor</u>
24095	<u>Radionuclide (Isotopic Symbol)</u>	<u>(pCi•ℓ⁻¹/4 mrem•y⁻¹)</u>
24096		
24097	<u>Antimony-122 (¹²²₅₁Sb)</u>	<u>90</u>
24098	<u>Antimony-124 (¹²⁴₅₁Sb)</u>	<u>60</u>
24099	<u>Antimony-125 (¹²⁵₅₁Sb)</u>	<u>300</u>
24100	<u>Arsenic-73 (⁷³₃₃As)</u>	<u>1,000</u>
24101	<u>Arsenic-74 (⁷⁴₃₃As)</u>	<u>100</u>
24102	<u>Arsenic-76 (⁷⁶₃₃As)</u>	<u>60</u>
24103	<u>Arsenic-77 (⁷⁷₃₃As)</u>	<u>200</u>
24104	<u>Barium-131 (¹³¹₅₆Ba)</u>	<u>600</u>
24105	<u>Barium-140 (¹⁴⁰₅₆Ba)</u>	<u>90</u>
24106	<u>Berkelium-249 (²⁴⁹₉₇Bk)</u>	<u>2,000</u>
24107	<u>Beryllium-7 (⁷₄Be)</u>	<u>6,000</u>
24108	<u>Bismuth-206 (²⁰⁶₈₃Bi)</u>	<u>100</u>
24109	<u>Bismuth-207 (²⁰⁷₈₃Bi)</u>	<u>200</u>
24110	<u>Bromine-82 (⁸²₃₅Br)</u>	<u>100</u>
24111	<u>Cadmium-109 (¹⁰⁹₄₈Cd)</u>	<u>600</u>
24112	<u>Cadmium-115 (¹¹⁵₄₈Cd)</u>	<u>90</u>
24113	<u>Cadmium-115m (^{115m}₄₈Cd)</u>	<u>90</u>
24114	<u>Calcium-45 (⁴⁵₂₀Ca)</u>	<u>10</u>
24115	<u>Calcium-47 (⁴⁷₂₀Ca)</u>	<u>80</u>
24116	<u>Carbon-14 (¹⁴C) (¹⁴₆C)</u>	<u>2,000</u>
24117	<u>Cerium-141 (¹⁴¹₅₈Ce)</u>	<u>300</u>
24118	<u>Cerium-143 (¹⁴³₅₈Ce)</u>	<u>100</u>
24119	<u>Cerium-144 (¹⁴⁴₅₈Ce)</u>	<u>30</u>
24120	<u>Cesium-131 (¹³¹₅₅Cs)</u>	<u>20,000</u>
24121	<u>Cesium-134 (¹³⁴₅₅Cs)</u>	<u>80</u>
24122	<u>Cesium-134m (^{134m}₅₅Cs)</u>	<u>20,000</u>
24123	<u>Cesium-135 (¹³⁵₅₅Cs)</u>	<u>900</u>
24124	<u>Cesium-136 (¹³⁶₅₅Cs)</u>	<u>800</u>
24125	<u>Cesium-137 (¹³⁷₅₅Cs)</u>	<u>200</u>
24126	<u>Chlorine-36 (³⁶₁₇Cl)</u>	<u>700</u>
24127	<u>Chlorine-38 (³⁸₁₇Cl)</u>	<u>1,000</u>
24128	<u>Chromium-51 (⁵¹₂₄Cr)</u>	<u>6,000</u>
24129	<u>Cobalt-57 (⁵⁷₂₇Co)</u>	<u>1,000</u>
24130	<u>Cobalt-58 (⁵⁸₂₇Co)</u>	<u>300</u>

