



**Portsmouth Water System
UCMR3 Sample Results
For PFCs
- Sampling through April 2015**

All of the Portsmouth water sources were sampled for Perfluorinated compounds (PFCs) as part of the USEPA's third Unregulated Contaminant Monitoring Rule (UCMR 3). Four rounds of sampling were performed between July 2014 and April 2015. A summary of those results are attached along with the EPA's information regarding the UCMR 3 guidelines.

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs).

The third Unregulated Contaminant Monitoring Rule (UCMR 3) was published on May 2, 2012. UCMR 3 requires monitoring for 30 contaminants (28 chemicals and two viruses) between 2013 and 2015 using analytical methods developed by EPA, consensus organizations or both. This monitoring provides a basis for future regulatory actions to protect public health.

The Third Unregulated Contaminant Monitoring Rule (UCMR 3) Fact Sheet for Assessment Monitoring (List 1 Contaminants)

Overview of the Rule

- ❖ **Title:** Revisions to the Unregulated Contaminant Monitoring Rule for Public Water Systems; 77 FR 26072, May 2, 2012.
- ❖ **Purpose:** To collect occurrence data for contaminants suspected to be present in drinking water but that do not have health-based standards set under the Safe Drinking Water Act (SDWA). Assessment Monitoring targets contaminants that are analyzed with methods that utilize existing and widely used technology. The UCMR program is the primary source of drinking water contaminant occurrence data used by EPA in regulatory determinations.
- ❖ **Description:** UCMR 3 includes Assessment Monitoring for 21 List 1 chemical contaminants using six EPA-approved analytical methods and four equivalent consensus methods. List 1 contaminants are always associated with an Assessment Monitoring sampling design. Public water systems (PWSs) subject to Assessment Monitoring will sample within a 12-month period during 2013 - 2015.
- ❖ **Utilities Affected:** Community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) with more than 10,000 retail customers and a representative sample of 800 systems serving 10,000 or fewer retail customers are required to conduct Assessment Monitoring.
- ❖ **Occurrence Data:** The analytical results from UCMR 3 are stored in the [National Contaminant Occurrence Database \(NCOD\)](#). For a summary of the NCOD results, tips for querying NCOD, and health effects information (including reference concentrations) please refer to the [UCMR 3 Data Summary](#) document.

Assessment Monitoring (List 1 Contaminants)

Contaminant / CASRN ¹	MRL ² (µg/L)	Use or Environmental Source ³
Volatile Organic Compounds: EPA Method 524.3		
1,2,3-trichloropropane 96-18-4	0.03	Halogenated alkane; used as an ingredient in paint, varnish remover, solvents and degreasing agents
1,3-butadiene 106-99-0	0.1	Alkene; used in rubber manufacturing and occurs as a gas
chloromethane (methyl chloride) 74-87-3	0.2	Halogenated alkane; used as foaming agent, in production of other substances, and by-product that can form when chlorine used to disinfect drinking water
1,1-dichloroethane 75-34-3	0.03	Halogenated alkane; used as a solvent
bromomethane 74-83-9	0.2	Halogenated alkane; occurs as a gas, and used as a fumigant on soil before planting, on crops after harvest, on vehicles and buildings, and for other specialized purposes
chlorodifluoromethane (HCFC-22) 75-45-6	0.08	Chlorofluorocarbon; occurs as a gas, and used as a refrigerant, as a low-temperature solvent, and in fluorocarbon resins, especially tetrafluoroethylene polymers
bromochloromethane (Halon 1011) 74-97-5	0.06	Used as a fire-extinguishing fluid, an explosive suppressant, and as a solvent in the manufacturing of pesticides

Synthetic Organic Compound: EPA Method 522		
1,4-dioxane 123-91-1	0.07	Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Metals: EPA Method 200.8; SM 3125; ASTM D5763-10⁴		
vanadium 7440-62-2	0.2	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
molybdenum 7439-98-7	1	Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent
cobalt 7440-48-4	1	Naturally-occurring element found in the earth's crust and at low concentrations in seawater, and in some surface and ground water; cobaltous chloride was formerly used in medicine and as a germicide
strontium 7440-24-6	0.3	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
chromium⁵ CASRN n/a	0.2	See chromium-6 for use or source information; though the amount measured when analyzing for "total chromium" is the sum of chromium in all of its valence states, the MCL for EPA's current total chromium regulation was determined based upon the health effects of chromium-6
Chromium-6: EPA Method 218.7		
chromium-6⁶ 18540-29-9	0.03	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Oxyhalide Anion: EPA Method 300.1; SM 4110D; ASTM D658-08		
chlorate 14866-68-3	20	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide
Perfluorinated Compounds: EPA Method 537		
perfluorooctanesulfonic acid (PFOS) 1763-23-1	0.04	Surfactant or emulsifier; used in fire-fighting foam, circuit board etching acids, alkaline cleaners, floor polish, and as a pesticide active ingredient for insect bait traps; U.S. manufacture of PFOS phased out in 2002; however, PFOS still generated incidentally
perfluorooctanoic acid (PFOA) 335-67-1	0.02	Perfluorinated aliphatic carboxylic acid; used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire-fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
perfluorononanoic acid (PFNA) 375-95-1	0.02	Manmade chemical; used in products to make them stain, grease, heat and water resistant
perfluorohexanesulfonic acid (PFHxS) 355-46-4	0.03	Manmade chemical; used in products to make them stain, grease, heat and water resistant
perfluoroheptanoic acid (PFHpA) 375-85-9	0.01	Manmade chemical; used in products to make them stain, grease, heat and water resistant
perfluorobutanesulfonic acid (PFBS) 375-73-5	0.09	Manmade chemical; used in products to make them stain, grease, heat and water resistant

