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Chester Water Authority

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RE: Summary of Testimony to the Proposed Revised Total Coliform Rule (RTCR)

Public Hearing, November 5, 2015

2015 NOV 10 PM 2: 51

General Comments

1. Chester Water Authority (CWA) is supportive of the Pennsylvania Department of Environmental Protection's (DEP) efforts to increase public health protection by adopting revisions to the Total Coliform Rule (TCR).
2. There are Public Notification (PN) and Consumer Confidence Report (CCR) reporting requirements that must be addressed for subsequent and/or concurrent changes to support the revisions to the TCR. CWA is uncertain if DEP has reviewed and drafted revisions to these requirements.
3. CWA notes that the term "check" is used extensively throughout Chapter 109.301, Chapter 109.409 (and other sections) to refer to "repeat" monitoring and suggest that "check" sample be changed to "repeat" sample to be consistent with EPA's terminology.
4. DEP noted in the Proposed Rulemaking that, "Section 109.701(a)(5)(i)(D) is proposed to be added to clarify that repeat coliform monitoring locations must be included in sample siting plans. This amendment reflects 40 CFR 141.853(a)(1). The TAC noted that identifying specific addresses for check samples is unworkable for some water systems. However, this proposed amendment reflects 40 CFR 141.853(a)(1)." CWA believes that DEP failed to provide the regulatory language in 40 CFR 141.853(a)(1) for transparency and comparison and that DEP also failed to acknowledge that the Federal rule allows flexibility for PWSs to select repeat monitoring locations. Per 40 CFR § 141.853 (a)(5)(i) General Monitoring requirements for all public water systems Sample Siting Plans states, "Systems may propose repeat monitoring locations to the State that the system believes to be representative of a pathway for contamination of the distribution system. A system may elect to specify either alternative fixed locations or criteria for selecting repeat sampling sites on a situational basis in a standard operating procedure (SOP) in its sample siting plan." CWA, therefore, would appreciate the Board's re-consideration of the proposed amendment by DEP based on the full citation from 40 CFR.

Specific Comments

1. § 109.202. State MCLs, MRDLs and treatment technique requirements (Section (c)(4)(i),(ii),(iii))

CWA Response: CWA disagrees with DEP directing a system to conduct an assessment if other situations outside § 109.701(a)(3)(iii) arise for any particular water quality situation. Assessments are designed to be applied for specific response to Total Coliform and *E. coli*. While CWA agrees that DEP may have other water quality concerns where other "investigations" may be warranted, these should not be incorporated here or referred to as "assessments" to prevent confusion.

2. § 109.301. General monitoring requirements – *Monitoring requirements for coliforms* (Section 3)

CWA Response: CWA believes the PN requirement as stated is incorrect and is not required for every single *E. coli* positive sample. If a system foregoes *E. coli* testing on a positive total coliform sample, this does not always result in a violation of the MCL. If, for example, this is the original-routine sample, then the system must collect a set of repeat samples prior to making an MCL determination. CWA agrees that the sample must be counted as *E. coli* positive used to determine MCL compliance and that DEP must be notified of the positive sample result within 1 hour.

3. § 109.301. General monitoring requirements – *Monitoring requirements for coliforms, Frequency* (Section 3(i)(D))

CWA Response: CWA agrees with DEP in allowing PWSs to collect more than the required number of samples for compliance with the TCR as explained in the sample siting plan. However, CWA recommends that PWSs be allowed to collect more samples than required in unusual circumstances, such as following positive total coliform samples, when the PWS believes there is reason to collect more samples to ensure public health protection. This flexibility should be noted in the sample siting plan.

4. § 109.301. General monitoring requirements – *Monitoring requirements for coliforms, Compliance determinations Section* (Section 3(iv))

CWA Response: CWA supports the MCL compliance determinations based on *E. coli* and sub-clauses I-IV of this section. CWA notes that sub-clauses I-IV support CWAs comment "2" above when not every *E. coli* positive result generates an MCL violation requiring PN.

5. § 109.303. Sampling requirements (Section a(2))

CWA Response: CWA agrees with representative TCR sampling locations and collection at regular intervals. However, CWA advocates that sampling plans be flexible such that the plan allows and supports operational/business efficiencies, customer service demands, special projects and other unusual circumstances.