24131	<u>Cobalt-58m</u> ($^{58m}_{27}\text{Co}$)	<u>9,000</u>
24132	<u>Cobalt-60</u> ($^{60}_{27}\text{Co}$)	<u>100</u>
24133	<u>Copper-64</u> ($^{64}_{29}\text{Cu}$)	<u>900</u>
24134	<u>Dysprosium-165</u> ($^{165}_{66}\text{Dy}$)	<u>1,000</u>
24135	<u>Dysprosium-166</u> ($^{166}_{66}\text{Dy}$)	<u>100</u>
24136	<u>Erbium-169</u> ($^{169}_{68}\text{Er}$)	<u>300</u>
24137	<u>Erbium-171</u> ($^{171}_{68}\text{Er}$)	<u>300</u>
24138	<u>Europium-152</u> ($^{152}_{63}\text{Eu}$)	<u>200</u>
24139	<u>Europium-154</u> ($^{154}_{63}\text{Eu}$)	<u>60</u>
24140	<u>Europium-155</u> ($^{155}_{63}\text{Eu}$)	<u>600</u>
24141	<u>Fluorine-18</u> ($^{18}_{9}\text{F}$)	<u>2,000</u>
24142	<u>Gadolinium-153</u> ($^{153}_{63}\text{Gd}$)	<u>600</u>
24143	<u>Gadolinium-159</u> ($^{159}_{63}\text{Gd}$)	<u>200</u>
24144	<u>Gallium-72</u> ($^{72}_{31}\text{Ga}$)	<u>100</u>
24145	<u>Germanium-71</u> ($^{71}_{32}\text{Ge}$)	<u>6,000</u>
24146	<u>Gold-196</u> ($^{196}_{79}\text{Au}$) ($^{196}_{79}\text{Au}$)	<u>600</u>
24147	<u>Gold-198</u> ($^{198}_{79}\text{Au}$) ($^{198}_{79}\text{Au}$)	<u>100</u>
24148	<u>Gold-199</u> ($^{199}_{79}\text{Au}$) ($^{199}_{79}\text{Au}$)	<u>600</u>
24149	<u>Hafmium-181</u> ($^{181}_{72}\text{Hf}$)	<u>200</u>
24150	<u>Holmium-166</u> ($^{166}_{67}\text{Ho}$)	<u>90</u>
24151	<u>Hydrogen-3 (Tritium)</u> (^3_1H)	<u>20,000</u>
24152	<u>Indium-113m</u> ($^{113m}_{49}\text{In}$)	<u>3,000</u>
24153	<u>Indium-114m</u> ($^{114m}_{49}\text{In}$)	<u>60</u>
24154	<u>Indium-115</u> ($^{115}_{49}\text{In}$)	<u>300</u>
24155	<u>Indium-115 m</u> ($^{115m}_{49}\text{In}$)	<u>1,000</u>
24156	<u>Iodine-126</u> ($^{126}_{53}\text{I}$)	<u>3</u>
24157	<u>Iodine-129</u> ($^{129}_{53}\text{I}$)	<u>1</u>
24158	<u>Iodine-131</u> ($^{131}_{53}\text{I}$)	<u>3</u>
24159	<u>Iodine-132</u> ($^{132}_{53}\text{I}$)	<u>90</u>
24160	<u>Iodine-133</u> ($^{133}_{53}\text{I}$)	<u>10</u>
24161	<u>Iodine-134</u> ($^{134}_{53}\text{I}$)	<u>100</u>
24162	<u>Iodine-135</u> ($^{135}_{53}\text{I}$)	<u>30</u>
24163	<u>Iridium-190</u> ($^{190}_{77}\text{Ir}$)	<u>600</u>
24164	<u>Iridium-192</u> ($^{192}_{77}\text{Ir}$)	<u>100</u>
24165	<u>Iridium-194</u> ($^{194}_{77}\text{Ir}$)	<u>90</u>
24166	<u>Iron-55</u> ($^{55}_{26}\text{Fe}$)	<u>2,000</u>
24167	<u>Iron-59</u> ($^{59}_{26}\text{Fe}$)	<u>200</u>
24168	<u>Lanthanum-140</u> ($^{140}_{57}\text{La}$)	<u>60</u>
24169	<u>Lead-203</u> ($^{203}_{82}\text{Pb}$)	<u>1,000</u>
24170	<u>Lutetium-177</u> ($^{177}_{71}\text{Lu}$)	<u>300</u>
24171	<u>Manganese-52</u> ($^{52}_{25}\text{Mn}$)	<u>90</u>

