

NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

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CHAPTER *Env-Dw 700 WATER QUALITY: STANDARDS, MONITORING, TREATMENT, COMPLIANCE, AND REPORTING*

Statutory Authority: RSA 485:3

~~~~~ See separate document for Revision Notes ~~~~~

PART *Env-Dw 709 MONITORING FOR MICROBIOLOGICAL CONTAMINANTS*

*Env-Dw 709.01 Applicability.*

(a) The rules in this part shall apply to all public water systems (PWS), including community water systems (CWS) and non-community water systems (NCS), whether transient NCS or non-transient NCS, and whether seasonal or non-seasonal systems.

(b) Subject to (c), each PWS owner shall monitor according to the sampling schedule in effect on January 1, 2015 unless any of the conditions specified in *Env-Dw 709* that trigger additional sampling requirements are met.

(c) Commencing February 1, 2015, the owner of a seasonal system shall begin monthly sampling each month that the system serves water to the public, subject to (d), below.

(d) The owner of a seasonal system where the entire distribution system remains pressurized during the entire period that the system is not serving water to the public shall monitor for total coliforms in accordance with the monitoring requirements for non-seasonal NCS specified in *Env-Dw 709.08* and *Env-Dw 709.09*.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

*Env-Dw 709.02 Location for Collection of Bacterial Samples.*

(a) Subject to (d) and (e), below, a PWS owner shall collect total coliform samples at the sampling points specified in the sampling schedule established pursuant to *Env-Dw 708.01*, which have been selected to be representative of water throughout the distribution system such as a customer's premises or dedicated sampling station.

(b) If the PWS owner wishes to collect total coliform samples at alternate points, the owner shall seek approval of the proposed sampling points as specified in *Env-Dw 708.04*.

(c) If the department determines that the sampling points for total coliforms are not representative of water throughout the distribution system, the PWS owner shall not collect total coliform samples until the department revises the sampling schedule to identify new sampling points.

(d) Repeat total coliform samples required by *Env-Dw 709.15* shall be collected at the locations specified in that section.

(e) The additional routine total coliform samples required by *Env-Dw 709.17* shall be collected at the locations specified in that section.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

*Env-Dw 709.03 Collection of Bacteria Samples.*

(a) The owner of a PWS that serves greater than 4,900 persons shall collect total coliform samples on at least 2 separate occasions at least 5 days apart throughout the sampling month.

(b) Each group of total coliform samples collected pursuant to (a), above, shall contain as close to the same number of samples as possible.

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(c) Subject to (d), below, the owner of a PWS that uses only groundwater not under the direct influence of surface water, as defined in Env-Dw 100, and serves 4,900 persons or fewer may collect all required samples on a single day only if the samples are obtained at different sampling points.

(d) For purposes of (c), above, multiple samples may be taken from a sample site only if the PWS has fewer sampling sites than the number of samples to be collected and at least one sample is collected from each sample site.

(e) The PWS owner shall collect not less than the minimum number of required samples even if the system has had an E. coli MCL violation as described in Env-Dw 702.02 or has exceeded the coliform assessments triggers in Env-Dw 709.22.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.04 General System Evaluation Bacteria Samples. Any general system evaluation total coliform sample collected to investigate potential problems in the distribution system, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement, or repair, shall be used to determine compliance if the sample:

- (a) Is representative of water being supplied to consumers; and
- (b) Is positive for E. coli bacteria.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.05 Frequency of Standard Monitoring for Total Coliforms for CWS.

(a) Subject to (b), below, and Env-Dw 709.06, the minimum number of total coliform samples taken per month by a CWS shall be based on the population served by the CWS, as specified in Table 709-1, below:

Table 709-1: Frequency of Standard Sampling for Community Water Systems

| <u>Population Served</u> |                    | <u>Minimum number of samples per month</u> |
|--------------------------|--------------------|--------------------------------------------|
| <u>Lower Limit</u>       | <u>Upper Limit</u> |                                            |
| 25                       | to 1,000           | 1                                          |
| 1,001                    | to 2,500           | 2                                          |
| 2,501                    | to 3,300           | 3                                          |
| 3,301                    | to 4,100           | 4                                          |
| 4,101                    | to 4,900           | 5                                          |
| 4,901                    | to 5,800           | 6                                          |
| 5,801                    | to 6,700           | 7                                          |
| 6,701                    | to 7,600           | 8                                          |
| 7,601                    | to 8,500           | 9                                          |
| 8,501                    | to 12,900          | 10                                         |
| 12,901                   | to 17,200          | 15                                         |
| 17,201                   | to 21,500          | 20                                         |
| 21,501                   | to 25,000          | 25                                         |
| 25,001                   | to 33,000          | 30                                         |
| 33,001                   | to 41,000          | 40                                         |
| 41,001                   | to 50,000          | 50                                         |
| 50,001                   | to 59,000          | 60                                         |
| 59,001                   | to 70,000          | 70                                         |
| 70,001                   | to 83,000          | 80                                         |
| 83,001                   | to 96,000          | 90                                         |
| 96,001                   | to 130,000         | 100                                        |

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| Population Served |    |             | Minimum number of samples per month |
|-------------------|----|-------------|-------------------------------------|
| Lower Limit       |    | Upper Limit |                                     |
| 130,001           | to | 220,000     | 120                                 |
| 220,001           | to | 320,000     | 150                                 |
| 320,001           | to | 450,000     | 180                                 |
| 450,001           | to | 600,000     | 210                                 |
| 600,001           | to | 780,000     | 240                                 |
| 780,001           | to | 970,000     | 270                                 |
| 970,001           | to | 1,230,000   | 300                                 |
| 1,230,001         | to | 1,520,000   | 330                                 |
| 1,520,001         | to | 1,850,000   | 360                                 |

(b) The owner of a CWS for which the population varies seasonally, such as a community having a large influx of summer residents or a college community, shall average the daily population over each sampling period to determine the number of samples required in each sampling period.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.06 Reduction in Total Coliform Monitoring for CWS Serving Fewer Than 1,000 Persons.

(a) The owner of a CWS serving 25 to 1,000 persons may submit to the department a written request for a reduction in monitoring frequency from monthly to not less than one sample per calendar quarter.

(b) A request submitted pursuant to (a), above, shall include the following information:

- (1) The name of the CWS;
- (2) The PWS identifier for the CWS; and
- (3) The rationale for the reduction in monitoring, based on the criteria listed in (c), below.

(c) The department shall approve a request submitted pursuant to this section if it determines that:

- (1) The CWS has not been required to issue a boil order in accordance with Env-Dw 709.19 within the preceding 12 months;
- (2) The CWS has a clean compliance history as defined in Env-Dw 701.05;
- (3) The CWS's most recent sanitary survey confirms that the system:
  - a. Is supplied solely by one or more protected water sources;
  - b. Is free of sanitary defects and significant deficiencies;
  - c. Meets applicable construction standards; and
  - d. If applicable, has an approved corrective action plan and schedule pursuant to Env-Dw 720 and is in compliance with the plan and schedule;
- (4) The CWS has not had an on-line inactivation or disinfection process in operation in the previous 12 months; and
- (5) The CWS is in compliance with RSA 485:11 relative to backflow prevention devices.

(d) The department shall notify the CWS owner in writing of its decision on the request to reduce the frequency of bacteria monitoring. If the request is denied, the notice shall specify the reason(s) for the denial.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15; ss by #12420, eff 11-18-17

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Env-Dw 709.07 Return to Standard Monitoring Frequency for CWS Serving 1,000 Persons or Fewer.

(a) A CWS for which a reduction in monitoring for total coliforms has been approved pursuant to Env-Dw 709.06 shall return to standard monthly monitoring by taking the number of samples for total coliforms specified in Env-Dw 709.05(a) the month following the event if:

- (1) The CWS:
  - a. Has an E. coli MCL violation;
  - b. Triggers a level II assessment or 2 level I assessments in a rolling 12-month period;
  - c. Has a treatment technique violation as specified in Env-Dw 709.23;
  - d. Has 2 bacteria monitoring violations in a rolling 12-month period;
  - e. Is required to issue a boil order in accordance with Env-Dw 709.19;
  - f. Is without a certified operator for the system for more than 30 consecutive days;
  - g. Adds a new source; or
  - h. Has a sanitary defect;
- (2) The department determines that a groundwater source for the CWS is under the direct influence of surface water or otherwise no longer qualifies as a protected water source, for example due to activities or circumstances that makes the source vulnerable to pathogenic contamination; or
- (3) The physical configuration of the CWS warrants additional monitoring to accurately determine water quality.

(b) If the department determines that any of the criteria listed in (a), above, has been met, the department shall notify the CWS owner in writing of its determination and that Env-Dw 709.07(a) requires the system to return to the monitoring frequency for total coliforms specified in Env-Dw 709.05(a).

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15; ss by #12420, eff 11-18-17

Env-Dw 709.08 Frequency of Standard Monitoring For Total Coliforms for Non-Seasonal NCS and Certain Seasonal Systems.

(a) Subject to (b) and (c), below, and Env-Dw 709.09, the owner of a non-community water system (NCS) that is served solely by one or more protected water sources and that either is not a seasonal system or is a seasonal system that is described in Env-Dw 709.01(d) shall monitor for bacteria based on the number of persons served, as follows:

- (1) If the NCS serves 1,000 persons or fewer per month, the owner shall collect one sample during each calendar quarter that the NCS provides water to the public; and
- (2) If the NCS serves more than 1,000 persons during any month, the owner shall take the number of samples for total coliforms per month as required for a like-sized community water system, as specified in Env-Dw 709.05(a).

(b) If the number of persons served by an NCS is event-driven, such as a racetrack, fairgrounds, or concert venue, the owner shall take the number of samples for total coliforms as a like-sized CWS as specified in Env-Dw 709.05(a), using the average daily population calculated over a one-month period.

(c) An NCS supplied by surface water or groundwater under the direct influence of surface water shall monitor for coliform bacteria monthly.

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Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.09 Return to Standard Monitoring Frequency for NCS Serving 1,000 Persons or Fewer.

(a) The owner of an NCS monitoring bacteria at the frequency established by Env-Dw 709.01(b) or at a reduced frequency under Env-Dw 709.12 shall return to the standard bacteria monitoring frequency if:

- (1) The NCS:
  - a. Has a bacteria monitoring violation;
  - b. Has been required to issue a boil order in accordance with Env-Dw 709.19;
  - c. Has installed a continuously-operating bacterial disinfection/ inactivation treatment process within 6 months of incurring a bacterial MCL violation;
  - d. Adds a new source; or
  - e. Has a sanitary defect;
- (2) The physical configuration of the NCS warrants additional monitoring to accurately determine water quality; or
- (3) The department learns of an activity or circumstance that makes the source vulnerable to pathogenic contamination.

(b) If the department determines that any of the criteria listed in (a), above, has been met, the department shall notify the NCS owner in writing of its determination and that Env-Dw 709.09(a) requires the system to return to monitoring for total coliforms at the standard quarterly frequency.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15; ss by #12420, eff 11-18-17

Env-Dw 709.10 Increase to Monthly Monitoring for NCS Serving 1,000 Persons or Fewer.

(a) The owner of an NCS that serves 1,000 persons or fewer that is monitoring for total coliforms less frequently than monthly pursuant to Env-Dw 709.08 or Env-Dw 709.12 shall begin monthly bacteria monitoring if the NCS:

- (1) Has an E. coli MCL violation;
- (2) Experiences one level II assessment trigger or 2 level I assessments triggers in a rolling 12-month period;
- (3) Has a treatment technique violation as specified in Env-Dw 709.23 or Env-Dw 506.07;
- (4) Has 2 bacteria monitoring violations in a rolling 12-month period; or
- (5) Has one bacteria monitoring violation and experiences one level I assessment trigger in a rolling 12-month period.

