E2 Reporting and Amendments to the Safe Drinking Water Act (SDWA) and Private Well Testing Act (PWTA)

Felicia Fieo and Richard Gunoskey
New Jersey Department of Environmental Protection
Bureau of Safe Drinking Water
November 1, 2018

Rule Changes

- Amendments were recently made to the Safe Drinking Water Act (SDWA) rules N.J.A.C. 7:10 and the Private Well Testing Act (PWTA) rules N.J.A.C. 7:9E.
- These amendments were published in the N.J. Register and became effective on September 4, 2018.
- More detailed information as well as a copy of the rule changes can be found on our website at: https://www.state.nj.us/dep/watersupply/g_reg.html.

2

E2 Reporting and the Rule Changes

- As a result of these rule changes modifications were made to both the E2 Electronic Drinking Water Reporting (eDWR) and Private Well Testing Act (PWTA).
- An updated E2 Quick Reference Guide (E2QRG) dated September 28, 2018, detailed the SDWA changes (and a few other updates as well) and was sent out to all labs via a broadcast e-mail. It is also available on our website at: https://www.state.nj.us/dep/watersupply/

3

2 Major Changes for eDWR

1. Reporting of 1,2,3-Trichloropropane (1,2,3 TCP), Ethylene Dibromide (EDB), and 1,2,-Dibromo-3-chloropropane (DBCP).
2. Monitoring Requirements for perfluorononanoic acid (PFNA) and 1,2,3-trichloropropane (1,2,3-TCP).

4

1. Reporting of 1,2,3-TCP, EDB, and DBCP

- A NJ-certified drinking water method must be used for the analysis of compliance drinking water samples for EDB, DBCP, and 1,2,3-TCP

and

- must have a detection limit of 0.01 ug/L or less for EDB and 123TCP and 0.02 ug/L or less for DBCP.

5

1. Reporting of 1,2,3-TCP, EDB, and DBCP

- Because the method detection limits under those two methods are too high to meet regulatory requirements, EDB, DBCP, and 1,2,3-TCP samples submitted with Method 524.2 will be rejected by E2.
- Therefore, laboratories can no longer report these three analytes with compliance VOC monitoring results using Method 524.2 or Method 502.2.

6

2. Monitoring Requirements for PFNA and 1,2,3-TCP

The Division of Water Supply is phasing in the SDWA monitoring requirements for 1,2,3-TCP and PFNA

7

2. Monitoring Requirements for PFNA and 1,2,3-TCP

- **1st Quarter of 2019:** all community water systems using a groundwater source(s) serving a population 10,000 or less and NTNC water systems will be required to begin quarterly monitoring at all points-of-entry to the distribution system

8

2. Monitoring Requirements for PFNA and 1,2,3-TCP

- **1st Quarter of 2020:** all community water systems using a surface water source(s) and all community water systems serving a population greater than 10,000 will begin quarterly monitoring at all points-of entry to the distribution system.

9

Fun Facts About PFNA

- The Maximum Contaminant Level (MCL) for PFNA is 0.013 ug/l (13 ng/l).
- It is monitored as a Volatile Organic Compound.
- It is **NOT** a required to be monitored for under the Private Well Testing Act.

10

Fun Facts About 1,2,3-TCP

- The Maximum Contaminant Level (MCL) for 1,2,3-TCP is 0.030 ug/l (30 ng/l).
- It is monitored as a Synthetic Organic Compound.
- It **is** required to be monitored for under the Private Well Testing Act.

11

6 Major Changes for PWTA

1. Expanded testing for arsenic
2. Expanded testing for gross alpha
3. New testing requirements for uranium
4. The determination of adjusted gross alpha
5. New PWTA Excel Template
6. PWTA monitoring for ethylene dibromide (EDB), 1,2-dibromo-3-chloropropane (DBCP), and 1,2,3-trichloropropane (1,2,3-TCP).

12

1. Arsenic Testing

- Arsenic was previously only required to be submitted for samples collected in the northern counties of the state (Bergen, Essex, Hudson Hunterdon, Mercer, Middlesex, Morris, Passaic, Somerset, Sussex, Union, and Warren)
- Under the new rule changes, arsenic must be collected and analyzed for in **all** N.J. counties.