24172	<u>Manganese-54</u> ($^{54}_{25}\text{Mn}$)	<u>300</u>
24173	<u>Manganese-56</u> ($^{56}_{25}\text{Mn}$)	<u>300</u>
24174	<u>Mercury-197</u> ($^{197}_{80}\text{Hg}$)	<u>900</u>
24175	<u>Mercury-197m</u> ($^{197\text{m}}_{80}\text{Hg}$)	<u>600</u>
24176	<u>Mercury-203</u> ($^{203}_{80}\text{Hg}$)	<u>60</u>
24177	<u>Molybdenum-99</u> ($^{99}_{42}\text{Mo}$)	<u>600</u>
24178	<u>Neodymium-147</u> ($^{147}_{60}\text{Nd}$)	<u>200</u>
24179	<u>Neodymium-149</u> ($^{149}_{60}\text{Nd}$)	<u>900</u>
24180	<u>Neptunium-239</u> ($^{239}_{93}\text{Np}$)	<u>300</u>
24181	<u>Nickel-59</u> ($^{59}_{28}\text{Ni}$)	<u>300</u>
24182	<u>Nickel-63</u> ($^{63}_{28}\text{Ni}$)	<u>50</u>
24183	<u>Nickel-65</u> ($^{65}_{28}\text{Ni}$)	<u>300</u>
24184	<u>Niobium-93m</u> ($^{93\text{m}}_{41}\text{Nb}$)	<u>1,000</u>
24185	<u>Niobium-95</u> ($^{95}_{41}\text{Nb}$)	<u>300</u>
24186	<u>Niobium-97</u> ($^{97}_{41}\text{Nb}$)	<u>3,000</u>
24187	<u>Osmium-185</u> ($^{185}_{76}\text{Os}$)	<u>200</u>
24188	<u>Osmium-191</u> ($^{191}_{76}\text{Os}$)	<u>600</u>
24189	<u>Osmium-191m</u> ($^{191\text{m}}_{76}\text{Os}$)	<u>9,000</u>
24190	<u>Osmium-193</u> ($^{193}_{76}\text{Os}$)	<u>200</u>
24191	<u>Palladium-103</u> ($^{103}_{46}\text{Pd}$)	<u>900</u>
24192	<u>Palladium-109</u> ($^{109}_{46}\text{Pd}$)	<u>300</u>
24193	<u>Phosphorus-32</u> ($^{32}_{15}\text{P}$)	<u>30</u>
24194	<u>Platinum-191</u> ($^{191}_{78}\text{Pt}$)	<u>300</u>
24195	<u>Platinum-193</u> ($^{193}_{78}\text{Pt}$)	<u>3,000</u>
24196	<u>Platinum-193m</u> ($^{193\text{m}}_{78}\text{Pt}$)	<u>3,000</u>
24197	<u>Platinum-197</u> ($^{197}_{78}\text{Pt}$)	<u>300</u>
24198	<u>Platinum-197m</u> ($^{197\text{m}}_{78}\text{Pt}$)	<u>3,000</u>
24199	<u>Plutonium-241</u> ($^{241}_{94}\text{Pu}$)	<u>300</u>
24200	<u>Potassium-42</u> ($^{42}_{19}\text{K}$)	<u>900</u>
24201	<u>Praseodymium-142</u> ($^{142}_{59}\text{Pr}$)	<u>90</u>
24202	<u>Praseodymium-143</u> ($^{143}_{59}\text{Pr}$)	<u>100</u>
24203	<u>Promethium-147</u> ($^{147}_{61}\text{Pm}$)	<u>600</u>
24204	<u>Promethium-149</u> ($^{149}_{61}\text{Pm}$)	<u>100</u>
24205	<u>Protactinium-230</u> ($^{230}_{91}\text{Pa}$)	<u>600</u>
24206	<u>Protactinium-233</u> ($^{233}_{91}\text{Pa}$)	<u>300</u>
24207	<u>Rhenium-183</u> ($^{186}_{75}\text{Re}$)	<u>2,000</u>
24208	<u>Rhenium-186</u> ($^{186}_{75}\text{Re}$)	<u>300</u>
24209	<u>Rhenium-187</u> ($^{187}_{75}\text{Re}$)	<u>9,000</u>
24210	<u>Rhenium-188</u> ($^{188}_{75}\text{Re}$)	<u>200</u>
24211	<u>Rhodium-103m</u> ($^{103\text{m}}_{45}\text{Rh}$)	<u>30,000</u>
24212	<u>Rhodium-105</u> ($^{105}_{45}\text{Rh}$)	<u>300</u>