(b) If the department determines that any of the criteria listed in (a), above, has been met, the department shall notify the NCS owner in writing of its determination and that Env-Dw 709.10(a) requires the system to begin monitoring for total coliforms at the increased frequency.

(c) The owner may request the department to allow the system to return to quarterly monitoring for total coliforms by submitting a written request that includes the following:

- (1) The name of the NCS;

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- (2) The PWS identifier of the NCS; and
- (3) The rationale for the reduction in monitoring, based on the criteria in (d), below.

(d) The department shall authorize the system to return to quarterly sampling for total coliforms if the NCS has not been required to issue a boil order in accordance with Env-Dw 709.19 in the preceding 12 months, has a clean compliance history, and either:

- (1) A level II assessment has been conducted within the preceding 12 months by an individual who meets the qualifications specified in Env-Dw 720.12 and all identified sanitary defects have been corrected; or
- (2) The department has conducted a sanitary survey within the preceding 12 months and confirmed that the NCS:
  - a. Is supplied solely by one or more protected water sources; and
  - b. Is free of sanitary defects and significant deficiencies.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.11 Standard Monitoring for Total Coliforms for Seasonal Systems. The owner of a seasonal system that is not described in Env-Dw 709.01(d) shall monitor for total coliforms each month the system is in operation based on the number of persons served, as follows:

- (a) If the seasonal system serves 1,000 persons or fewer per month, the owner shall collect one total coliform sample each month that the system provides water to the public; and
- (b) If the seasonal system serves more than 1,000 persons during any month, the owner shall take the number of total coliform samples as a like-sized CWS as specified in Env-Dw 709.05(a).

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.12 Reduction in Total Coliform Monitoring for Seasonal Systems Serving 1,000 Persons or Fewer.

(a) The owner of a seasonal system that is not described in Env-Dw 709.01(d) that serves 1,000 persons or fewer may request the department to reduce the monthly monitoring frequency to not less than one sample per calendar quarter.

(b) To request the reduction allowed by (a), above, the owner of the system shall submit the following information in writing to the department:

- (1) The name of the seasonal system;
- (2) The PWS identifier of the seasonal system; and
- (3) The rationale for the reduction in monitoring frequency, based on the criteria in (c), below.

(c) The department shall approve the request if the department determines that:

- (1) The seasonal system has not been required to issue a boil order in accordance with Env-Dw 709.19 in the preceding 12 months and has a clean compliance history; and

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(2) A level II assessment conducted by an individual who meets the qualifications in Env-Dw 720.09 during current operation season, confirms that the seasonal system is:

- a. Supplied solely by one or more protected water sources; and
- b. Free of sanitary defects.

(d) The department shall notify the owner of the seasonal system in writing of its decision on the request to reduce the number of total coliforms samples taken. If the request is denied, the notice shall specify the reason(s) for the denial.

(e) If the request is approved, the department shall designate that monitoring be conducted during periods of highest demand or highest vulnerability, based on review of the system configuration and flow rates.

(f) Any seasonal system that has been authorized to monitor quarterly shall be returned to standard monthly monitoring if the conditions in Env-Dw 709.09 are met.

(g) The approval for reduced monitoring frequency shall expire at the end of the seasonal system's operating season, at which time the system shall return to standard monitoring for total coliform per Env-Dw 709.11.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.13 Sampling for Total Coliforms When Turbidity Exceeds One NTU.

(a) The owner of a PWS using surface water or groundwater under the direct influence of surface water that is not subject to the filtration requirements in Env-Dw 716 shall collect at least one total coliform sample at or before the first service connection each day the turbidity level of the source water, measured as specified in 40 CFR 141.22, exceeds one NTU.

(b) The sample shall be analyzed for turbidity and for the presence of total coliforms.

(c) When one or more turbidity measurements in any day exceed one NTU, the system owner shall collect a total coliform sample within 24 hours of the first NTU exceedance, unless the department determines that the system cannot have the sample analyzed within 30 hours of collection.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.14 Adjusting Total Coliform Sampling Frequency After a Sanitary Survey.

(a) The department shall review the results of each sanitary survey undertaken pursuant to Env-Dw 720 with respect to bacterial contamination to determine whether:

- (1) The wellhead is physically inaccessible;
- (2) The wellhead is subject to flooding due to conditions that cannot be corrected within the time limit specified in Env-Dw 720; or
- (3) Any other condition exists that would increase the potential for bacterial contamination.

(b) If the PWS does not already take total coliform samples each month and the department determines that any of the conditions listed in (a), above, is present, the department shall require the PWS to take total coliform samples monthly.

(c) In conducting a sanitary survey of a system using groundwater, information on sources of contamination within the delineated wellhead protection area that was collected in the course of developing

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and implementing a wellhead protection program for the groundwater source shall be considered instead of collecting new information, if the information was collected since the last time the system was subject to a sanitary survey.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15 (from Env-Dw 709.13)

Env-Dw 709.15 Repeat Monitoring.

(a) Subject to (b) and (c), below, if a routine sample is positive for total coliforms the PWS owner shall collect a set of not less than 3 repeat samples as specified in (d) and (f), below, for each routine sample that was positive for total coliforms within 24 hours after being notified of the positive result.

(b) If one or more of the samples in a set of repeat samples is positive for total coliforms, the PWS owner shall continue to collect additional sets of 3 samples every 24 hours until either:

- (1) Total coliforms are not detected in any sample in a set of 3 repeat samples; or
- (2) The coliform treatment technique trigger specified in Env-Dw 709.22 has been exceeded.

(c) The department shall extend the 24-hour limit if the department determines that the PWS owner cannot collect the repeat samples within 24 hours or when the samples cannot be analyzed within 30 hours of being collected. In determining the amount of the time extension, the department shall evaluate the need to protect public health against the owner's inability to collect the samples within the 24-hour limit.

(d) Subject to Env-Dw 709.16, the PWS owner shall collect one repeat sample from each of the following locations:

- (1) The sampling tap where the original sample that was positive for total coliforms was collected;
- (2) A tap within 5 service connections upstream of the original sampling site; and
- (3) A tap within 5 service connections downstream of the original sampling site.

(e) The PWS owner shall collect a source sample to meet the triggered monitoring requirements specified in Env-Dw 717, if applicable.

(f) The PWS owner shall collect all samples in a set of repeat samples on the same day.

(g) Except as provided in Env-Dw 709.17, the department shall not waive the requirement for a system owner to collect repeat samples as specified in (a) through (f), above.

Source. (See Revision Note #1) #9700, eff 5-1-10 ss by #10771, eff 2-1-15 (from Env-Dw 709.10)

Env-Dw 709.16 Alternate Plan for Repeat Monitoring Locations.

(a) The owner of a PWS who is required to take repeat samples who wishes to establish alternative sampling locations believed to be more representative of a likely pathway of contamination shall submit a proposed plan in writing to the department for approval. Submission of a proposed plan shall not extend the time limit for taking the samples established in Env-Dw 709.15(a) or (b).

(b) A proposed plan submitted under (a), above, shall include:

- (1) The system's name and PWS identifier;
- (2) The name, daytime telephone number, and, if available, e-mail address for the system's representative who can be contacted by the department regarding the request;

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- (3) If the owner is proposing alternative fixed locations, the specific locations proposed; and
  - (4) If the owner is proposing situation-based sampling, a proposed standard operating procedure (SOP) for determining the location where the repeat samples will be taken to verify and determine the extent of potential contamination of the distribution system area based on the specific situation.
- (c) The department shall respond to the proposed plan in writing. If the plan is not approved, the department's response shall specify the reason(s) why.
- (d) The department shall approve the proposed plan if the department determines that the proposed alternative locations or SOP will result in samples that are more likely to verify and determine the extent of potential contamination of the distribution system area based on specific situations than the existing locations or SOP, as applicable.
- (e) If the department determines that the proposed alternative locations or SOP would be acceptable with modifications, the department shall inform the owner of such modifications. If the department makes modifications, the owner shall either implement the plan as modified or take samples in the location(s) specified in Env-Dw 709.15.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 709.17 Additional Routine Sampling Requirements.

- (a) Subject to (c) through (f), below, if a PWS owner who is required to collect samples on a quarterly or semi-annual schedule has one or more total coliform-positive samples and the department does not invalidate the sample result(s) under Env-Dw 709.18, the owner shall collect at least 3 additional total coliform routine samples at sites that are representative of water throughout the distribution system, including all of the sample site(s) listed in the sampling schedule, during the next month the PWS provides water to the public.
- (b) The additional routine samples required by (a), above, shall not be considered for purposes of the triggered monitoring requirements specified in Env-Dw 717.
- (c) The department shall waive the requirement to collect 3 additional routine samples the next month the PWS provides water to the public if the department:
- (1) Performs a site visit before the end of the next month the PWS provides water to the public to determine whether additional monitoring or corrective action is needed or otherwise determines why the sample was positive for total coliforms; and
  - (2) Establishes that the PWS has corrected the problem or will correct the problem before the end of the next month the PWS provides water to the public.
- (d) Once a determination is made to waive the requirement to collect the 3 additional routine samples, the department shall:
- (1) Document the decision in writing, have it approved and signed by the director of the department's division of water, or designee, and make this document available to EPA and the public; and
  - (2) Describe the specific cause(s) of the positive total coliforms sample result(s) and what action(s) the PWS owner has taken and/or will take to correct the problem.
- (e) As a condition of receiving a waiver of the 3 additional routine sample monitoring requirement, the PWS owner shall:

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(1) Not seek a waiver of the requirement to collect 3 additional routine samples the next month that the PWS provides water to the public solely on the grounds that all repeat samples are negative for total coliforms; and

(2) Continue to take at least one routine sample before the end of the next month the PWS provides water to the public and use it to determine compliance as specified in Env-Dw 702, unless the department has determined that the PWS owner has corrected the contamination problem before the set of repeat samples required by Env-Dw 709.15 was collected, and all repeat samples are negative for total coliforms.

(f) Results of all routine and repeat samples not invalidated by the department shall be included in determining compliance as specified in Env-Dw 702.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15 (from Env-Dw 709.11)

Env-Dw 709.18 Invalidation of Total Coliform Samples.

(a) A sample result that is positive for total coliforms or E. coli that is invalidated under this section shall not be used to meet the minimum monitoring requirements of this part.

(b) The department shall invalidate a sample result that is positive for E. coli only if the laboratory establishes that improper sample analysis caused the positive result.

(c) Subject to (d), below, the department shall invalidate a sample result that is positive for total coliforms only if:

(1) The laboratory establishes that improper sample analysis caused the positive result;

(2) The department, on the basis of the results of repeat samples collected as required by Env-Dw 709.15, and source water samples collected per Env-Dw 717, if required, determines that the positive sample resulted from a domestic or other non-distribution system plumbing problem, provided that all repeat samples collected at the same tap as the original positive sample are also positive for total coliforms, and all other repeat and source water samples are negative for total coliforms; or

(3) The department has substantial grounds to believe that a positive total coliform result is due to a circumstance or condition that does not reflect water quality in the distribution system, provided the PWS owner collects all repeat samples required under Env-Dw 710.15 and uses them to determine whether a treatment trigger as specified in Env-Dw 709.22 has been exceeded.

(d) The department shall not invalidate a total coliform-positive sample result on the basis of repeat samples if:

(1) All of the repeat samples are negative for total coliforms;

(2) Any source water sample collected pursuant to Env-Dw 717 is total coliform positive, unless the system provides continuous disinfection; or

(3) The PWS has only one service connection.

(e) If a sample is invalidated for the reason specified in (c)(1), above, the PWS owner shall collect another sample from the same sampling point as the original sample within the same monitoring period after being notified of the sample invalidation.