13

2. Gross Alpha Testing

- Gross alpha was previously only required to be submitted for samples collected in the southern counties of the state (Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Ocean and Salem)

Under the new rule changes, gross alpha must be collected and analyzed for in **all** N.J. counties.

14

3. New Uranium Testing

- Uranium shall now be collected and analyzed for in 12 northern counties of the state which include: Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Morris, Passaic, Somerset, Sussex, Union, and Warren.
- Uranium testing is necessary to identify which radiological contaminant is contributing to a high gross alpha result.
- Uranium MCL = 30 ug/l

15

4. Determining Adjusted Gross Alpha

To determine compliance with the gross alpha MCL, the total uranium activity (PWTA change #3) is subtracted from the measured gross alpha activity, resulting in the "adjusted gross alpha".

- Adjusted gross alpha is calculated after the uranium result is determined.
- Adjusted gross alpha MCL = 15 pCi/L.

16

4. Determining Adjusted Gross Alpha

- Adjusted gross alpha is determined by:

Gross alpha (pCi/L) – Uranium (pCi/L)

!!! UNITS ARE IMPORTANT !!!

- To convert uranium concentrations from ug/l to pCi/L, multiply it by 0.67

17

4. Determining Adjusted Gross Alpha

Example:

Gross Alpha = 29 pCi/L (fails)
Uranium Mass = 25 ug/l (passes)

Uranium activity conversion = 25 ug/L x 0.67=17 pCi/L

Adjusted Gross Alpha: 29 pCi/L – 17 pCi/L = 12 pCi/L

No MCL exceedance for adjusted gross alpha

18

5. New PWTA Excel Template

- The E2 PWTA Excel template has been modified to automatically calculate the adjusted gross alpha.
- If a PWTA sample was collected in a county that requires uranium, the PWTA Excel template will automatically populate a row for it with pCi/L as units of measure.
- Enter the concentration of uranium detected in the "Result" column of this row.
- Enter the concentration of the initial gross alpha result.

19

5. New PWTA Excel Template

!!! IMPORTANT NOTE !!!

If the initial gross alpha concentration exceeds 5 pCi/L you will have to enter a final gross alpha result.

20

5. New PWTA Excel Template

- If the results of the PWTA analysis have both an initial and final gross alpha analytical result, the E2 Excel template will use the **FINAL** result when automatically calculating the adjusted gross alpha concentration.
- If there is only an initial count, the E2 Excel template will use that concentration to determine the adjusted gross alpha concentration.

21

5. New PWTA Excel Template

- In the example on the next slide, uranium was detected at a concentration of 3 pCi/L. There is both an initial gross alpha concentration (6 pCi/L) and a final gross alpha concentration (4 pCi/L).
- The E2 Excel template will automatically add a row for the adjusted gross alpha and calculate it by subtracting the uranium concentration (3 pCi/L) from the FINAL gross alpha concentration (4 pCi/L).
- In this example, the concentration for adjusted gross alpha is 1 pCi/L (4 pCi/L – 3 pCi/l).

22

5. New PWTA Excel Template

7440-61-1	Uranium		3	pCi/l
SDWIS-1925	pH			pH units
SDWIS-3100	Total coliform			
SDWIS-4002I	Gross - alpha (incl. radium & U excl. radon) initial		6	pCi/l
SDWIS-4002F	Gross - alpha (incl. radium & U excl. radon) final		4	pCi/l
4000	Adjust - alpha		1	pCi/l

23

5. New PWTA Excel Template

- Please note: When the E2 Excel template automatically adds the record for adjusted gross alpha, it will not have a value in the "Analysis Method Code" field.
- **Do not enter any values in this field for adjusted gross alpha.**
- It will be the only record in the PWTA list of parameters that will not have a method.

24

5. New PWTA Excel Template

- The E2 PWTA Excel template will also automatically add a second row for uranium, with "ug/l" as a unit of measure.
- Remember that the MCL for uranium is 30 ug/l.
- The uranium concentration entered into the first uranium record (in pCi/L) is converted automatically by the E2 Excel template into a concentration in ug/l.

25

5. New PWTA Excel Template

7440-61-1	Uranium		3	pCi/l
SDWIS-1925	pH			pH units
SDWIS-3100	Total coliform			
SDWIS-4002I	Gross - alpha (incl. radium & U excl. radon) initial		6	pCi/l
SDWIS-4002F	Gross - alpha (incl. radium & U excl. radon) final		4	pCi/l
4000	Adjust - alpha		1	pCi/l
7440-61-1	Uranium		4.4	ug/l

!!