6. § 109.409. Tier 2 public notice – *Categories, Timing and Delivery of notice* (Section a(3))

CWA Response: CWA disagrees with requirement for Tier 2 PNs for failure to report an *E. coli*-positive routine sample. Since the routine *E. coli* positive sample requires repeat sampling, a failure to report the routine positive sample does not pose risk to public health itself. CWA suggests clarification as this should be a Tier 2 reporting violation to be consistent with the Federal RTCR reporting requirements.

7. § 109.701. Reporting and recordkeeping - *Siting plan* (Section a(5))

CWA Response: CWA agrees that PWSs should have written or electronic sample siting plans, yet plans need to be flexible to accommodate for business/operational efficiency, customer service, sampling personnel availability and unusual events or situations etc. However, CWA strongly discourages incorporation of clauses (D) and (G) as they are more stringent than requirements of the Federal RTCR, have no benefit to public health protection, are overly time-consuming and burdensome to PWSs and do not allow for the flexibility needed to assess positive total coliform or *E. coli* results on a case-by-case or situational basis. Please refer to General Comment #4 above.

8. § 109.705. System Evaluations and Assessments (Section b(3),(4))

CWA Response: The Level 1 assessment should be conducted and approved by persons appropriate within or to the PWS (e.g. an engineer or water quality person). The Level 2 assessment does not have to be fully "conducted" by someone meeting the qualifications (certified operator or administrator) as other personnel may assist in the assessment, however, the assessment should be reviewed and approved by this qualified person. CWA recommends that the language be clarified to reflect these comments.

Chester Water Authority

RE: Testimony to the Proposed Revised Total Coliform Rule (RTCR)

Public Hearing, November 5, 2015

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE II. WATER RESOURCES

CHAPTER 109. SAFE DRINKING WATER

Subchapter A. GENERAL PROVISIONS

Dated 10/3/2015

General Comments

1. Chester Water Authority (CWA) is supportive of the Pennsylvania Department of Environmental Protection's (DEP) efforts to increase public health protection by adopting revisions to the Total Coliform Rule (TCR).
2. There are Public Notification (PN) and Consumer Confidence Report (CCR) reporting requirements that must be addressed for subsequent and/or concurrent changes in order to support the revisions to the TCR. CWA is uncertain if DEP has reviewed and drafted revisions to these requirements.
3. CWA notes that the term "check" is used extensively throughout Chapter 109.301, Chapter 109.409 (and other sections) to refer to "repeat" monitoring and suggest that "check" sample be changed to "repeat" sample to be consistent with EPA's terminology. Interchanging the terms "repeat" and "check" imparts confusion for water suppliers and regulators.
4. DEP noted in the Proposed Rulemaking that, "Section 109.701(a)(5)(i)(D) is proposed to be added to clarify that repeat coliform monitoring locations must be included in sample siting plans. This amendment reflects 40 CFR 141.853(a)(1). The TAC noted that identifying specific addresses for check samples is unworkable for some water systems. However, this proposed amendment reflects 40 CFR 141.853(a)(1)." CWA believes that DEP failed to provide the regulatory language in 40 CFR 141.853(a)(1) for transparency and comparison and that DEP also failed to acknowledge that the Federal rule allows flexibility for PWSs to select repeat monitoring locations. Per **40 CFR § 141.853 (a)(5)(i)** General Monitoring requirements for all public water systems Sample Siting Plans states, "*Systems may propose repeat monitoring locations to the State that the system believes to be representative of a pathway for contamination of the distribution system. A system may elect to specify either alternative fixed locations or criteria for selecting repeat sampling sites on a situational basis in a standard*

operating procedure (SOP) in its sample siting plan.” CWA, therefore, would appreciate the Board’s re-consideration of the proposed amendment by DEP based on the full citation from 40 CFR.