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(f) If the department invalidates a total coliform sample result for the reason specified in (c)(3), above, then:

- (1) The department shall document the rationale for the decision in writing and have the document approved and signed by the director of the department's division of water, or designee;
- (2) The written documentation shall state the specific cause of the positive sample, and what action(s) the PWS owner has taken or will take to correct the problem; and
- (3) The department shall make the document available to the EPA and the public.

(g) A laboratory shall invalidate a total coliform sample result where total coliforms are not detected if the sample:

- (1) Produces turbid culture in the absence of gas production using an analytical method where gas formation is examined, such as the multiple-tube fermentation technique;
- (2) Produces turbid culture in the absence of an acid reaction in the presence-absence coliform test; or
- (3) Exhibits confluent growth or produces colonies too numerous to count with an analytical method using a membrane filter.

(h) If a sample is invalidated for a reason specified in (g), above, the PWS owner shall:

- (1) Collect another sample from the same sampling point as the original sample within 24 hours of being notified of the sample invalidation;
- (2) Have the sample analyzed for the presence of total coliforms; and
- (3) Continue to resample within 24 hours and have the samples analyzed until a valid result is obtained.

(i) The department shall extend the 24-hour limit established in (h), above, if the PWS owner is unable to collect the sample within 24 hours for reasons that are beyond the owner's control.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15 (from Env-Dw 709.12)

Env-Dw 709.19 Follow-up Testing for E. coli; Boil Orders.

(a) If any sample is positive for total coliforms, the PWS owner shall analyze, or request the laboratory to analyze, the total coliform-positive culture medium for E. coli.

(b) If E. coli are present or the E. coli MCL is exceeded per Env-Dw 702.02(b), the PWS owner shall:

- (1) Issue a boil order advising all consumers that the water should be vigorously boiled for not less than 2 minutes before human consumption; and
- (2) Notify the department by the end of the work day in which the PWS owner is notified of the test result, unless the PWS owner is notified of the result after the department office is closed, in which case the PWS owner shall notify the department before noon on the next business day.

(c) Boil order language shall:

- (1) Clearly explain the need to boil water vigorously for a minimum of 2 minutes prior to using the water for any purpose associated with human or animal consumption, which includes but is not

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limited to drinking, brushing teeth, washing vegetables, food preparation, dishwashing, making infant formula, or making ice;

(2) Provide the name, title, and telephone number of the PWS contact who can address any questions or concerns; and

(3) State that further notification will be issued when the boil order has been lifted.

(d) Notification to PWS consumers of the boil order shall be in accordance with the public notification requirements for acute violations as specified in Env-Dw 800.

(e) For all PWS, the PWS owner also shall post the boil order in a conspicuous place in areas frequented by the public, which shall include electronic postings such as on the home page of the internet site for the owner or PWS, if the owner or PWS has an internet site.

(f) The PWS owner shall not lift the boil order unless:

(1) A minimum of 2 consecutive sets of samples, collected at least 24 hours apart, show an absence of total coliforms and E. coli, where a set of samples consists of the greater of 3 samples or the number of routine samples required by Env-Dw 709.05, to a maximum of 10 samples, at sampling points identified in consultation with the department;

(2) The department is satisfied that the PWS owner has undertaken all reasonable efforts to identify and correct the source of contamination, by conducting an inspection equivalent to a level II assessment and correcting all sanitary defects; and

(3) The department notifies the PWS owner that the boil order may be lifted.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15 (from Env-Dw 709.14)

Env-Dw 709.20 Relief from Boil Order Requirements.

(a) If E. coli are present only in specific, hydraulically-isolated segments of a PWS service area, a PWS owner may submit a written request to the department to approve a boil order that is limited to customers in the service areas that are directly affected.

(b) The department shall approve a request submitted pursuant to (a), above, if it agrees with the PWS owner's assessment that the affected area is hydraulically isolated.

(c) The owner of a PWS may submit a written request to the department to waive the requirement to issue a boil order if the PWS owner:

(1) Has submitted a minimum of 3 routine total coliform samples per month for bacteria analysis;

(2) Was notified that only one sample in the sampling set shows the presence of E. coli and all other samples in the set show an absence of total coliforms;

(3) Concludes, based on an inspection performed by the system's primary certified operator immediately after being notified of the detection, that there are no apparent causes for the detection of E. coli;

(4) If applicable, has provided continuous treatment of all active water sources by addition of a chemical disinfectant during the 30 days prior to the samples that tested positive and has continuously maintained detectable disinfectant residuals at all times and locations for at least the prior 6 months, as verified by monitoring performed under Env-Dw 715; and

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- (5) Submits the written request to waive the boil order requirement within 4 hours of receiving notice from the department that a boil order is required.
- (d) The department shall waive the requirement to issue a boil order if it determines that all of the requirements specified in (c), above, have been met, subject to the following conditions:
- (1) The PWS owner shall:
    - a. Take repeat samples as specified in Env-Dw 709.15 within 6 hours of being notified of the positive result; and
    - b. Submit the sample results showing the absence of total coliforms and E. coli to the department within 24 hours of taking the samples; and
  - (2) The department shall inspect the PWS within 24 hours of initial notification, focusing on the effectiveness of the disinfection process and the circumstances of the samples that initially indicated the presence of E. coli.
  - (e) The department shall require the PWS to issue a boil order within 12 hours of notification if the system fails to comply with the conditions specified in (d)(1), above, or the department's inspection pursuant to (d)(2), above, identifies a possible cause of the initial indication of fecal coliforms or E. coli.

Source. #10771, eff 2-1-15 (from Env-Dw 709.15)

### Env-Dw 709.21 Sample Volume and Collection Protocol.

- (a) A standard sample volume of 100 ml shall be used for bacteria analysis, regardless of the analytical method used.
- (b) The time from sample collection to initiation of test medium incubation shall not exceed 30 hours.
- (c) Bacteria samples shall be analyzed for the presence or absence of total coliforms and E. coli.
- (d) Bacteria samples may be analyzed for total coliform density.
- (e) Unless a PWS disinfects on a regular and continuous basis, chlorine or other disinfectants shall not be added to the PWS within one week prior to the time when bacterial test samples are scheduled to be collected. If disinfection is necessary to protect public health within one week of a bacterial test, such treatment shall be described on the sample identification form. Failure to report disinfection occurring within one week on the sample information form shall be considered misrepresentation of the sample.

Source. #10771, eff 2-1-15 (from Env-Dw 709.16)

### Env-Dw 709.22 Coliform Assessment Triggers and Required Actions.

- (a) A PWS owner shall conduct an assessment in accordance with Env-Dw 720.07 if an assessment is triggered as specified in (b) or (c), below.
- (b) The level I assessment shall be triggered if:
  - (1) For a system collecting fewer than 40 samples per month, the system has 2 or more total coliform-positive samples in the same month;
  - (2) For a system collecting 40 or more samples per month, more than 5.0% of the samples collected during a month are total coliform-positive; or
  - (3) The system fails to take every required repeat sample after any single total coliform-positive sample result.

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(c) The level II assessment shall be triggered if:

- (1) An E. coli MCL violation as specified in Env-Dw 702.02 occurs; or
- (2) A second level I assessment is triggered within 12 months of a prior level I or level II assessment, unless the department has:
  - a. Identified a likely reason that the samples that caused the first level I treatment technique trigger were total coliform-positive; and
  - b. Determined that the owner has corrected the problem.

Source. #10771, eff 2-1-15

Env-Dw 709.23 Bacteria Violations.

(a) An E. coli MCL violation shall exist if:

- (1) Any routine sample tests positive for total coliforms and is followed by any repeat sample that tests positive for E. coli;
- (2) Any routine sample tests positive for E. coli and any of the repeat samples test positive for total coliforms;
- (3) The owner fails to collect all required repeat samples following an E. coli-positive routine sample; or
- (4) The owner fails to test for E. coli when any repeat sample tests positive for total coliforms.

(b) A treatment technique violation shall exist when a system exceeds a trigger specified in Env-Dw 709.22 and the owner fails to conduct the required assessment or corrective action within the time specified in Env-Dw 720.

(c) A monitoring violation shall exist if the owner:

- (1) Fails to collect every required routine or additional routine sample in a compliance period; or
- (2) Fails to analyze for E. coli following a routine total coliform-positive result.

(d) A reporting violation shall exist if the owner:

- (1) Fails to submit a monitoring report or completed assessment form after the system properly conducts monitoring or assessment within the time period specified; or
- (2) Fails to notify the department of an E. coli-positive sample required by Env-Dw 719 within the time period specified.

Source. #10771, eff 2-1-15 (from Env-Dw 709.18)

Env-Dw 709.24 Reporting and Notification of Violations.

(a) The owner of a PWS at which the MCL specified in Env-Dw 702 for E. coli is exceeded shall:

- (1) Report the violation to the department as soon as possible by telephone or email within 24 hours of receiving the results; and
- (2) Notify the public in accordance with Env-Dw 800.

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- (b) A PWS owner who has a total coliform monitoring violation as specified in Env-Dw 709.23 shall:
- (1) Report the monitoring violation to the department by telephone, email, or first class mail within 10 days after the system discovers the violation; and
  - (2) Notify the public in accordance with Env-Dw 800.
- (c) A PWS owner who has a treatment technique violation as specified in Env-Dw 709.23 shall:
- (1) Report the treatment technique violation to the department by telephone or email as soon as the owner learns of the violation but no later than the end of the next business day; and
  - (2) Notify the public in accordance with Env-Dw 800.
- (d) A PWS owner who has a reporting violation as specified in Env-Dw 709.23 shall:
- (1) Report the reporting violation to the department by telephone or email as soon as the owner learns of the violation; and
  - (2) Notify the public in accordance with Env-Dw 800.

Source. #10771, eff 2-1-15

Env-Dw 709.25 Recordkeeping. If the department approves an extension of the 24 hour limit to take repeat samples per Env-Dw 709.15(c), the owner of the system shall maintain a record of the approval for at least 5 years from the date of the extension.

### PART Env-Dw 710 MONITORING FOR RADIONUCLIDES

Env-Dw 710.01 Purpose. The purpose of this part is to establish procedures and criteria for the monitoring of radionuclides in drinking water.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 710.02 Applicability.

(a) The requirements of this part other than Env-Dw 710.05(c) shall apply to community water systems (CWS).

(b) The requirements specified in Env-Dw 710.05(c) shall apply to non-transient non-community water systems.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 710.03 Definitions.

(a) “Alpha particle” means a positively charged atomic particle consisting of 2 neutrons and 2 protons.

(b) “Analytical gross alpha” means total gross alpha activity as measured by the EPA approved methodologies, as specified in 40 CFR 141.25, and includes, but is not be limited to, alpha particles from radium-226, uranium, thorium, and polonium.

(c) “Beta particle” means an electron emitted from the nucleus of a radionuclide.

(d) “Compliance gross alpha” means the analytical gross alpha activity minus the uranium activity.

(e) “Radionuclides” means alpha particles, beta particles, or both.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 710.04 Frequency and Sample Location for Radionuclides.

(a) The owner of a CWS shall collect a minimum of one water sample at each sampling point specified in the sampling schedule established pursuant to Env-Dw 708.01, at the frequency specified in the sampling schedule.

(b) The CWS owner shall collect each sample at the same sampling point unless the owner requests, and the department approves, an alternative sampling point pursuant to Env-Dw 708.04.

(c) If the CWS draws water from more than one source and the sources are combined before distribution, the CWS owner shall sample the blended water, provided it meets the criteria established in Env-Dw 708.05.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 710.05 Radionuclide Monitoring Requirements for New Systems or Sources.