24213	<u>Rubidium-86 ($^{86}_{37}\text{Rb}$)</u>	<u>600</u>
24214	<u>Rubidium-87 ($^{87}_{37}\text{Rb}$)</u>	<u>300</u>
24215	<u>Ruthenium-97 ($^{97}_{44}\text{Ru}$)</u>	<u>1,000</u>
24216	<u>Ruthenium-103 ($^{103}_{44}\text{Ru}$)</u>	<u>200</u>
24217	<u>Ruthenium-105 ($^{105}_{44}\text{Ru}$)</u>	<u>200</u>
24218	<u>Ruthenium-106 ($^{106}_{44}\text{Ru}$)</u>	<u>30</u>
24219	<u>Samarium-151 ($^{151}_{62}\text{Sm}$)</u>	<u>1,000</u>
24220	<u>Samarium-153 ($^{153}_{62}\text{Sm}$)</u>	<u>200</u>
24221	<u>Scandium-46 ($^{46}_{21}\text{Sc}$)</u>	<u>100</u>
24222	<u>Scandium-47 ($^{47}_{21}\text{Sc}$)</u>	<u>300</u>
24223	<u>Scandium-48 ($^{48}_{21}\text{Sc}$)</u>	<u>80</u>
24224	<u>Selenium-75 ($^{75}_{34}\text{Se}$)</u>	<u>900</u>
24225	<u>Silicon-31 ($^{31}_{14}\text{Si}$)</u>	<u>3,000</u>
24226	<u>Silver-105 ($^{105}_{47}\text{Ag}$)</u>	<u>300</u>
24227	<u>Silver-110m ($^{110\text{m}}_{47}\text{Ag}$)</u>	<u>90</u>
24228	<u>Silver-111 ($^{111}_{47}\text{Ag}$)</u>	<u>100</u>
24229	<u>Sodium-22 ($^{22}_{11}\text{Na}$)</u>	<u>400</u>
24230	<u>Sodium-24 ($^{24}_{11}\text{Na}$)</u>	<u>600</u>
24231	<u>Strontium-85 ($^{85}_{38}\text{Sr}$)</u>	<u>900</u>
24232	<u>Strontium-85m ($^{85\text{m}}_{38}\text{Sr}$)</u>	<u>20,000</u>
24233	<u>Strontium-89 ($^{89}_{38}\text{Sr}$) Bone</u>	<u>20</u>
24234	<u>Strontium-90 ($^{90}_{38}\text{Sr}$)</u>	<u>8</u>
24235	<u>Strontium-91 ($^{91}_{38}\text{Sr}$)</u>	<u>200</u>
24236	<u>Strontium-92 ($^{92}_{38}\text{Sr}$)</u>	<u>200</u>
24237	<u>Sulfur-35 (inorganic) ($^{35}_{16}\text{S}$)</u>	<u>500</u>
24238	<u>Tantalum-182 ($^{182}_{73}\text{Ta}$)</u>	<u>100</u>
24239	<u>Technetium-96 ($^{96}_{43}\text{Tc}$)</u>	<u>300</u>
24240	<u>Technetium-96m ($^{96\text{m}}_{43}\text{Tc}$)</u>	<u>30,000</u>
24241	<u>Technetium-97 ($^{97}_{43}\text{Tc}$)</u>	<u>6,000</u>
24242	<u>Technetium-97m ($^{97\text{m}}_{43}\text{Tc}$)</u>	<u>1,000</u>
24243	<u>Technetium-99 ($^{99}_{43}\text{Tc}$)</u>	<u>900</u>
24244	<u>Technetium-99m ($^{99\text{m}}_{43}\text{Tc}$)</u>	<u>20,000</u>
24245	<u>Tellurium-125m ($^{125\text{m}}_{52}\text{Te}$)</u>	<u>600</u>
24246	<u>Tellurium-127 ($^{127}_{52}\text{Te}$)</u>	<u>900</u>
24247	<u>Tellurium-127m ($^{127\text{m}}_{52}\text{Te}$)</u>	<u>200</u>
24248	<u>Tellurium-129 ($^{129}_{52}\text{Te}$)</u>	<u>2,000</u>
24249	<u>Tellurium-129m ($^{129\text{m}}_{52}\text{Te}$)</u>	<u>90</u>
24250	<u>Tellurium-131m ($^{131\text{m}}_{52}\text{Te}$)</u>	<u>200</u>
24251	<u>Tellurium-132 ($^{132}_{52}\text{Te}$)</u>	<u>90</u>
24252	<u>Terbium-160 ($^{160}_{65}\text{Tb}$)</u>	<u>100</u>
24253	<u>Thallium-200 ($^{200}_{81}\text{Tl}$)</u>	<u>1,000</u>