Specific Comments

1. **§ 109.202. State MCLs, MRDLs and treatment technique requirements (Section (c)(4)(i),(ii),(iii))**
“(4) Public water systems shall conduct assessments in accordance with § 109.705(b) (relating to system evaluations and assessments) after meeting any of the triggers under subparagraph (i) or (ii). Failure to conduct an assessment or complete a corrective action in accordance with § 109.705(b) is a treatment technique violation requiring 1-hour reporting in accordance with § 109.701(a)(3) and public notification in accordance with § 109.409.
 - (i) A Level 1 assessment is triggered if any of the following conditions occur:*
 - (A) For systems taking 40 or more samples per month under § 109.301(3), the system exceeds 5.0% total coliform-positive samples for the month.*
 - (B) For systems taking fewer than 40 samples per month under § 109.301(3), the system has two or more total coliform-positive samples in the same month.*
 - (C) The system fails to take every required check sample under § 109.301(3) after any single total coliform-positive sample.*
 - (ii) A Level 2 assessment is triggered if any of the following conditions occur:*
 - (A) A system fails to meet the E. coli MCL as specified under subsection (a)(2).*
 - (B) A system triggers a second Level 1 assessment, as defined in subparagraph (i), within a rolling 12-month period, unless the Department has determined a likely reason that the samples that caused the first Level 1 assessment were total coliform-positive and has established that the system has corrected the problem.*
 - (iii) The Department may direct a system to conduct a Level 1 or Level 2 assessment if circumstances exist which may adversely affect drinking water quality including, but not limited to, the situations specified in § 109.701(a)(3)(iii).”*

CWA Response: Under (iii), CWA disagrees with DEP directing a system to conduct an assessment if other situations outside § 109.701(a)(3)(iii) arise for any particular water quality situation. Assessments are designed to be applied for specific response to Total Coliform and *E. coli* and using assessments otherwise could impart confusion among water suppliers and regulators. While CWA agrees that DEP may have other water quality concerns where other “investigations” may be warranted, these should not be incorporated here or referred to as “assessments” to prevent confusion.

2. **§ 109.301. General monitoring requirements – Monitoring requirements for coliforms (Section 3)**
“(3) Monitoring requirements for coliforms. Public water systems shall determine the presence or absence of total coliforms for each routine or check sample; and, the presence or absence of E. coli for a total coliform positive sample in accordance with analytical techniques approved by the Department under § 109.304 (relating to analytical requirements). A system may forego E. coli testing on a total coliform-positive sample if the system assumes that any total coliform-positive sample is also E. coli-

positive. A system which chooses to forego E. coli testing shall, under § 109.701(a)(3), notify the Department within 1 hour after the water system learns of the violation or the situation, and shall provide public notice in accordance with § 109.408 (relating to Tier 1 public notice—categories, timing and delivery of notice).”

CWA Response: The PN requirement as stated is confusing and may not be required for every single *E. coli* positive sample. If a system foregoes *E. coli* testing on a positive total coliform sample, this does not always result in a violation of the MCL. If, for example, this is the original-routine sample, then the system must collect a set of repeat samples prior to making an MCL determination (see §109.301(3)(iv)(A)) relating to compliance determinations. CWA recommends that the language be clarified to say that the sample must be counted as *E. coli* positive and must be used to determine MCL compliance and that DEP must be notified of the positive sample result within 1 hour.

3. § 109.301. General monitoring requirements – Monitoring requirements for coliforms, Frequency (Section 3(i)(D))

“(D) A system may take more than the minimum number of required routine samples only if the samples are collected in accordance with § 109.303(a)(2) and are included in the sample siting plan in accordance with § 109.701(a)(5). These samples shall be included in determining whether an assessment has been triggered under § 109.202(c)(4).

CWA Response: CWA agrees with DEP in allowing PWSs to collect more than the required number of samples for compliance with the TCR as explained in the sample siting plan. However, CWA recommends that PWSs be allowed to collect more samples than required in unusual circumstances, such as following positive total coliform samples, when the PWS believes there is reason to collect more samples to ensure public health protection. This flexibility in the sampling site plan should be noted in the PWS’s sample siting plan.