(a) The owner of a new CWS or an existing CWS using a new source of supply shall collect and analyze:

(1) One sample for radon prior to using water from the new source; and

(2) Quarterly samples for compliance gross alpha, combined radium-226 and radium-228, and uranium as specified in the schedule established pursuant to Env-Dw 708.

(b) Initial monitoring shall:

(1) Begin within the first quarter that the new system or source first provides water to the system; and

(2) Be performed in accordance with Env-Dw 710.06.

(c) The owner of a new non-transient, non-community water system or an existing non-transient, non-community water system using a new source of supply shall collect and analyze one sample for compliance gross alpha, combined radium-226 and radium-228, and uranium prior to using water from the new source.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 710.06 Initial Monitoring for Radionuclides.

(a) A CWS owner shall collect 4 consecutive quarterly samples for compliance gross alpha, combined radium-226 and radium-228, and uranium at all sampling points identified in the sampling schedule established pursuant to Env-Dw 708.01.

(b) The samples required by (a), above, shall be taken in the quarters designated in the sampling schedule established pursuant to Env-Dw 708.01 during each compliance period.

(c) If the results of the samples from the first 2 quarters are below the detection limits as specified in Env-Dw 710.12(d), the CWS owner may submit a written request to the department for the monitoring frequency to be reduced.

(d) A written request submitted pursuant to (c), above, shall contain the following:

(1) The name of the CWS;

(2) The PWS identifier for the CWS; and

(3) A summary of the historical radionuclide data from the system and nearby systems, when available.

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(e) Upon determination by the department that the results are all below the detection limits, as listed in Table 710-2, the final 2 quarters of the initial monitoring shall be dismissed and the monitoring frequency shall be as specified in Env-Dw 710.08.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 710.07 Increased Monitoring for Radionuclides. If the running annual average of the initial monitoring results for radionuclides at any sampling point is above the applicable MCL, the CWS owner shall collect and analyze quarterly samples at that sampling point.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 710.08 Reduced Monitoring for Radionuclides.

(a) The monitoring frequency for radionuclides shall be based on the average of the results of the initial monitoring required pursuant to Env-Dw 710.06, as specified in Table 710-1 below:

Table 710-1: Monitoring Frequency Based on Radionuclide Concentrations

| <b>Compliance Gross Alpha (pCi/L)</b> |                  |
|---------------------------------------|------------------|
| <b>Average Monitoring Result</b>      | <b>Frequency</b> |
| 13.5 to 15                            | Yearly           |
| 7.6 to 13.4                           | Every 3 years    |
| 3 to 7.5                              | Every 6 years    |
| less than 3                           | Every 9 years    |

| <b>Radium 226 plus Radium-228 (pCi/L)</b> |                  |
|-------------------------------------------|------------------|
| <b>Average Monitoring Result</b>          | <b>Frequency</b> |
| 4.5 to 5                                  | Yearly           |
| 2.6 to 4.4                                | Every 3 years    |
| 1.0 to 2.5                                | Every 6 years    |
| less than 1.0                             | Every 9 years    |

| <b>Uranium (µg/L)</b>            |                  |
|----------------------------------|------------------|
| <b>Average Monitoring Result</b> | <b>Frequency</b> |
| 27 to 30                         | Yearly           |
| 15.5 to 26.5                     | Every 3 years    |
| 1 to 15.4                        | Every 6 years    |
| less than 1                      | Every 9 years    |

(b) Subsequent sample results shall be used to establish future sampling schedules using the frequencies in Table 710-1.

(c) Based on review of the submitted results, the department shall modify the system's schedule in accordance with Table 710-1 and notify the CWS owner in writing of the new monitoring requirements.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 710.09 Monitoring and Compliance Requirements for Beta Particle and Photon Radioactivity for Vulnerable Systems. To determine compliance with the MCLs in Env-Dw 703.03 for beta particle and photon radioactivity, the CWS owner shall comply with 40 CFR 141.26(b).

Source. (See Revision Note #1) #9700, eff 5-1-10

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Env-Dw 710.10 Compliance Determinations for Radionuclides.

- (a) The department shall determine compliance with Env-Dw 703 based on the analytical results obtained at each sampling point.
- (b) Subject to (k) below, for a CWS at which the required monitoring is annual or less frequently, if the result of a sample from one sampling point exceeds an MCL, the CWS owner shall collect a confirmation sample within 14 days.
- (c) The confirmation sample shall:
- (1) Be a new sample collected under the same contributing conditions and at the same sampling point as the original sample; and
  - (2) Be analyzed within 45 days of collection.
- (d) The results of the confirmation sample shall be averaged with the initial sample results and the average shall be used to determine compliance.
- (e) If the average exceeds the MCL, the CWS shall be deemed in violation of the MCL.
- (f) To determine compliance with the MCLs listed in Env-Dw 703, averages of data shall be used, rounded to the same number of significant figures as the MCL for the substance in question.
- (g) For a CWS at which the required monitoring is more frequent than once per year, the department shall determine compliance with the MCL based on a running annual average at each sampling point, as follows:
- (1) If the running annual average of the sample results at any sampling point is greater than the MCL, then the CWS shall be deemed out of compliance with the MCL; and
  - (2) If any sample result is more than 4 times the MCL at any sample point, the CWS shall be deemed out of compliance with the MCL immediately.
- (h) The CWS owner shall include the results of all samples taken and analyzed to determine compliance, even if that number is greater than the minimum required.
- (i) If a sample result is less than the detection limit, the result shall be deemed to be zero for purposes of calculating the running annual average.
- (j) If the MCL for the radionuclides set forth in Env-Dw 703 is exceeded, the CWS owner shall notify:
- (1) The department, pursuant to Env-Dw 710.11; and
  - (2) The public, as required by Env-Dw 800.
- (k) If results from the sampling point or the contributing sources have historically demonstrated the presence of the radionuclide, then:
- (1) A confirmation sample shall not be required; and
  - (2) The monitoring frequency for the approved sampling point shall be increased to quarterly for that contaminant.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 710.11 System Reporting and Recordkeeping.

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(a) A CWS owner shall report the monitoring results for radionuclides to the department within the first 10 days following the month in which the results are received.

(b) Any CWS owner who fails to report monitoring results to the department within the first 10 days following the month in which the results are received shall notify the public as required by Env-Dw 800.

(c) The CWS owner shall submit the monitoring results in the same unit of measurement and number of significant figures in which the MCL is expressed, as set forth in Table 703-2.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 710.12 Sample Collection Protocol and Laboratory Analytical Methods.

(a) The sampling protocol for alpha and beta radionuclides shall be those set forth in 40 CFR 141, 142, or 143, as applicable.

(b) Detection limits for radionuclides shall be those set forth in Table 710-1, below:

Table 710-1: Detection Limits for Radionuclides

| <b>Contaminant</b>     | <b>Detection Limit</b>       |
|------------------------|------------------------------|
| Analytical Gross Alpha | 3 pCi/L                      |
| Cesium-134             | 10 pCi/L                     |
| Compliance Gross Alpha | 3 pCi/L                      |
| Gross Beta             | 4 pCi/L                      |
| Iodine-131             | 1 pCi/L                      |
| Radium-226             | 1 pCi/L                      |
| Radium-228             | 1 pCi/L                      |
| Strontium-89           | 10 pCi/L                     |
| Strontium-90           | 2 pCi/L                      |
| Tritium                | 1,000 pCi/L                  |
| Uranium                | 1 µg/L                       |
| Other radionuclides    | 1/10 of the applicable limit |

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

PART Env-Dw 711 MONITORING FOR INORGANIC CHEMICALS

Env-Dw 711.01 Applicability.

(a) The owner of a community water system (CWS) or non-transient, non-community water system (NTNC) shall conduct monitoring to determine compliance with the MCLs for inorganics specified in Env-Dw 704.02.

(b) The owner of a transient, non-community water system shall conduct monitoring to determine compliance with the nitrate and nitrite MCLs specified in Env-Dw 704.02, in accordance with Env-Dw 711.18 through Env-Dw 711.29.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.02 Monitoring Location for Regulated Inorganics for Groundwater Systems.

(a) The sampling point for a PWS using groundwater (groundwater system) shall be at each entry point to the distribution system, so as to be representative of each well after treatment.

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(b) The owner of a groundwater system shall collect each sample at the same sampling point. If the owner believes that conditions make another sampling point more representative of each source or treatment plant, the owner shall request a change in sampling point pursuant to Env-Dw 708.04.

Source. (See Revision Note #1) #9700, eff 5-1-10

### Env-Dw 711.03 Monitoring Location for Regulated Inorganics for Other Systems.

(a) The owner of a PWS using surface water or a combination of surface water and groundwater shall take a minimum of one sample at each sampling point specified in the sampling schedule established pursuant to Env-Dw 708.01.

(b) The sampling points specified in the schedule shall include every entry point to the distribution system:

- (1) After any application of treatment; or
- (2) In the distribution system at a point which is representative of each source after treatment.

(c) The owner of a system specified in (a), above, shall collect each sample at the same sampling point. If the owner believes that conditions make another sampling point more representative of each source or treatment plant, the owner shall request a change in the sampling point pursuant to Env-Dw 708.04.

Source. (See Revision Note #1) #9700, eff 5-1-10

### Env-Dw 711.04 Frequency of Monitoring for Regulated Inorganics.

(a) The owner of a groundwater system shall collect one sample at each sample point during each 3-year compliance period.

(b) The owner of a surface water system, or combined surface/groundwater system, shall collect one sample at each sample point annually.

(c) The frequency of monitoring for asbestos shall be as specified in Env-Dw 711.09 through Env-Dw 711.17.

(d) The frequency of monitoring for nitrate and nitrite shall be as specified in Env-Dw 711.18 through Env-Dw 711.26.

(e) The department shall waive the requirement to monitor for cyanide if the department determines that the PWS is not vulnerable to cyanide due to a lack of any industrial source(s) within the wellhead contributing area.

Source. (See Revision Note #1) #9700, eff 5-1-10

### Env-Dw 711.05 Sampling Requirements When Concentrations of Regulated Inorganics are Greater Than or Equal To 50% of the MCL.

(a) Subject to (k), below, if the concentration of any regulated inorganic in a representative sample is greater than or equal to 50% of the applicable MCL listed in Env-Dw 704, the PWS owner shall collect a confirmation sample as specified in (b), below.

(b) The confirmation sample shall be:

- (1) A new sample collected under the same contributing conditions and at the same sampling point as the original sample; and
- (2) Collected within 14 days of the original sample and analyzed for the regulated inorganic(s) that triggered the requirement to collect the confirmation sample.

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(c) The results of the confirmation sample shall be averaged with the initial sample results and the average shall be used to determine compliance with the MCL specified in Env-Dw 704.

(d) If the average is less than 50% of the MCL listed in Env-Dw 704, the monitoring requirements for that sampling point shall be as specified in Env-Dw 711.04.

(e) If the average is equal to or greater than 50% of the MCL, the monitoring frequency for that sampling point for that contaminant shall be revised to quarterly beginning in the next quarter.

(f) The revised monitoring schedule for each source pursuant to (e), above, shall continue until the concentration of the particular regulated inorganic is determined by the department to be reliably and consistently below the MCL as defined in Env-Dw 100.

(g) After a minimum of one year of quarterly sampling, the PWS owner may submit in writing a request to the department for the monitoring frequency to be reduced.

(h) The written request shall include:

(1) The name of the PWS;

(2) The PWS identifier for the PWS;

(3) A summary of all quarterly sampling results and results of any additional sampling undertaken by the owner; and

(4) An explanation of whether the PWS is operating any type of treatment to reduce the amount of regulated inorganics.