24254	<u>Thallium-201</u> ($^{201}_{81}\text{Tl}$)	<u>900</u>
24255	<u>Thallium-202</u> ($^{202}_{81}\text{Tl}$)	<u>300</u>
24256	<u>Thallium-204</u> ($^{204}_{81}\text{Tl}$)	<u>300</u>
24257	<u>Thulium-170</u> ($^{170}_{69}\text{Tm}$)	<u>100</u>
24258	<u>Thulium-171</u> ($^{171}_{69}\text{Tm}$)	<u>1,000</u>
24259	<u>Tin-113</u> ($^{113}_{50}\text{Sn}$)	<u>300</u>
24260	<u>Tin-125</u> ($^{125}_{50}\text{Sn}$)	<u>60</u>
24261	<u>Tungsten-181</u> ($^{181}_{74}\text{W}$)	<u>1,000</u>
24262	<u>Tungsten-185</u> ($^{185}_{74}\text{W}$)	<u>300</u>
24263	<u>Tungsten-187</u> ($^{187}_{74}\text{W}$)	<u>200</u>
24264	<u>Vanadium-48</u> ($^{48}_{23}\text{V}$)	<u>90</u>
24265	<u>Ytterbium-175</u> ($^{175}_{70}\text{Yb}$)	<u>300</u>
24266	<u>Yttrium-90</u> ($^{90}_{39}\text{Y}$)	<u>60</u>
24267	<u>Yttrium-91</u> ($^{91}_{39}\text{Y}$)	<u>90</u>
24268	<u>Yttrium-91m</u> ($^{91\text{m}}_{39}\text{Y}$)	<u>9,000</u>
24269	<u>Yttrium-92</u> ($^{92}_{39}\text{Y}$)	<u>200</u>
24270	<u>Yttrium-93</u> ($^{93}_{39}\text{Y}$)	<u>90</u>
24271	<u>Zinc-65</u> ($^{65}_{30}\text{Zn}$)	<u>300</u>
24272	<u>Zinc-69</u> ($^{69}_{30}\text{Zn}$)	<u>6,000</u>
24273	<u>Zinc-69m</u> ($^{69\text{m}}_{30}\text{Zn}$)	<u>200</u>
24274	<u>Zirconium-93</u> ($^{93}_{40}\text{Zr}$)	<u>2,000</u>
24275	<u>Zirconium-95</u> ($^{95}_{40}\text{Zr}$)	<u>200</u>
24276	<u>Zirconium-97</u> ($^{97}_{40}\text{Zr}$)	<u>60</u>

24277
 24278 BOARD NOTE: This Table R derives from Table VI-2 (Annual Average Concentrations
 24279 Yielding 4 Millirem per Year for a Two Liter Daily Intake), Statement of Basis and Purpose for
 24280 the National Primary Drinking Water Regulations – Radionuclides, USEPA, Office of Radiation
 24281 Protection (July 9, 1976), at 87-94, and Appendix I (Comparison of Derived Values of Beta and
 24282 Photon Emitters), Implementation Guidance for Radionuclides, USEPA, Office of Ground Water
 24283 and Drinking Water, EPA 816-F-00-002 (March 2002). USEPA based these values on NBS
 24284 Handbook 69 (63), incorporated by reference in Section 611.102.