4. § 109.301. General monitoring requirements – Monitoring requirements for coliforms, Repeat monitoring Section (Section 3(ii)B)

“(B) The system shall collect at least one check sample from the sampling tap where the original total coliform-positive sample was taken, at least one check sample at a tap within five service connections upstream of the original coliform-positive sample and at least one check sample within five service connections downstream of the original sampling site. If a total coliform-positive sample occurs at the end of the distribution system or one service connection away from the end of the distribution system, the water supplier shall collect an additional check sample upstream of the original sample site in lieu of a downstream check sample.”

CWA Response: We concur with DEP for following these EPA revisions in repeat sampling requirements. The current TCR is complicated for smaller systems to determine the appropriate number

of repeat samples required. This change clarifies that every positive total coliform sample requires three repeat samples for all PWSs regardless of size.

However, CWA strongly recommends that DEP follow the EPA's revision (refer to **40 CFR § 141.853 (a)(5)(i)** General Monitoring requirements for all public water systems Sample Siting Plans) by allowing PWSs to develop alternative repeat sampling plans in addition to utilizing the default +/- 5 upstream/downstream requirements. PWSs should be given flexibility to assess the current situation and then to utilize alternative plans or default to +/- 5 upstream and downstream, whichever is appropriate. PWSs can select, under current conditions, the most valid upstream and downstream sample locations to meet the intent of the rule by reviewing variables that impact flow and direction of flow in the system such as valve positions, storage tanks in service or out of service for maintenance, utilizing hydraulic modeling etc. The distribution systems are complex and are not static and the PWS is best able to evaluate the system operation on a real-time basis to select the appropriate repeat sampling locations. Allowing a PWS to better determine the repeat sample locations improves the chances of identifying any on-going contamination and, therefore, better protects public health.

5. **§ 109.301. General monitoring requirements – Monitoring requirements for coliforms, Invalidation of total coliform samples Section (Section 3(iii)(A)(III))**

“(iii) Invalidation of total coliform samples. A total coliform sample invalidated under this paragraph does not count towards meeting the minimum monitoring requirements of this section.

(A) The Department may invalidate a total coliform-positive sample if one of the following applies:

*(III) A total coliform-positive sample result is due to a circumstance or condition which does not reflect water quality in the distribution system. The Department's decision to invalidate a sample shall be based on evidence that the sample result does not reflect water quality in the distribution system. In this case, the system shall still collect all check samples required under subparagraph (ii) to determine compliance with the MCL for *E. coli* as established under § 109.202(a)(2) or whether an assessment has been triggered under § 109.202(c)(4). The decision to invalidate a total coliform-positive sample result and supporting evidence will be documented by the Department, in writing, and approved and signed by the supervisor of the Department official who recommended the decision.”*

CWA Response: Invalidation should be used for both total coliform and *E. coli* sample results when contamination is deemed to come from the faucet, sample tap, the internal plumbing system, etc. This determination should be made following discussion between the PWS and DEP.

6. **§ 109.301. General monitoring requirements – Monitoring requirements for coliforms, Compliance determinations Section (Section 3(iv))**

(iv) Compliance determinations.

*(A) A system is in compliance with the MCL for *E. coli* as specified under §109.202(a)(2) for samples taken under this paragraph unless any of the following conditions occur:*

(I) The system has an E. coli-positive check sample following a total coliform-positive routine sample.

(II) The system has a total coliform-positive check sample following an E. coli-positive routine sample.

(III) The system fails to take all required check samples following an E. coli-positive routine sample.

(IV) The system fails to test for E. coli when any check sample tests positive for total coliform.

(B) A public water system shall determine compliance with the MCL for E. coli in clause (A) for each month in which it is required to monitor for total coliforms.

CWA Response: CWA supports the MCL determination being based on *E. coli* and also on the MCL determination in clause (A) above. CWA notes that sub-clauses I-IV support CWAs response “2” above to § 109.301. General monitoring requirements – *Monitoring requirements for coliforms* (Section 3), when not every *E. coli* positive result generates an MCL violation requiring PN.

7. § 109.303. Sampling requirements (Section a(2))

“(2) Samples for determining compliance with the E. coli MCL under § 109.202(a)(2) (relating to state MCLs, MRDLs and treatment technique requirements) and for determining whether an assessment is triggered under § 109.202(c)(4) shall be taken at regular intervals throughout the monitoring period at sites which are representative of water throughout the distribution system according to a written sample siting plan as specified under § 109.701(a)(5) (relating to reporting and recordkeeping). Representative locations include, but are not limited to, the following:

(i) Dead ends.