1. CASRN - Chemical Abstracts Service Registry Number
2. MRL - Minimum Reporting Level
3. "Use or Environmental Source" further documented in UCMR 3 Contaminants – Information Compendium. EPA 815-B-11-001. January 2012
4. SM – Standard Methods; ASTM – ASTM International
5. Monitoring for total chromium, in conjunction with UCMR 3 Assessment Monitoring, is required under the authority provided in Section 1445(a)(1)(A) of SDWA
6. Chromium-6 will be measured as soluble chromate ion (CASRN 13907-45-4)

Assessment Monitoring

- ❖ **Time frame:** One consecutive 12-month period during January 2013 - December 2015 (monitoring can span more than one calendar year, as long as conducted during a consecutive 12-month period).
- ❖ **Frequency:** *Ground Water:* Monitoring will occur twice in one consecutive 12-month period. Sample events must occur 5 - 7 months apart. *Surface Water or GUDI:* Monitoring will occur in 4 consecutive quarters, with sampling events occurring 3 months apart.
- ❖ **Location:** Entry point to the distribution system (EPTDS) for all contaminants, as well as distribution system maximum residence time sampling locations for chromium, chromium-6, cobalt, molybdenum, strontium, vanadium and chlorate.
- ❖ **Laboratories:** Samples must be analyzed by [EPA-approved laboratories](#).

Critical Deadlines and Requirements

Due Date	Requirement	Report through SDWARS ¹	Contact Sampling Coordinator ²
Following Rule Publication			
October 1, 2012	Systems must submit contact information to SDWARS. (Any subsequent changes must be submitted within 30 days of the change occurring).	X	
	Laboratories seeking approval must submit a registration form to participate in the laboratory approval process .		X
August 1, 2012	Ground water systems that wish to monitor from representative EPTDSs must submit either state-approved, UCMR 2-approved or propose a new representative sampling plan.		X
October 1, 2012	Deadline for systems to change their monitoring schedule (after October 1, systems must provide an explanation for the requested schedule change and obtain EPA approval of the change).	X	X (after October 1)
	PWSs review/edit if necessary, inventory information for sampling locations.	X	X (after October 1)
Following Sample Collection			
Within 120 days of sample collection	Laboratories post data to SDWARS.	X	
Within 60 days of lab posting data	PWSs review and approve the data. If the PWS has not taken action after 60 days, the data are considered approved and ready for state and EPA review.	X	

1. Safe Drinking Water Accession and Review System
2. Contact via email at: UCMR_Sampling_Coordinator@epa.gov.

Data Elements

Public Water System Identification (PWSID) Code	Sampling Point Identification Code	Sample Collection Date	Analytical Method Code	Analytical Result-Value
Public Water System Facility Identification Code	Sampling Point Type Code	Sample Identification Code	Sample Analysis Type	Laboratory Identification Code
Water Source Type	Disinfectant Type	Contaminant	Analytical Results-Sign	Sample Event Code

Additional Information

The **Public Notification Rule** (40 CFR §141.207), published on May 4, 2000 (65 FR 25982) with amendments and corrections included in the Code of Federal Regulations for the Public Notification Rule published on July 1, 2006, requires PWSs to notify the public annually that the results of monitoring for unregulated contaminants are available. CWSs may include their public notice within their CCRs. Details on these reporting requirements can be found in the document: [Revised Public Notification Handbook \(EPA 816-R-09-013\)](#).

Under the **Consumer Confidence Report (CCR) Rule**, as specified in 40 CFR §141.153(d), CWSs must report the monitoring results whenever unregulated contaminants are detected. CCRs are delivered to all billing customers each year by July 1. (The CCR Rule does not apply to non-community water systems). Details on these reporting requirements can be found on the [CCR Home Page](#).

For More Information

- ❖ Safe Drinking Water Hotline: (800) 426 – 4791
- ❖ CDX/SDWARS Help Desk: (888) 890 – 1995
- ❖ [UCMR Homepage](#)