(i) The department shall reinstate the monitoring frequency specified in Env-Dw 711.04 upon determining that:

(1) Based on 4 consecutive quarterly samples, the concentration of the regulated inorganic is reliably and consistently below the MCL; and

(2) The PWS is not operating any type of treatment to reduce the amount of the regulated inorganics.

(j) If the monitoring frequency is reduced pursuant to (i), above, subsequent samples shall be collected during the quarter(s) which previously resulted in the highest analytical result.

(k) If results from the sampling point or the contributing sources have historically demonstrated the presence of regulated inorganics, then:

(1) A confirmation sample shall not be required; and

(2) The monitoring frequency for the approved sampling point shall be increased to quarterly for that contaminant.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 711.06 Sample Collection Protocol for Regulated Inorganics. A system owner shall conduct sample collection for the regulated inorganics listed in Env-Dw 704 using the sample preservation, container, and maximum holding time procedures specified in 40 CFR 141, 142, or 143, as applicable.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 711.07 Compliance Determination for Regulated Inorganics.

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(a) For a system at which regulated inorganics are monitored at a frequency greater than annually, the department shall determine compliance with the MCL specified in Env-Dw 704 by a running annual average, as defined in Env-Dw 100, at each sampling point.

(b) If the department determines that the running annual average at any sampling point is greater than the MCL as specified in Env-Dw 704, then the system shall be deemed out of compliance.

(c) If any one sample is more than 4 times the MCL specified in Env-Dw 704, then the system shall be out of compliance.

(d) Any sample result which is below the detection limit shall be calculated as zero for the purpose of determining the running annual average.

(e) If a system is monitoring annually or less frequently, the system shall be deemed out of compliance with the MCLs if the level of a regulated inorganic at any sampling point is greater than the MCL. If confirmation samples are required by Env-Dw 711.05, the determination of compliance shall be based on the average of the initial and confirmation samples.

(f) If a PWS has a distribution system with portions that are hydraulically separate from other parts of the distribution system, then:

(1) Only that part of the system in which the MCL specified in Env-Dw 704 is exceeded shall be out of compliance; and

(2) The PWS owner may request approval from the department pursuant to Env-Dw 801.15 to limit the public notice to the users of only that portion of the system which is out of compliance.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 711.08 Reporting for Regulated Inorganics. A PWS owner shall report regulated inorganics in accordance with Env-Dw 719.01.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.09 Monitoring for Asbestos. Asbestos monitoring shall be in accordance with Env-Dw 711.11 through Env-Dw 711.17, unless a waiver is obtained pursuant to Env-Dw 711.10.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.10 Waiver of Monitoring for Asbestos.

(a) A PWS owner may request a waiver of asbestos monitoring as specified in (b), below, if the owner believes the PWS is not vulnerable to asbestos contamination.

(b) To request a waiver, the owner shall submit to the department a written request containing the following information:

(1) The name of the PWS;

(2) The PWS identifier for the PWS; and

(3) An explanation of why a waiver is warranted, based on the factors specified in (c), below, with documentation and data to support the explanation, as appropriate to the factor.

(c) A PWS shall be deemed vulnerable to asbestos contamination if the PWS:

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(1) Has a water source that is at risk for asbestos contamination, for instance due to proximity to an asbestos disposal site or other source of asbestos; or

(2) Uses asbestos-cement pipe for finished water distribution and the water is corrosive.

(d) The department shall grant a waiver to a PWS if the department determines that the PWS is not vulnerable to asbestos.

(e) A waiver shall remain in effect for the remainder of the 3-year compliance period. At the end of the compliance period, the PWS owner may request another waiver.

Source. (See Revision Note #1) #9700, eff 5-1-10; and by #10771, eff 2-1-15

Env-Dw 711.11 Duration and Frequency of Routine Monitoring for Asbestos. The owner of each community water system and non-transient, non-community water system shall monitor once for asbestos during the 3-year compliance period that it begins operation and every 9 years thereafter.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.12 Monitoring Location for Asbestos.

(a) The owner of a PWS that is vulnerable to asbestos contamination due solely to corrosion of asbestos-cement pipe shall collect one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely to occur.

(b) The owner of a PWS that is vulnerable to asbestos contamination due solely to the potential for source water contamination shall monitor as for general regulated inorganics in accordance with Env-Dw 711.01 through Env-Dw 711.08.

(c) The owner of a PWS that is vulnerable to asbestos contamination both to corrosion of asbestos-cement pipe and the potential for source water contamination shall collect one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely to occur.

(d) The department shall establish the sampling point in the sampling schedule established pursuant to Env-Dw 708.01 after conferring with the PWS owner relative to appropriate factors such as the amount of asbestos cement pipe and the age of the pipe.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.13 Monitoring When the MCL for Asbestos is Exceeded.

(a) The owner of a PWS which exceeds the MCL specified in Env-Dw 704 shall monitor for asbestos quarterly beginning in the next calendar quarter after the initial violation occurred.

(b) The PWS owner may submit to the department a written request to reduce the asbestos monitoring frequency after:

(1) A minimum of one year of quarterly sampling for surface water systems; and

(2) A minimum of 2 quarters of sampling for groundwater systems.

(c) A request submitted pursuant to (b), above, shall include:

(1) The name of the PWS;

(2) The PWS identifier for the PWS;

(3) A summary of all quarterly sampling results; and

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(4) An explanation of whether the PWS is operating any type of treatment to reduce the amount of asbestos.

(d) The department shall decrease the quarterly monitoring requirement to the frequency specified in Env-Dw 711.11 only if the department determines that:

(1) The PWS is not operating any type of treatment to reduce the amount of asbestos; and

(2) The amount of asbestos in the water being delivered to persons served by the system is reliably and consistently below the MCL as defined in Env-Dw 100.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 711.14 Confirmation Sampling for Asbestos.

(a) Where the results of sampling for asbestos indicate that the concentration of asbestos is greater than or equal to 50% of the MCL, the PWS owner shall:

(1) Collect a confirmation sample within 14 days after the initial sample was collected at the same sampling point and under the same contributing conditions; and

(2) Have the sample analyzed within 48 hours of collection, as required by 40 CFR 141.23(k)(2).

(b) Where confirmation samples are taken, compliance shall be determined based on the average of the 2 samples.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.15 Collection Protocol for Asbestos. Samples to be analyzed for asbestos shall be collected in accordance with the protocol specified in 40 CFR 141.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 711.16 Reporting for Asbestos. A PWS owner shall report for asbestos in accordance with Env-Dw 719.01.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.17 Compliance for Asbestos.

(a) Compliance determination for asbestos shall be made using the analytical monitoring results obtained at each sampling point.

(b) For systems conducting monitoring at a frequency greater than annually, the department shall determine compliance with the MCL for asbestos by analyzing a running annual average at each sampling point.

(c) If the average at any sample point is greater than the MCL, then the system shall be out of compliance.

(d) If any one sample in (c), above, would cause the running annual average to exceed the MCL, the system shall be out of compliance.

(e) For a system monitoring annually or less frequently, the system shall be out of compliance with the MCL for asbestos if the level of a contaminant at any sampling point is greater than the MCL. If confirmation samples are required by Env-Dw 711.14, the determination of compliance shall be based on the average of the initial and confirmation samples.

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Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.18 Monitoring for Nitrate. The owner of a community water system, non-transient non-community water system, or transient non-community water system shall:

(a) Monitor as specified in Env-Dw 711.19 through Env-Dw 711.22 to determine compliance with the MCL for nitrate specified in Env-Dw 704; and

(b) Report for nitrate as specified in Env-Dw 711.23.

Source. (See Revision Note at #1) #9700, eff 5-1-10

Env-Dw 711.19 Frequency of Monitoring for Nitrate; Confirmation Samples.

(a) The owner of a community water system, non-transient non-community water system, or transient non-community water system served by groundwater shall monitor annually for nitrate.

(b) The owner of a community water system, non-transient non-community water system, or transient non-community water system served by surface water shall monitor for nitrate quarterly for the initial 4 quarters of operation and annually thereafter, subject to (h), below, and Env-Dw 711.20.

(c) Subject to (d) below, if nitrate sampling results indicate an exceedance of the MCL and the system has no previous detections for nitrate, the system owner shall collect a confirmation sample within 24 hours of the system's receipt of notification of the analytical results of the first sample.

(d) A system owner unable to comply with the 24-hour sampling requirement shall:

(1) Immediately notify the consumers served by the system in accordance with Env-Dw 800; and

(2) Collect and analyze a confirmation sample within 7 days of notification of the analytical results of the first sample.

(e) If nitrate sampling results indicate an exceedance of the MCL and the system has previous detections for nitrate, no confirmation sample shall be necessary.

(f) Subject to (h), below, if nitrate results are 50% to 100% of the MCL the system owner shall collect a confirmation sample within 7 days.

(g) If a confirmation sample is required pursuant to (c) or (f), above, the results of the initial and confirmation samples shall be averaged to determine compliance.

(h) If results from the sampling point or the contributing sources have historically demonstrated the presence of nitrate, then:

(1) A confirmation sample shall not be required; and

(2) The monitoring frequency for the approved sampling point shall be increased to quarterly for that contaminant.

Source. (See Revision Note #1) #9700, eff 5-1-10; and by #10771, eff 2-1-15

Env-Dw 711.20 Revised Monitoring for Nitrate.

(a) The owner of a community water system, non-transient non-community water system, or transient non-community water system using groundwater shall monitor for nitrate quarterly for at least one year following any one sample in which the concentration is greater than or equal to 50% of the nitrate MCL.

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(b) After a minimum of one year of quarterly sampling, the system owner may submit a written request to the department for the monitoring frequency to be reduced.

(c) The written request shall include:

- (1) The name of the PWS;
- (2) The PWS identifier for the PWS;
- (3) A summary of all quarterly sampling results; and
- (4) An explanation of whether the PWS is operating any type of treatment to reduce the amount of nitrate.

(d) The department shall approve a reduction in monitoring from quarterly to annually if the department determines that:

- (1) Based on 4 consecutive quarterly samples, the nitrate levels are reliably and consistently below the nitrate MCL; and
- (2) The PWS is not operating any type of treatment to reduce the amount of nitrate.

(e) A surface water system shall return to quarterly monitoring if any one sample is greater than or equal to 50% of the nitrate MCL.

(f) After the initial round of quarterly sampling is completed, each community water system, non-transient non-community water system, and transient non-community system shall collect subsequent annual samples during the quarter in which the highest analytical result was obtained.

Source. (See Revision Note #1) #9700, eff 5-1-10; and by #10771, eff 2-1-15

Env-Dw 711.21 General System Evaluation Nitrate Samples. Any nitrate sample collected in addition to the routine, make-up or confirmation samples for a PWS shall be used to determine compliance if the sample:

- (a) Is representative of water being supplied to consumers; and
- (b) Exceeds the MCL for nitrate as specified in Env-Dw 704.02.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.22 Collection Protocol for Nitrate. Collection protocol requirements for nitrate samples shall be as specified in 40 CFR 141, 142, or 143, as applicable.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 711.23 Reporting and Compliance for Nitrate. A system owner shall report for nitrates in accordance with Env-Dw 719.01.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.24 Monitoring for Nitrite. The owner of a community water system, non-transient non-community water system, or transient non-community water system shall:

- (a) Monitor for nitrite in accordance with Env-Dw 711.25 through Env-Dw 711.28; and
- (b) Report for nitrite in accordance with Env-Dw 711.29.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.25 Frequency of Monitoring for Nitrite; Confirmation Samples.

- (a) The PWS owner shall initially monitor for nitrite once in each 3 year compliance period to determine compliance with the MCL for nitrite in Env-Dw 704.