(ii) First service connection.

(iii) Finished water storage facilities.

(iv) Interconnections with other public water systems.

(v) Areas of high water age

(vi) Areas with previous coliform detections.”

CWA Response: CWA agrees with TCR sampling locations that are “representative” of water throughout the distribution system. These samples should be collected at regular intervals throughout the monitoring period, however, CWA advocates that sampling plans be flexible such that the plan allows and supports operational/business efficiencies, customer service demands, special projects and other unusual circumstances such as road closures, inclement weather, icy/snow covered road conditions, flooding events and sampling personnel schedules (e.g. vacation, sick and Holiday time; company required training, etc.) Often times, a PWS may only have 1 person designated as the primary sampler or, in cases of smaller PWSs, the sampling may be done by a certified commercial laboratory that may have limited sampling collection personnel with multiple demands competing for time. Sampling plans, therefore, must be sufficiently flexible, to realistically accommodate for planned, unplanned and unscheduled events. CWA also advocates for written or electronic sample siting plans.

8. **§ 109.409. Tier 2 public notice – categories, timing and delivery of notice (a) General violation categories and other situations requiring a Tier 2 public notice (Section a(3))**

“(3) Failure to report an E.coli MCL violation or an E.coli-positive routine or check sample as required under § 109. 701(a)(3)(iv)” and § 109.701. Reporting and recordkeeping – Reporting requirements for public water systems (Section a(3)(iv))

“(3) One-hour reporting requirements. A public water supplier shall report the circumstances to the Department within 1 hour of discovery for the following violations or situations:

(iv) Any sample result is E. coli-positive.”

CWA Response: CWA disagrees with Tier 2 PNs for failure to report an *E.coli*-positive routine sample that does not result in an MCL violation. Since the routine *E. coli* positive sample requires repeat sampling, a failure to report the routine positive sample does not pose risk to public health itself. This should be a Tier 3 Reporting violation, not a Tier 2 violation. CWA suggests that the language be clarified to reflect that this example be a Tier 2 reporting violation to be consistent with the Federal RTCR reporting requirements.

9. **§ 109.701. Reporting and recordkeeping - Siting plan (Section a(5))**

“(5) Siting plan. The water supplier shall submit to the Department a written sample siting plan for routine and repeat coliform sampling as required under § 109.301(3) by (insert effective date of the regulation). A public water system that begins operation after (insert effective date of the regulation) shall submit the sample siting plan prior to serving water to the public.

(i) A sample siting plan shall include at a minimum the following:

(A) A list of sample site locations as specified in § 109.303(a)(2) (relating to sampling requirements) in the distribution system to be used for routine monitoring purposes.

(B) The name of the company or individual collecting the samples.

(C) A sample collection schedule.

(D) Available repeat monitoring locations for each routine monitoring location.

(E) Triggered source water monitoring locations as specified under 109.1303 (relating to triggered monitoring requirements for groundwater sources).

(F) The population served by the system.

(G) A description of the accessibility of sample sites.

(H) The beginning and ending dates of each operating season for seasonal systems.

(ii) A water supplier shall revise and resubmit its sample siting plan within 30 days of notification by the Department of a sample siting plan which fails to meet the criteria in subparagraph (i).”

CWA Response: CWA agrees that PWSs should have written or electronic sample siting plans, yet plans need to be flexible to accommodate for business/operational efficiency, customer service, sampling personnel availability and unusual events or situations etc. However, CWA strongly discourages incorporation of clauses (D) and (G) above as they are more stringent than requirements of the Federal RTCR, have no benefit to public health protection, are overly time-consuming and burdensome to PWSs and do not allow for the flexibility needed to assess positive total coliform or *E. coli* results on a case-by-case or situational basis.

The Federal Rule at **40 CFR § 141.853 (a)(5)(i)** General Monitoring requirements for all public water systems Sample Siting Plans states, “Systems may propose repeat monitoring locations to the State that the system believes to be representative of a pathway for contamination of the distribution system. A system may elect to specify either alternative fixed locations or criteria for selecting repeat sampling sites on a situational basis in a standard operating procedure (SOP) in its sample siting plan.”