These new requirements apply to all real estate closings that take place on or after September 4, 2018.

27

6. PWTA Monitoring For EDB, DBCP, and 1,2,3-TCP

- EDB and DBCP, 1,2,3-TCP are potent carcinogens and mutagens.
- EDB and DBCP have MCLs under the Federal regulations; 1,2,3-TCP now has an MCL under the NJ regulations.
- Testing for all three of these parameters is now required under PWTA.

6. PWTA Monitoring For EDB, DBCP, and 1,2,3-TCP

- Testing for these parameters is required to start beginning for all real estate closings that occur on or after March 3, 2019.
- A new E2 PWTA Excel template incorporating these new parameters will be distributed by the implementation date of March 3, 2019.

NJ Private Well Water Test Reporting Form

- A standardized 6-page form that contains pertinent information about the lab, well, property, analytical results, MCLs, etc.
- Includes remediation funding alternatives, health effects information.
- Includes treatment options information.
- Also contains written certification by lab manager that analyses meet requirements of N.J.A.C. 7:18.

NJ Private Well Water Test Reporting Form

Completely updated to include the new PWTA sampling requirements.

https://www.state.nj.us/dep/watersupply/pwta/pdf/mcl_table_6_21_06.pdf.

PWTA Maximum Contaminant Level (MCL) Table

- A listing of all the primary and secondary parameters for the PWTA Program with their respective MCLs or standards.
- Completely updated to include all of the new parameters (e.g. adjusted gross alpha, uranium).
- It is located on the PWTA website at:

https://www.state.nj.us/dep/watersupply/pwta/pdf/mcl_table_6_21_06.pdf.

32

PWTA Website

- Contains a listing of the PWTA Act (N.J.S.A 58:12A-26 et seq.) and Regulations (N.J.A.C. 7:9E et seq.)
- List of common FAQs (updated with the new amendments to the PWTA)
- Directory of New Jersey Health Departments
- Private Well test result compilations for various years
- List of New Jersey Certified laboratories for the PWTA
- General information regarding private wells, well testing, and interpreting well test results.

!!! BONUS INFO !!!

34

Child Care Facilities

- Please be aware that the new analytes required under the SDWA rule amendments (PFNA and 1,2,3-TCP) also apply to Child Care Facilities.
- EDB and DBCP are also required to be collected and analyzed by Child Care Facilities.

Cyanotoxins/Harmful Algal Blooms (HABs)

- Subsection listed under the Unregulated Compound Section of the new E2QRG.
- The HAB subsection contains a list of specific HAB parameters and their respective SDWIS analyte codes and methods.

Cyanotoxins/Harmful Algal Blooms (HABs)

- HAB parameters submitted via the E2 system will be rejected by SDWIS due to a bug in that data system.
- A workaround has been implemented to address this issue. The rejected HAB sample results will be reviewed by the Bureau of Safe Drinking Water (BSDW) and manually entered into our database.

Cyanotoxins/Harmful Algal Blooms (HABs)

- Once the result has been entered our database, the E2-DWR result status will be manually changed from "Rejected" to "Accepted" in the E2 system under the View Lab Samples tab.
- The results will then be viewable in Drinking Water Watch (DWW).

Per- and Polyfluoroalkyl Parameters (PFAS)

- Subsection listed under the Unregulated compound section of the new E2QRG.
- The PFAS subsection contains a list of specific PFAS parameters and their respective SDWIS analyte codes and methods.

Note: Since PFNA is now regulated, it is not listed in this Section; PFNA now lives in the new section "**Regulated** Per-and Polyfluoroalkyl Substances (PFAS)" in the new edition of the E2 Quick Reference Guide

Contact Information

Contacts:

Richard.Gunoskey@dep.nj.gov
(PWTA database/E2 EDWR submittals)
Phone: (609) 292-5550

Brad.Koffler@dep.nj.gov
(General PWTA questions)
Phone: (609) 292-5550

PWTA website:
https://www.state.nj.us/dep/watersupply/pw_pwta.html

E-mail: submitquestionpwta@dep.nj.gov

40