- (b) Subject to (c), below, if nitrite sampling results indicate an exceedance of the MCL and the PWS has no previous detections for nitrite, the PWS owner shall take a confirmation sample within 24 hours of receipt of notification of the analytical results of the first sample.
- (c) A PWS owner unable to comply with the 24 hour sampling requirement shall:
- (1) Immediately notify the persons served by the system in accordance with Env-Dw 800; and
  - (2) Collect and analyze a confirmation sample within 7 days of notification of the analytical results of the first sample.
- (d) If the nitrite sampling results indicate an exceedance of the MCL and the system has previous detections for nitrite, no confirmation sample shall be necessary.
- (e) Subject to (g), below if nitrite results are 50% to 100% of the MCL, the system owner shall collect a confirmation sample within 7 days.
- (f) If a confirmation sample is required pursuant to (b) or (e), above, the results of the initial and confirmation samples shall be averaged in determining compliance.
- (g) If results from the sampling point or the contributing sources have historically demonstrated the presence of nitrite, then:
- (1) A confirmation sample shall not be required; and
  - (2) The monitoring frequency for the approved sampling point shall be increased to quarterly for that contaminant.

Source. (See Revision Note #1) #9700, eff 5-1-10; and by #10771, eff 2-1-15

Env-Dw 711.26 Continued and Revised Monitoring for Nitrite.

- (a) After the initial sample, a PWS for which the analytical result for nitrite is less than 50% of the MCL shall monitor for nitrite annually.
- (b) The owner of a community water system, non-transient non-community water system, or transient non-community water system shall monitor for nitrite quarterly for at least one year following any one sample in which the concentration of nitrite is equal to or greater than 50% of the MCL.
- (c) After a minimum of one year of quarterly sampling, the PWS owner may submit a written request to the department that the monitoring frequency be reduced.
- (d) The written request shall include:
- (1) The name of the PWS;
  - (2) The PWS identifier for the PWS;
  - (3) A summary of all quarterly sampling results; and

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(4) Confirmation that the PWS is not operating any type of treatment to reduce the amount of nitrite.

(e) The department shall approve a reduction in monitoring from quarterly to annually if the department determines that:

(1) Based on 4 consecutive quarterly samples, the nitrite levels are reliably and consistently less than the nitrite MCL; and

(2) The PWS is not operating any type of treatment to reduce the amount of nitrite.

(f) A PWS owner who monitors annually shall collect each subsequent sample during the quarter(s) which previously resulted in the highest analytical results.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 711.27 General System Evaluation Nitrite Samples. Any nitrite sample collected in addition to the routine, make-up or confirmation samples for a PWS shall be used to determine compliance if the sample:

(a) Is representative of water being supplied to consumers; and

(b) Exceeds the MCL for nitrite as specified in Env-Dw 704.02.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 711.28 Collection Protocol for Nitrite. Collection protocol requirements for nitrite samples shall be as specified in 40 CFR 141, 142, or 143, as applicable.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 711.29 Reporting and Compliance for Nitrite. The reporting requirements for nitrite shall be those specified in Env-Dw 719.01.

Source. (See Revision Note #1) #9700, eff 5-1-10

PART Env-Dw 712 MONITORING FOR ORGANICS

Env-Dw 712.01 Monitoring Frequency for VOC Contaminants.

(a) The owner of a community water system or non-transient, non-community water system shall initially monitor for the health-related regulated volatile organic chemical (VOC) contaminants listed in Env-Dw 705.01 on a quarterly basis for one year.

(b) If no contaminant listed in Env-Dw 705.01 is detected at a PWS during the first year, the owner shall thereafter monitor annually.

(c) If one or more contaminants monitored pursuant to (a), above, is detected during the first year, the owner shall continue to monitor quarterly, subject to (d), below, and Env-Dw 712.04.

(d) If the monitoring conducted during the first year reveals variations in the source(s) or within the system, the owner shall increase the monitoring frequency to the frequency that is necessary to accurately identify consumer exposure to the contaminants listed in Env-Dw 705.01.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 712.02 Monitoring Location for VOC Contaminants.

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(a) The owner of a groundwater system shall collect at least one sample at every entry point to the distribution system, which entry point shall be representative of each well after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.

(b) The owner of a system supplied by surface water or a combination of surface water and groundwater shall collect at least one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.

(c) If the owner believes that conditions make another sampling point more representative of a source, treatment plant, or distribution system, the owner shall request a change in sampling location pursuant to Env-Dw 708.04.

(d) If a system obtains water from more than one source and the sources are combined prior to entering the distribution system, the system owner shall collect the samples at an entry point to the distribution system during periods of normal operating conditions, when water from all sources is being used.

Source. (See Revision Note #1) #9700, eff 5-1-10

### Env-Dw 712.03 Confirmation Sampling for VOC Contaminants.

(a) If a VOC contaminant is detected in a representative sample at a level greater than or equal to the detection limit of 0.0005 mg/L, the PWS owner shall:

- (1) Collect a confirmation sample under the same contributing conditions within 14 days of being notified of the result; and
- (2) Have the sample analyzed for the contaminant(s) detected.

(b) If the concentration of the VOC contaminant in the confirmation sample is greater than or equal to the detection limit of 0.0005 mg/L, the monitoring requirement for those sources shall be that stated in Env-Dw 712.04.

(c) If the concentration of the VOC contaminant in the confirmation sample is below the detection limit, the monitoring requirements for those sources shall be that stated in Env-Dw 712.01.

Source. (See Revision Note #1) #9700, eff 5-1-10

### Env-Dw 712.04 Revised Monitoring Frequency for VOC Contaminants.

(a) If a VOC contaminant is detected in the confirmation sample at a level greater than or equal to the detection limit of 0.0005 mg/L, the sampling frequency for the representative sampling site shall be revised to quarterly.

(b) The revised monitoring schedule pursuant to (a), above, shall continue until the concentration of the contaminant is reliably and consistently below the MCL at each sampling point.

(c) After a minimum of one year of quarterly sampling pursuant to (b), above, the PWS owner may submit a written request to the department in accordance with (d), below, for the monitoring frequency to be reduced.

(d) The written request to reduce the VOC monitoring frequency shall contain the following:

- (1) The name of the PWS;
- (2) The PWS identifier for the PWS;
- (3) A summary of all quarterly sampling results; and

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- (4) Whether any type of treatment to reduce VOC contaminants has been or is being used by the PWS.
- (e) The department shall reinstate annual monitoring for VOC contaminants in response to a request submitted pursuant to (d), above, upon determining that:
- (1) Based on 4 consecutive quarterly samples, the level of VOC contaminant(s) previously detected is reliably and consistently below the MCL; and
  - (2) The PWS is not operating any type of treatment to reduce the amount of VOC contaminants.
- (f) The owner of a PWS at which VOC contaminants are monitored annually shall monitor during the quarter which previously yielded the highest analytical result.
- (g) A PWS at which no VOC contaminants are detected in 3 consecutive annual samples may apply to the department for a waiver as specified in Env-Dw 712.19.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 712.05 Monitoring for Vinyl Chloride.

- (a) Subject to (e), below, the owner of a community water system or non-transient non-community water system shall monitor quarterly for vinyl chloride if any of the following 2-carbon organic compounds is initially detected and subsequently confirmed in the water supply:
- (1) Trichloroethylene;
  - (2) Tetrachloroethylene;
  - (3) 1,2-dichloroethane;
  - (4) 1,1,1-trichloroethane;
  - (5) Cis-1,2-Dichloroethylene;
  - (6) Trans-1,2 Dichloroethylene; or
  - (7) 1,1-dichloroethylene.
- (b) The vinyl chloride samples collected pursuant to (a), above, shall be collected at each sampling point for each source at which any of the 2-carbon organic compounds was detected and confirmed.
- (c) If the initial test results collected pursuant to (a), above, include analytical results for vinyl chloride, the results shall be counted as the first of 4 required quarterly samples.
- (d) If vinyl chloride is not detected in the first quarterly sample, the department shall reduce the required monitoring for vinyl chloride to one sample during each compliance period.
- (e) If monitoring frequency is not reduced pursuant to (d), above, then after a minimum of one year of quarterly sampling the system owner may submit a written request to the department as specified in (f), below, for the monitoring frequency be reduced.
- (f) The written request shall contain the following:
- (1) The name of the PWS;
  - (2) The PWS identifier for the PWS;
  - (3) A summary of all quarterly sampling results; and

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(4) Whether any type of treatment to reduce vinyl chloride has been or is being used by the PWS.

(g) The department shall reinstate annual monitoring for vinyl chloride in response to a request submitted pursuant to (e), above, if the department determines that:

(1) Based on 4 consecutive quarterly samples, the level of vinyl chloride is reliably and consistently below the MCL; and

(2) The PWS is not operating any type of treatment to reduce the amount of vinyl chloride.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 712.06 Laboratory Methods and Sampling Protocol for VOC Contaminants.

(a) Analyses for VOC contaminants shall be conducted only by laboratories that are accredited by the department for such analyses pursuant to Env-C 300.

(b) The sampling protocol for VOC contaminants shall be as specified in 40 CFR 141.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 712.07 Compliance Determination for VOC Contaminants.

(a) Compliance with Env-Dw 705.01 shall be determined based on the analytical results obtained at each sampling point identified in the sampling schedule established pursuant to Env-Dw 708.01.

(b) For a PWS at which monitoring is conducted at a frequency greater than annually, the following shall apply:

(1) The department shall determine compliance based on a running annual average, as defined in Env-Dw 100, of all samples collected at each sampling point;

(2) If the running annual average of any sampling point is greater than the MCL, the PWS shall be out of compliance; and

(3) If any sample result is more than 4 times the MCL at any sample point, the PWS shall be out of compliance.

(c) For purposes of determining the running annual average, any sample below the detection limit shall be calculated as zero.

(d) If monitoring is conducted annually or less frequently, the PWS shall be out of compliance if the level of a VOC contaminant at any sampling point is greater than the MCL. If confirmation samples are required by Env-Dw 712.03, the determination of compliance shall be based on the average of the initial and confirmation samples.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 712.08 Reporting for VOC Contaminants.

(a) A PWS owner shall report VOC contaminants in accordance with Env-Dw 719.01.

(b) If a PWS has a distribution system with portions that are hydraulically separate from other parts of the distribution system, the PWS owner may request approval from the department pursuant to Env-Dw 801 to limit the public notice to only that area hydraulically served by that portion of the PWS which is out of compliance.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 712.09 Monitoring Location for SOCs.

(a) The owner of a groundwater system shall collect at least one sample to be analyzed for SOCs at every entry point to the distribution system, which entry point is representative of each well after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.

(b) The owner of a system supplied by surface water or a combination of surface water and groundwater shall collect at least one sample to be analyzed for SOCs at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.

(c) If the owner believes that conditions make another sampling point more representative of a source, treatment plant or distribution system, the owner shall request a change in sampling location pursuant to Env-Dw 708.04.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 712.10 Monitoring Frequency for SOCs.

(a) The owner of a community water system or non-transient, non-community water system shall monitor for SOCs on an annual basis, except that monitoring shall not be required for aldicarb, aldicarb sulfoxide, or aldicarb sulfone.

(b) The owner of a community water system or non-transient non-community water system at which no SOC listed in Env-Dw 705.02 is detected may apply to the department for a waiver from the requirement of this section as specified in Env-Dw 712.19.

(c) The department shall reduce the sampling frequency to a minimum of one sample during each successive 3-year compliance period if a waiver is granted pursuant to Env-Dw 712.19.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 712.11 Revised Monitoring for SOCs.

(a) If any SOC listed in Env-Dw 705.02 is detected in any sample, the department shall revise the sampling requirements to quarterly for that contaminant at each representative sampling site.