For example, CWAs current sample siting plan has 64 routine sampling sites; if CWA must select 2 “fixed” repeat sampling locations for each routine location, then the sample siting plan would contain, at minimum, 192 sampling locations. CWA also notes that simply selecting 2 “fixed” addresses or range of addresses for repeat locations is not sufficient. CWA and other PWSs would need to spend additional time investigating and testing potential sample taps within each premise to find suitable sampling taps to include in the siting plan. In addition, these “fixed” locations may not be reflective of operational flow patterns in the distribution system at the given time when repeat sampling is required. The PWS is better able to select the appropriate repeat sampling locations on a case-by-case basis at the specific point in time to better protect public health and this selection process can be documented in an SOP.

Given that total coliform and *E. coli* positive sample results are not frequently detected under routine conditions, month after month and year after year, it is not appropriate to force all PWSs to exhaust efforts and resources and to absorb the costs of “pre-selecting” repeat monitoring locations that, in actual practice, may never be used or needed. CWA, therefore, recommends that clause (D) not be adopted.

Similarly, clause (G) above is more stringent than the Federal RTCR. Federal RTCR does not require PWSs to identify and document accessibility for routine or repeat monitoring locations in the sample siting plan. Requiring PWSs to pre-determine accessibility of repeat monitoring locations and documenting such in sample siting plans has limited to no value to the PWS. PWSs are accustomed to reviewing system operations and determining accessible repeat monitoring locations on a real-time, as needed basis. CWA recommends that this practice be continued and that clause (G) not be adopted.

10. § 109.705. System Evaluations and Assessments (Section b(3),(4))

“(3) A Level 1 assessment must be conducted by competent personnel qualified to operate and maintain the water system’s facilities.

(4) A Level 2 assessment must be conducted by one or more individuals meeting the following criteria:

(i) Holds a valid certificate issued under Chapter 302 (relating to administration of the water and wastewater operator’s certification program) to operate a water system.

(ii) Maintains certification in the appropriate class and subclassifications as defined in Chapter 302 for the size and treatment technologies for the water system being assessed."

CWA Response: The Level 1 assessment should be conducted and approved by persons appropriate within or to the PWS. This person, for example, could be an engineer or water quality person that may not "operate or maintain" the system per se but may have areas of expertise to complete the assessment. The Level 2 assessment does not have to be fully "conducted" by someone meeting the qualifications as other personnel may assist in the assessment, however, the assessment should be reviewed and approved by this qualified person. CWA recommends that the language be clarified to reflect these comments.

CWA responses to the Board's request for comments on the following:

- "Why alternate repeat monitoring locations should be allowed"

CWA response: As noted in CWA response to #4 above, CWA strongly recommends that DEP follow the EPA's revision (refer to **40 CFR § 141.853 (a)(5)(i)** General Monitoring requirements for all public water systems Sample Siting Plans) by allowing PWSs to develop alternative repeat sampling plans in addition to utilizing the default +/- 5 upstream/downstream requirements. PWSs should be given flexibility to assess the current situation and then to utilize alternative plans or default to +/- 5 upstream and downstream, whichever is appropriate. PWSs can select, under current conditions, the most valid upstream and downstream sample locations to meet the intent of the rule by reviewing variables that impact flow and direction of flow in the system such as valve positions, storage tanks in service or out of service for maintenance, utilizing hydraulic modeling etc. The distribution systems are complex and are not static and the PWS is best able to evaluate the system operation on a real-time basis to select the appropriate repeat sampling locations. Allowing a PWS to better determine the repeat sample locations improves the chances of identifying any on-going contamination and, therefore, better protects public health. CWA asks that the Board be mindful that there is a 24 hour time requirement to perform the repeat sampling. To maintain efficiency and to identify potential pathways to contamination, the process of repeat sampling selection should be in the hands of the PWSs, as that process is now. However, CWA does support EPA's requirement to have an SOP, for how a PWS may determine or select a repeat sampling location, included in the PWS sample siting plan.