24285
 24286 Calculating compliance with Section 611.330(d) under Section 611.742 requires dividing the
 24287 measured concentration for each radionuclide by the appropriate conversion factor to determine
 24288 its calculated fractional contribution to the total annual exposure limit of 4 mrem/yr:

24289
 24290
$$\frac{\text{Fraction of Maximum Exposure Limit (4 mrem}\cdot\text{yr}^{-1})}{\text{Sample Concentration (pCi}\cdot\ell^{-1})}$$

24291
$$\frac{\text{Conversion Factor (pCi}\cdot\ell^{-1}/4 \text{ mrem}\cdot\text{yr}^{-1})}{\text{Sample Concentration (pCi}\cdot\ell^{-1})}$$

24292
 24293 The supplier then sums the fractional contributions for all radionuclides to determine the total
 24294 fraction of the maximum exposure limit:

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$$\begin{aligned} & \text{Total Fraction of Maximum Exposure Limit for All Radionuclides Present} \\ & = \sum_{\text{Isotope 1}}^{\text{Isotope n}} \text{Fraction of Maximum Exposure Limit for Each Radionuclide} \end{aligned}$$

A sum of fractions result exceeding 1.00 exceeds the 4 mrem/yr standard in Section 611.330(d).

The total exposure is this sum of fractions (i.e., the total fraction of maximum exposure limit) times 4 mrem•yr⁻¹.

See Statement of Basis and Purpose for the National Primary Drinking Water Regulations – Radionuclides, USEPA, Office of Radiation Protection (July 9, 1976), at 80-86, and Implementation Guidance for Radionuclides, USEPA, Office of Ground Water and Drinking Water, EPA 816-F-00-002 (March 2002), pp. II-5 and II-6.

(Source: Added at 47 Ill. Reg. _____, effective _____)

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24312
24313
24314

Section 611.TABLE Z Federal Effective Dates

The following are the effective dates of the various federal NPDWRs:

<p>Fluoride (40 CFR 141.62(b)(1)) (corresponding with Section 611.301(b))</p>	<p>October 2, 1987</p>
<p>Phase I VOCs (40 CFR 141.61(a)(1) through (a)(8)) (corresponding with Section 611.311(a)) (benzene, carbon tetrachloride, p-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride)</p>	<p>January 9, 1989</p>
<p>Total Coliforms Rule (40 CFR 141.21 and 141.63) (corresponding with Sections 611.521-611.527 and 611.325) (total coliforms, fecal coliforms, and E. coli) Replaced by the Revised Total Coliforms Rule (40 CFR 141, subpart Y)</p>	<p>December 31, 1990</p>
<p>Surface Water Treatment Rule (40 CFR 141, subpart H) (corresponding with Subpart B) (filtration, disinfection, and turbidity)</p>	<p>Effective: December 31, 1990 Compliance: December 31, 1991</p>
<p>Lead and Copper (40 CFR 141, subpart I) (corresponding with Subpart G) (lead and copper monitoring, reporting, and recordkeeping requirements of 40 CFR 141.86 through 141.91)</p>	<p>July 7, 1991</p>
<p>Phase II IOCs (40 CFR 141.62(b)(2) and (b)(4) through (b)(10)) (corresponding with Section 611.301(b)) (asbestos, cadmium, chromium, mercury, nitrate, nitrite, and selenium)</p>	<p>July 30, 1992</p>
<p>Phase II VOCs (40 CFR 141.61(a)(9) through (a)(18)) (corresponding with Section 611.311(a)) (o-dichlorobenzene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, 1,2-dichloropropane, ethylbenzene, monochlorobenzene, styrene, tetrachloroethylene, toluene, and xylenes (total))</p>	<p>July 30, 1992</p>