(b) The revised monitoring schedule for each source for the particular contaminant shall continue until the concentration of the contaminant in each source is reliably and consistently below the MCL.

(c) The PWS owner may submit a written request as specified in (d), below, for the monitoring frequency to be reduced after a minimum of 4 consecutive quarterly samples for surface water systems or 2 consecutive quarterly samples for groundwater systems.

(d) A written request submitted pursuant to (c), above, shall contain:

- (1) The name of the PWS;
- (2) The PWS identifier for the PWS;
- (3) A summary of all sampling results; and
- (4) Whether any type of treatment to reduce SOC contaminants has been or is being used by the PWS.

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(e) The department shall reinstate annual monitoring for SOC contaminants in response to a request submitted pursuant to (d), above, if the department determines that:

(1) Based on 4 consecutive quarterly samples, the level of SOC the level of SOC contaminant(s) previously detected is reliably and consistently below the MCL; and

(2) The PWS is not operating any type of treatment to reduce the amount of SOC contaminants.

(f) A PWS which monitors annually shall monitor during the quarter which previously yielded the highest analytical results.

(g) A PWS which has 3 consecutive annual samples with no detection of an SOC may apply to the department for a waiver as specified in Env-Dw 712.19.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

### Env-Dw 712.12 Laboratory Methods and Sample Protocol for SOCs.

(a) Analysis for SOCs shall be conducted only by laboratories that are accredited by the department for such analyses pursuant to Env-C 300.

(b) The sampling protocol for SOCs shall be as specified in 40 CFR 141.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

### Env-Dw 712.13 Compliance Determination for SOCs.

(a) Compliance with Env-Dw 705.02 shall be determined using the analytical results obtained at each sampling point which is an entry point to the distribution system, as specified in the sampling schedule established pursuant to Env-Dw 708.01.

(b) For any PWS that conducts monitoring at a frequency greater than annually, the department shall determine compliance by calculating a running annual average of all samples collected at each sampling point. If the annual average of any sampling point is greater than the MCL, then the department shall identify the PWS as out of compliance.

(c) If monitoring is conducted annually or less frequently, then the department shall identify the PWS as being out of compliance if the level of a contaminant at any sampling point is greater than the MCL.

(d) If a PWS has a distribution system with portions that are hydraulically separate from other parts of the distribution system, the PWS owner may request approval from the department pursuant to Env-Dw 801 to limit the notice to only that portion that is out of compliance.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 712.14 Reporting SOCs. A PWS owner shall report regulated synthetic organics in accordance with Env-Dw 719.01.

Source. (See Revision Note #1) #9700, eff 5-1-10

### Env-Dw 712.15 Monitoring for Endrin.

(a) Monitoring conducted by the owner of a CWS or NTNC for the pesticide endrin for purposes of determining compliance with the MCL shall be conducted in accordance with this section.

(b) The system owner shall collect samples to be analyzed for endrin if endrin has been used:

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(1) In the watershed of the surface water, for a system using surface water alone or in combination with groundwater; or

(2) Within the recharge area of the system's well or wells, for a system using only groundwater.

(c) Samples shall be taken and analyzed during June through September, when contamination by pesticides is most likely to occur, at the intervals specified in the sampling schedule established pursuant to Env-Dw 708.01, which shall be no less frequently than at 3-year intervals.

(d) If the level of endrin exceeds the MCL, the system owner shall:

(1) Report the exceedance to the department within 7 days; and

(2) Conduct 3 additional analyses within one month.

(e) If the average of the original result and the 3 results obtained pursuant to (d), above, rounded to the same number of significant figures as the MCL, exceeds the MCL, the system owner shall:

(1) Report to the department pursuant to Env-Dw 719.01; and

(2) Give notice to the public pursuant to Env-Dw 800.

(f) After giving public notification pursuant to (e)(2), above, the system owner shall continue to monitor for endrin until the MCL has not been exceeded in 2 successive samples or until a monitoring schedule as a condition to a variance, exemption, or enforcement action becomes effective.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

Env-Dw 712.16 PCB Monitoring.

(a) The owner of a CWS or NTNC that is vulnerable to PCB contamination due to the current or historical presence of electrical transformers in which PCBs may be present shall collect one sample from the source during the pump test required by Env-Dw 301 or Env-Dw 302, as applicable, and analyze each sample using method 505 or 508 specified in 40 CFR 141.24.

(b) If PCBs, as one of 7 Aroclors, are detected in an initial pump test sample, the system owner shall reanalyze the sample using method 508A specified in Env-C 306.05.

(c) The department shall determine compliance with the PCB MCL based on the quantitative results of analyses using method 508A.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 712.17 Monitoring and Compliance Determination for Disinfection Byproducts.

(a) The owner of a community water system shall monitor for disinfection byproducts as specified in Env-Dw 715.

(b) Compliance with the disinfection byproduct monitoring requirements shall be as specified in Env-Dw 715.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 712.18 Monitoring for Acrylamide and Epichlorohydrin. Each PWS owner shall certify annually in writing to the department that when acrylamide and epichlorohydrin are used in drinking water systems, the combination of dose and monomer level does not exceed the levels specified in Env-Dw 705.05.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 712.19 VOC and SOC Chemical Monitoring Waivers.

(a) For purposes of this section, the following definitions shall apply:

(1) “Source water protection area” means:

a. For groundwater sources, the wellhead protection area as defined in RSA 485-C:2, XVIII, namely “the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield”; and

b. For surface water sources, the surface area draining toward the intake within 4,000 feet of the intake as determined by topographic data and on-site verification; and

(2) “Pesticide application area” means any area that is treated with pesticides or fertilizers that contain pesticides, as defined in Pes 101.21, within the past 3 years or are likely to be treated with pesticides within the next 3 years including, but not limited to, golf courses, lawn or landscaped areas, cemeteries, agricultural areas, athletic or recreational fields, commercial food crops, pesticide storage areas, rights-of-way, railroads, and large overhead power lines.

(b) The owner of a community water system or a non-transient non-community water system who wishes to request a waiver or reduction in monitoring requirements for one or more volatile organic compound (VOC) contaminants or synthetic organic chemical (SOC) contaminants, where authorized by Env-Dw 712.01, shall submit the following information in writing to the department on forms supplied by the department:

(1) The name of the PWS;

(2) The location, including street address, of the PWS;

(3) The PWS identifier for the PWS;

(4) The name, mailing address, and daytime telephone number of the PWS owner;

(5) The name and daytime telephone number and, if available, the e-mail address of the individual who completed the application;

(6) The name of the individual responsible for distributing educational materials on behalf of the PWS;

(7) For each system source, the type and location of the source;

(8) The results of all VOC and SOC analyses for each source within one year of the waiver request; and

(9) Source water protection area information including:

a. The maximum daily withdrawal volume;

b. Identification of known and potential contamination sources, as defined in Env-Dw 301.03(s), within the source water protection area; and

c. Identification of land uses for the following areas:

1. For wells, within the sanitary protective area established in accordance with Env-Dw 301, Env-Dw 302, Env-Dw 405, or Env-Dw 406, as applicable, or predecessor rules in Env-Ws 378, Env-Ws 379, Env-Ws 372, or Env-Ws 373, respectively; and

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2. For surface water sources, within the source water protection area.

(c) The request shall be signed by the individual identified pursuant to (b)(5), above. Such signature shall constitute certification that the information provided is true, complete, and not misleading to the individual's knowledge and belief.

(d) No request shall be granted if the PWS:

- (1) Has not resolved each significant deficiency identified by the department in accordance with Env-Ws 306 or successor rules in Env-Dw 720;
- (2) Has not corrected each deficiency or violation identified in an administrative order or letter of deficiency issued by the department;
- (3) Does not have an active primary water system operator as required by Env-Dw 502;
- (4) Has not paid its permit-to-operate fee as specified in Env-Dw 501;
- (5) Is not in compliance with the lead and copper requirements specified in Env-Ws 381 or successor rules in Env-Dw 714;
- (6) Is not in compliance with the emergency plan requirements specified in Env-Ws 360.15 or successor rules in subtitle Env-Dw, if applicable;
- (7) Is not in compliance with the consumer confidence report requirements specified in Env-Ws 352 or successor rules in Env-Dw 811, if applicable;
- (8) Is not in compliance with the monitoring requirements specified in Env-Ws 707 through 713 and Env-Env-Dw 719; or
- (9) Has submitted an incomplete request or a request that contains false information.

(e) No VOC waiver shall be granted if:

- (1) There is any structure of any size or type within the sanitary protective area from which there is a discharge to the ground or groundwater of any substance other than potable water from hydrants, blow-offs, sampling taps, or other such structures;
- (2) There is any structure of any size or type, other than the pump house, within the sanitary protective area in which regulated substances as defined in Env-Wq 401 are stored, used, or handled, other than chemicals or other substances necessary for treatment processes in the pump house;
- (3) The well is situated within 50 feet of a parking lot;
- (4) The well is situated within 25 feet of a trail used by off-highway recreational vehicles as defined in RSA 215-A:1, VI (OHRV), or snowmobiles as defined in RSA 251-A:1, XIII, or both;
- (5) The surface water intake is situated within 200 feet of a trail used by OHRV or snowmobiles, or both;
- (6) There is a known source of contamination within the source water protection area that has not been designated as closed or inactive by the department;
- (7) The PWS is on mandatory VOC sampling;
- (8) The source has had a confirmed detection of a regulated VOC within the previous 3 years;

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(9) The sanitary protective area contains any disposal systems for solid waste or wastewater, such as dumpsters or septic tanks, grease traps, or effluent disposal areas;

(10) The sanitary protective area contains any storage tanks for hazardous chemicals or petroleum products such as oil, gasoline, propane, or natural gas, other than:

- a. A tank used exclusively to store potable water treatment chemicals;
- b. A home heating oil tank located within an intact concrete structure such as a basement;
- c. A home heating oil tank located on an impervious surface with a roof, secondary containment, and protected from collision; or
- d. An above-ground tank used to store propane or natural gas only;

(11) There is an on-site VOC treatment system;

(12) There is an auto salvage yard, as defined in RSA 236:112, or underground storage tank that contains petroleum products or other regulated substances, except propane, within 1,000 feet of the source or intake and within the source water protection area; or

(13) There is confirmed detection of MTBE at any level in wells located within 1,000 feet of the source within the past 3 years.

(f) The department shall grant a 3-year VOC waiver if none of the disqualifying conditions identified in (d) or (e), above, are present.

(g) No SOC waiver shall be granted if:

- (1) The PWS is on a mandatory SOC sampling program;
- (2) There is an on-site SOC treatment system; or
- (3) The source has had a confirmed detection of a regulated SOC within the previous 3 years.

(h) The department shall grant a 3-year SOC waiver if:

- (1) None of the disqualifying conditions identified in (d) or (g), above, are present; and
- (2) Any of the following conditions exist:
  - a. The source is within a pesticide application area;
  - b. The source is located under a power line unless an agreement and consent for joint use with the power line company and system to not use SOC's in the sanitary protection area (SPA) has been obtained; or
  - c. The source is within 50 feet of an active railroad.

(i) The department shall grant a 6-year SOC waiver if none of the disqualifying conditions identified in (d), (g), or (h)(2) above, are present.

(j) A waiver shall be valid for the applicable time established in (f), (h), or (i), above, from the date of the most recent sampling for the contaminant for which the waiver is granted.

(k) As a condition of any waiver granted under (f), (h), or (i), above, the PWS owner shall distribute educational materials provided by the department within 90 days of waiver approval and at least once every 3 years thereafter to:

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- (1) Residents within the source water protection area; and
- (2) Owners of known and potential contamination sources within the source water protection area.