- "How a PWS would demonstrate that an alternative repeat monitoring location represents the pathway for contamination that led to the original coliform-positive sample in the distribution system"

CWA response: As noted in CWA response to #4 and as noted above, CWA strongly recommends that PWSs be given flexibility to assess the situation and then utilize alternative plans and/or default to +/- 5 upstream and downstream service connections, whichever is appropriate and is best able to identify any pathway to contamination. Both of these options for repeat sample site selection can be documented in an SOP. PWSs can select, under current conditions, the most valid upstream and downstream sample locations to meet the intent of the rule by reviewing variables that impact flow and direction of flow in the system such as valve positions, storage tanks in service or out of service for maintenance, utilizing hydraulic modeling etc. The distribution systems are complex and are not static and the PWS is best

able to evaluate the system operation on a real-time basis to select the appropriate repeat sampling locations. Allowing a PWS to better determine the repeat sample locations improves the chances of identifying any on-going contamination and, therefore, better protects public health.

- “Whether only fixed alternative repeat monitoring locations should be allowed or if a standard operating procedure for choosing locations may also be allowed and why”

CWA response: Again as noted in CWA response to #4 and as noted above, CWA strongly recommends that PWSs be given flexibility to assess the situation and then utilize alternative plans and/or default to +/- 5 upstream and downstream, whichever is appropriate to select repeat sampling locations. The Federal rule, **40 CFR § 141.853 (a)(5)(i)**, allows for selection of alternate repeat sampling locations via SOP. PWSs can select, under current conditions, the most valid upstream and downstream sample locations to meet the intent of the rule by reviewing variables that impact flow and direction of flow in the system such as valve positions, storage tanks in service or out of service for maintenance, utilizing hydraulic modeling etc. The distribution systems are complex and are not static and the PWS is best able to evaluate the system operation on a real-time basis to select the appropriate repeat sampling locations. Allowing a PWS to better determine the repeat sample locations improves the chances of identifying any on-going contamination and, therefore, better protects public health.

- “Whether alternative repeat monitoring locations must be submitted under the signature of a certified operator”

CWA Response: CWA strongly discourages requiring a certified operator to submit the alternative repeat monitoring locations. A “one size fits all” approach is not appropriate for every situation or every system. In many PWSs, the certified operator(s) may only operate the water treatment plant and may have very limited or no knowledge of the distribution system operation and water quality. Similar to the Level 1 assessment comment as noted in #11 above, CWA recommends that alternate repeat sampling locations be submitted and approved by persons appropriate within or to the PWS. This person, for example, could be a sample collector, distribution person, engineer or water quality person, etc. that may not “operate or maintain” the system per se but may have areas of expertise sufficient to complete the assessment. In many instances, a variety of personnel at a PWS may be involved in selection of the repeat monitoring locations and it is possible that none of them are “certified operators”. PWSs should have flexibility and authority in utilizing whatever resources available, including various personnel, to best determine selection of repeat monitoring locations to ensure public health protection.

- “Whether alternative repeat monitoring locations must be submitted under the seal of a professional engineer”

CWA Response: CWA strongly discourages requiring a professional engineer to submit the alternative repeat monitoring locations. A “one size fits all” approach is not appropriate for every situation or every system. CWA recommends that alternate repeat sampling locations be submitted and approved by persons appropriate within or to the PWS. PWSs should have flexibility and authority in utilizing whatever resources available, including various personnel, to best determine selection of repeat

monitoring locations to ensure public health protection. Requiring a professional engineer to submit alternative repeat sampling locations is not appropriate as not every professional engineer is familiar with distribution hydraulics, operations etc. This requirement would also put unjustified time and financial burdens on PWSs and there may be no benefit to public health by incorporating this.

- “Whether alternate locations should only be allowed for systems serving greater than 9,999 people”

CWA Response: As noted in CWA response to #4 and as noted above, CWA strongly recommends that PWSs of all sizes be given flexibility to assess the situation and then utilize alternative plans and/or default to +/- 5 upstream and downstream service connections, whichever is appropriate and is best able to identify any pathway to contamination. PWSs should have flexibility and authority in utilizing whatever resources available, including various personnel, to best determine selection of repeat monitoring locations to ensure public health protection.