Phase II SOCs (40 CFR 141.61(c)(1) through (c)(18)) (corresponding with Section 611.311(c)) (alachlor, atrazine, carbofuran, chlordane, dibromochloropropane, ethylene dibromide, heptachlor, heptachlor epoxide, lindane, methoxychlor, polychlorinated biphenyls, toxaphene, 2,4-D, and 2,4,5-TP (silvex))	July 30, 1992
Phase V SOC (40 CFR 141.61(c)(3)) (corresponding with Section 611.311(c)) (endrin)	August 17, 1992
Lead and Copper (40 CFR141, subpart I) (corresponding with Subpart G of this Part) (lead and copper corrosion control, water treatment, public education, and lead service line replacement requirements of 40 CFR 141.81 through 141.85)	December 7, 1992
Phase IIB IOC (40 CFR 141.62(b)(3)) (corresponding with Section 611.301(b)) (barium)	January 1, 1993
Phase IIB SOCs (40 CFR 141.61(a)(9) through (a)(18)) (corresponding with Section 611.311(c)) (aldicarb, aldicarb sulfone, aldicarb sulfoxide, and pentachlorophenol. See the Board note appended to Section 611.311(c) for information relating to implementation of requirements relating to aldicarb, aldicarb sulfone, and aldicarb sulfoxide.)	January 1, 1993
Phase V IOCs (40 CFR 141.62(b)(11) through (b)(15)) (corresponding with Section 611.301(b)) (antimony, beryllium, cyanide, nickel, and thallium)	January 17, 1994
Phase V VOCs (40 CFR 141.61(b)(19) through (b)(21)) (corresponding with Section 611.311(a)) (dichloromethane, 1,2,4-trichlorobenzene, and 1,1,2- trichloroethane)	January 17, 1994
Phase V SOCs (40 CFR 141.61(c)(19) through (c)(25)) (corresponding with Section 611.311(c)) (benzo(a)pyrene, dalapon, di(2-ethylhexyl)adipate, di(2- ethylhexyl)phthalate dinoseb, diquat, endothall, glyphosate, hexachlorobenzene, hexachlorocyclopentadiene, oxamyl, picloram, simazine, and 2,3,7,8-TCDD)	January 17, 1994

<p>Consumer Confidence Report Rule (40 CFR 141, subpart Q) (corresponding with Subpart O) (notification to public of drinking water quality)</p>	<p>September 18, 1998</p>
<p>Interim Enhanced Surface Water Treatment Rule (40 CFR 141, subpart P) (corresponding with Subpart R) (applicable to suppliers providing water to fewer than 10,000 persons) (Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, Cryptosporidium, and turbidity)</p>	<p>February 16, 1999</p>
<p>Public Notification Rule (40 CFR 141, subpart Q) (corresponding with Subpart V) (notification to public of NPDWR violations, variances or exemptions, or other situations that could bear on public health)</p>	<p>June 5, 2000</p>
<p>Filter Backwash Rule (40 CFR 141.76) (corresponding with Section 611.276) (reuse of spent filter backwash water, thickener supernatant, or liquids from dewatering processes)</p>	<p>August 7, 2001</p>
<p>Disinfection/Disinfectant Byproducts Rule (40 CFR 141.64, 141.65 and 141, subpart L) Smaller Systems (serving 10,000 or fewer persons) Larger Systems (serving more than 10,000 persons) (corresponding with Sections 611.312 and 611.313) (total trihalomethanes, haloacetic acids (five), bromate, chlorite, chlorine, chloramines, and chlorine dioxide)</p>	<p>December 16, 2001 December 16, 2003</p>
<p>Long Term 1 Enhanced Surface Water Treatment Rule (40 CFR 141, subpart T) (corresponding with subpart X) (applicable to suppliers providing water to 10,000 or more persons) (Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, Cryptosporidium, and turbidity)</p>	<p>February 13, 2002</p>
<p>Radionuclides (40 CFR 141.66) (corresponding with Section 611.330) (combined radium (Ra-226 + Ra-228), gross alpha particle activity, beta particle and photon activity, and uranium)</p>	<p>December 8, 2003</p>
<p>Arsenic (40 CFR 141.62(b)(16))</p>	<p>January 23, 2006</p>