(l) The PWS owner shall certify to the department that the educational materials have been distributed as required by (k), above, before the due date stated in the application approval letter.

(m) As a condition of any waiver granted under this section for sources producing greater than 57,600 gpd and for systems that serve greater than 1,000 people, the PWS owner shall conduct inspections of all potential contamination sources to ensure compliance with the best management practices specified in Env-Wq 401 at least once every 3 years and prior to the renewal due date.

(n) The PWS owner shall certify to the department that the inspections have been completed with the renewal application.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15

PART Env-Dw 713 MONITORING FOR SECONDARIES

Env-Dw 713.01 Monitoring for Regulated Secondary MCLs. The owner of a community water system or non-transient, non-community water system shall monitor to determine compliance with the secondary MCLs specified in Env-Dw 706, as applicable, in accordance with this part.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 713.02 Monitoring Location.

(a) The owner of a system served by groundwater shall collect at least one sample at every entry point to the distribution system which is representative of each well after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.

(b) The owner of a system served by surface water shall collect at least one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.

(c) If the system owner believes that conditions make a sampling point other than that established in the sampling schedule more representative of each source or treatment plant, the owner shall request a change in sampling location pursuant to Env-Dw 708.04.

(d) If a system draws water from more than one source and the sources are combined before distribution, the system owner shall sample at an entry point to the distribution system during periods of normal operating conditions, when water is representative of all sources being used.

Source. (See Revision Note at #1) #9700, eff 5-1-10

Env-Dw 713.03 Monitoring Frequency. The system owner shall monitor for the SMCLs listed in Env-Dw 706 once every 3 years.

Source. (See Revision Note at #1) #9700, eff 5-1-10

Env-Dw 713.04 Sample Collection Protocol. Samples shall be collected using the sample preservation, container, and maximum holding time procedures specified in 40 CFR 141 or 143, as applicable.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

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Env-Dw 713.05 Increased Monitoring after an Exceedance. The owner of a system where the SMCL is exceeded and consumer complaints have been documented shall monitor based on a schedule established by the department in accordance with Env-Dw 708.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 713.06 Annual Fluoride Public Notice for Secondary MCL Exceedance.

(a) The owner of a system where the SMCL for fluoride is exceeded shall provide annual public notice as specified in Env-Dw 800.

(b) The public notice shall list the most recent sample result(s) used to determine compliance.

Source. (See Revision Note #1) #9700, eff 5-1-10; ss by #10771, eff 2-1-15

Env-Dw 713.07 Reporting. Reporting shall comply with Env-Dw 719.01.

Source. (See Revision Note #1) #9700, eff 5-1-10

Env-Dw 713.08 Sodium.

(a) The owner of a community water system or non-transient non-community water system shall collect and analyze one sample per plant at the entry point of the distribution system, as specified in the sampling schedule established pursuant to Env-Dw 708.01, for the determination of sodium concentration levels.

(b) Samples shall be collected and analyzed:

(1) Annually, for systems using surface water sources in whole or in part; and

(2) Subject to (c), below, once every 3 years for systems using groundwater only.

(c) The department shall establish a more frequent monitoring schedule for a system using groundwater only if a source is in a location where the sodium content is variable.

(d) Subject to (e), below, the system owner shall report the results of the analyses for sodium to the department within the earlier of:

(1) The first 10 days of the month following the month in which the sample results were received; or

(2) The first 10 days following the end of the required monitoring period.

(e) If more than annual sampling is required, the system owner shall report the average sodium concentration within 10 days of the month following the month in which the analytical results of the last sample used for the annual average was received.

(f) Subject to (g), below, the system owner shall send:

(1) A written notice of the sodium levels to appropriate local and state public health officials by direct mail within 3 months; and

(2) A copy of each notice required to be provided by (1), above, to the department within 10 days of its issuance.

(g) The system owner shall not be required to send the notice required by (f), above, if the department provides such notices in lieu of the supplier pursuant to Env-Dw 801.

Source. (See Revision Note #1) #9700, eff 5-1-10; amd by #10771, eff 2-1-15



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APPENDIX A - STATUTES/REGULATIONS IMPLEMENTED

| Rule Section(s)                                       | State Statute(s) Implemented  | Federal Regulation(s) Implemented                     |
|-------------------------------------------------------|-------------------------------|-------------------------------------------------------|
| Env-Dw 709.01 - 709.25                                | RSA 485:3, I                  | 40 CFR 141.21; 40 CFR 141.853 - 141.861               |
| Env-Dw 710.01                                         | RSA 485:3, I                  | 40 CFR 141.26                                         |
| Env-Dw 710.02                                         | RSA 485:3, I                  | 40 CFR 141.66                                         |
| Env-Dw 710.03 - 710.11                                | RSA 485:3, I; 485:41, I, & IV | 40 CFR 141.26                                         |
| Env-Dw 710.12                                         | RSA 485:41, IV                | 40 CFR 141 Subpart C, Appendix A;<br>40 CFR 142 & 143 |
| Env-Dw 711.01 - 711.03                                | RSA 485:3, I (c)              | 40 CFR 141.23(a)                                      |
| Env-Dw 711.04                                         | RSA 485:3, I (c)              | 40 CFR 141.23(a)                                      |
| Env-Dw 711.05 - 711.07                                | RSA 485:3, I (c)              | 40 CFR 141.23(a)                                      |
| Env-Dw 711.05(f) & (h)(2);<br>711.06; 711.07(a) & (f) | RSA 485:3, I (c)              | 40 CFR 141.23(a); 40 CFR 142 & 143                    |
| Env-Dw 711.08                                         | RSA 485:41, IV                | 40 CFR 141.31                                         |
| Env-Dw 711.09 - 711.15                                | RSA 485:3, I (c)              | 40 CFR 141.23(b)                                      |
| Env-Dw 711.16                                         | RSA 485:41, IV                | 40 CFR 141                                            |
| Env-Dw 711.17                                         | RSA 485:3, I                  | 40 CFR 141.23 (b)                                     |
| Env-Dw 711.18 - 711.22                                | RSA 485:3, I                  | 40 CFR 141.23                                         |
| Env-Dw 711.19(d)(1);<br>711.20(c)(2); 711.22          | RSA 485:3, I                  | 40 CFR 141.23; 40 CFR 142 & 143                       |
| Env-Dw 711.23                                         | RSA 485:41, IV                | 40 CFR 141.31                                         |
| Env-Dw 711.24 - 711.28                                | RSA 483:3, I                  | 40 CFR 141.23                                         |
| Env-Dw 711.29                                         | RSA 485:41, IV                | 40 CFR 141.31                                         |
| Env-Dw 712.01 - 712.02                                | RSA 485:3, I                  | 40 CFR 141.40                                         |
| Env-Dw 712.03                                         | RSA 485:3; 485:41             | 40 CFR 141.24                                         |
| Env-Dw 712.04                                         | RSA 485:3, I                  |                                                       |
| Env-Dw 712.05                                         | RSA 485:3, I                  | 40 CFR 141.24 (f)                                     |
| Env-Dw 712.05(f)(2)                                   | RSA 485:3, I                  |                                                       |
| Env-Dw 712.06 - 712.07                                | RSA 485:3, I                  | 40 CFR 14.23 (k)                                      |
| Env-Dw 712.08                                         | RSA 485:41, IV                | 40 CFR 141.23                                         |
| Env-Dw 712.09 - 712.10                                | RSA 485:3, I                  | 40 CFR 141.24 (f)                                     |
| Env-Dw 712.11                                         | RSA 485:3, I                  |                                                       |
| Env-Dw 712.12                                         | RSA 485:3, I                  |                                                       |
| Env-Dw 712.13                                         | RSA 485:3, I                  |                                                       |
| Env-Dw 712.14                                         | RSA 485:41, IV                | 40 CFR 141.31                                         |
| Env-Dw 712.15 - 712.16                                | RSA 485:3, I                  |                                                       |
| Env-Dw 712.17                                         | RSA 485:3, I(c)               | 40 CFR 141.132                                        |
| Env-Dw 712.18                                         | RSA 485:3, I                  | 40 CFR 141.30                                         |
| Env-Dw 712.19                                         | RSA 485:3, I                  | 40 CFR 141.24(e)(6)                                   |
| Env-Dw 712.19(b)(3),<br>(b)(9)c.1                     | RSA 485:3, I                  | 40 CFR 141.30                                         |
| Env-Dw 713.01 - 713.05                                | RSA 485:3, II                 | 40 CFR 143.4                                          |
| Env-Dw 713.06                                         | RSA 485:3, I(c)               |                                                       |
| Env-Dw 713.07                                         | RSA 485:41, IV                | 40 CFR 141.31                                         |
| Env-Dw 713.08                                         | RSA 485:3, II                 |                                                       |

## APPENDIX B - FEDERAL DEFINITIONS

**40 CFR §141.2**

*Coagulation* means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.

*Compliance cycle* means the nine-year calendar year cycle during which public water systems must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar year cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019.

*Compliance period* means a three-year calendar period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998, the third from January 1, 1999 to December 31, 2001.

*Conventional filtration treatment* means a series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal.

*Corrosion inhibitor* means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

*Direct filtration* means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.

*Disinfection* means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

*Domestic or other non-distribution system plumbing problem* means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which a coliform-positive sample was taken.

*Dose equivalent* means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified the International Commission on Radiological Units and Measurements (ICRU).

*Flocculation* means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.

*Ground-water under the direct influence of surface water (GWUDI)* means any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions.

*Haloacetic acids (five) (HAA5)* mean the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to 2 significant figures after addition.

*Initial compliance period* means the first full three-year compliance period which begins at least 18 months after promulgation, except for contaminants listed at §141.61(a)(19)-(21), (c) (19)-(33), and § 141.62(b)(11)-(15), initial compliance period means the first full three-year compliance period after promulgation for systems with 150 or more service connections (January 1993-December 1995), and first full three-year compliance period after the effective date of the regulation (January 1996-December 1998) for systems having fewer than 150 service connections.

*Large water system*, for the purpose of subpart I of this part only, means a water system that serves more than 50,000 persons.

*Lead service line* means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line.

*Legionella* means a genus of bacteria, some species of which have caused a type of pneumonia called legionnaires disease.

*Level 1 assessment* is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g. whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

*Level 2 assessment* is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system's monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the State, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. The system must comply with any expedited actions or additional actions required by the State in the case of an E. coli MCL violation.

*Man-made beta particle and photon emitters* mean all radionuclides emitting beta particles and/or photons listed in Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, NBS Handbook 69, except the daughter products of thorium-232, uranium-235 and uranium-238.

*Maximum residual disinfectant level (MRDL)* means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.

*Medium-size water system*, for the purpose of subpart I of this part only, means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.

*Near the first service connection* means at one of the 20 percent of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.

*Point-of-entry treatment device" (POE)* means a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

*Point-of-use treatment device (POU)* means a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.

*Repeat compliance period* means any subsequent compliance period after the initial compliance period.

*Residual disinfectant concentration ("C" in CT calculations)* means the concentration of disinfectant measured in mg/l in a representative sample of water.

*Sedimentation* means a process for removal of solids before filtration by gravity or separation.

*Small water system*, for the purpose of subpart I of this part only, means a water system that serves 3,300 persons or fewer.

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*Surface water* means all water which is open to the atmosphere and subject to surface runoff.

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

*Virus* means a virus of fecal origin which is infectious to humans by waterborne transmission.

**40 CFR §141.91 Recordkeeping requirements:**

“Any system subject to the requirements of this subpart shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, State determinations, and any other information required by §§141.81 through 141.88. Each water system shall retain the records required by this section for no fewer than 12 years.”