(corresponding with Section 611.301(b))
 (arsenic)

24315

Stage 2 Disinfection/Disinfectant Byproducts Rule (40 CFR 141, subparts U and V)

Systems that serve fewer than 10,000 persons)	
Submit plan	April 1, 2008
Complete monitoring or study	March 31, 2010
Submit IDSE report	July 1, 2010
Compliance with monitoring requirements	
If no Cryptosporidium monitoring is required	October 1, 2013
If Cryptosporidium monitoring is required	October 1, 2014
Systems that serve 10,000 to 49,999 persons)	
Submit plan	October 1, 2007
Complete monitoring or study	September 30, 2009
Submit IDSE report	January 1, 2010
Compliance with monitoring requirements	October 1, 2013
Systems that serve 50,000 to 99,999 persons)	
Submit plan	April 1, 2007
Complete monitoring or study	March 31, 2009
Submit IDSE report	July 1, 2009
Compliance with monitoring requirements	October 1, 2012
Systems that serve 100,000 or more persons)	
Submit plan	October 1, 2006
Complete monitoring or study	September 30, 2008
Submit IDSE report	January 1, 2009
Compliance with monitoring requirements	April 1, 2012
(corresponding with Subparts W and Y)	
(total trihalomethanes and haloacetic acids (five))	

Long Term 2 Enhanced Surface Water Treatment Rule (40 CFR 141, subpart W)

Systems that serve fewer than 10,000 persons	
And which monitor for E. coli	
Begin first round of monitoring	October 1, 2008
Begin treatment for Cryptosporidium	October 1, 2014
Begin second round of monitoring	October 1, 2017
And which monitor for cryptosporidium	
Begin first round of monitoring	April 1, 2010
Begin treatment for Cryptosporidium	October 1, 2014
Begin second round of monitoring	April 1, 2019
Systems that serve 10,000 to 49,999 persons	
Begin first round of monitoring	April 1, 2008
Begin treatment for Cryptosporidium	October 1, 2013
Begin second round of monitoring	October 1, 2016

Systems that serve 50,000 to 99,999 persons	
Begin first round of monitoring	April 1, 2007
Begin treatment for Cryptosporidium	October 1, 2012
Begin second round of monitoring	October 1, 2015
Systems that serve 100,000 or more persons	
Begin first round of monitoring	October 1, 2006
Begin treatment for Cryptosporidium	April 1, 2012
Begin second round of monitoring	April 1, 2015
(corresponding with Subpart Z)	
(E. coli, Cryptosporidium, Giardia lamblia, viruses, and turbidity)	
Groundwater Rule (40 CFR 141, subpart S)	December 1, 2009
(corresponding with Subpart S)	
(E. coli, enterococci, and coliphage)	
Revised Total Coliforms Rule (40 CFR 141, Subpart Y)	Effective: April 15, 2013
(corresponding with subpart AA)	Compliance: April 1, 2016
(total coliforms (indicator), E. coli)	
<u>Lead-Free Fixtures Rule (40 CFR 143, subpart B)</u>	<u>Effective: October 1, 2020</u>
<u>(corresponding with Section 611.126)</u>	<u>Compliance: September 1,</u>
<u>(lead in plumbing fixtures)</u>	<u>2023</u>
<u>Lead and Copper Rule Revisions (40 CFR 141, subpart I)</u>	<u>Effective: December 16, 2021</u>
<u>(corresponding with Subpart G)</u>	<u>Compliance: October 16, 2024</u>
<u>(lead and copper (indicator))</u>	

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(Source: Amended at 47 Ill. Reg. _____, effective _____)