EPA0712

DUPAGE WATER COMMISSION LABORATORY BENCH SHEET
MONTHLY REPORT FOR JULY 2012

	LEXINGTON SUPPLY			DUPAGE DISCHARGE							
DAY	FREE CL_2 mg/l	TURBIDITY NTU	PO_4 mg/l	FREE CL_2 mg/l	TURBIDITY NTU	TEMP °F	pH	Fluoride	PO_4 mg/l	P.A.C. LBS/MG	ANALYST INT
1	0.82	0.11	0.56	0.98	0.10	70	7.7	1.1	0.51	0	KD
2	0.82	0.11	0.52	0.98	0.10	70	7.7	1.1	0.54	0	KD
3	0.86	0.10	0.54	0.95	0.10	70	7.7	1.1	0.52	0	AM
4	0.88	0.10	0.50	0.98	0.09	70	7.7	1.1	0.50	0	FG
5	0.89	0.10	0.53	0.98	0.10	70	7.7	1.0	0.52	0	FG
6	0.88	0.10	0.52	0.95	0.11	71	7.7	1.1	0.50	0	KD
7	0.89	0.12	0.52	0.97	0.10	72	7.7	1.1	0.51	0	KD
8	0.90	0.11	0.53	0.96	0.10	71	7.7	1.1	0.50	0	KD
9	0.82	0.11	0.54	0.99	0.11	71	7.6	1.1	0.54	0	AM
10	0.84	0.12	0.54	0.98	0.10	74	7.7	1.1	0.53	0	KD
11	0.83	0.10	0.53	0.96	0.10	75	7.7	1.1	0.53	0	KD
12	0.87	0.10	0.54	0.97	0.10	75	7.7	1.1	0.53	0	KD
13	0.91	0.10	0.54	0.95	0.10	75	7.7	1.0	0.53	0	CT
14	0.89	0.10	0.51	0.95	0.10	75	7.6	1.1	0.52	0	CT
15	0.91	0.10	0.52	0.97	0.11	75	7.7	1.1	0.56	0	CT
16	0.86	0.10	0.51	0.96	0.10	75	7.7	1.1	0.52	0	AM
17	0.84	0.10	0.55	0.96	0.10	75	7.7	1.1	0.50	0	CT
18	0.90	0.12	0.51	0.98	0.11	75	7.7	1.0	0.56	0	CT
19	0.80	0.10	0.52	0.97	0.10	75	7.7	1.1	0.52	0	CT
20	0.85	0.11	0.50	0.97	0.11	75	7.7	1.0	0.53	0	FG
21	0.83	0.11	0.53	0.98	0.10	76	7.7	1.0	0.54	0	FG
22	0.80	0.11	0.54	0.95	0.11	76	7.7	1.1	0.56	0	CT
23	0.87	0.12	0.52	0.98	0.10	76	7.6	1.0	0.56	0	CT
24	0.83	0.11	0.51	0.97	0.11	76	7.7	1.1	0.55	0	FG
25	0.83	0.11	0.54	0.98	0.11	77	7.7	1.0	0.53	0	FG
26	0.84	0.10	0.52	0.99	0.11	77	7.7	1.1	0.54	0	FG
27	0.85	0.12	0.55	0.98	0.10	76	7.7	1.1	0.55	0	CT
28	0.86	0.12	0.55	0.98	0.10	77	7.7	1.0	0.56	0	CT
29	0.90	0.11	0.56	0.98	0.10	77	7.7	1.0	0.54	0	CT
30	0.85	0.10	0.54	0.99	0.10	78	7.6	1.0	0.55	0	FG
31	0.88	0.11	0.56	0.97	0.10	78	7.7	1.1	0.50	0	CT
AVG	0.86	0.11	0.53	0.97	0.10	74	7.7	1.1	0.53	0	
MAX	0.91	0.12	0.56	0.99	0.11	78	7.7	1.1	0.56	0	
MIN	0.80	0.10	0.50	0.95	0.09	70	7.6	1.0	0.50	0	

Terrance McGhee
Manager of Water Operations

EPA0812

DUPAGE WATER COMMISSION LABORATORY BENCH SHEET
MONTHLY REPORT FOR AUGUST 2012

	LEXINGTON SUPPLY			DUPAGE DISCHARGE							
DAY	FREE CL_2 mg/l	TURBIDITY NTU	PO_4 mg/l	FREE CL_2 mg/l	TURBIDITY NTU	TEMP °F	pH	Fluoride mg/l	PO_4 mg/l	P.A.C. LBS/MG	ANALYST INT
1	0.88	0.12	0.50	0.92	0.12	78	7.6	1.0	0.56	0	CT
2	0.82	0.11	0.55	0.94	0.11	77	7.7	1.1	0.55	0	CT
3	0.87	0.12	0.55	0.94	0.10	77	7.6	1.1	0.53	0	FG
4	0.84	0.12	0.54	0.90	0.10	77	7.6	1.0	0.54	0	FG
5	0.85	0.11	0.54	0.97	0.11	77	7.6	1.0	0.55	0	CT
6	0.86	0.11	0.54	0.92	0.11	77	7.6	1.0	0.55	0	CT
7	0.88	0.10	0.55	0.92	0.10	77	7.6	1.0	0.54	0	FG
8	0.90	0.09	0.54	0.92	0.11	77	7.6	1.0	0.56	0	FG
9	0.89	0.10	0.55	0.93	0.10	76	7.6	1.0	0.55	0	FG
10	0.86	0.11	0.52	0.94	0.11	77	7.6	1.1	0.53	0	AM
11	0.82	0.09	0.54	0.90	0.10	77	7.6	1.1	0.55	0	AM
12	0.82	0.09	0.55	0.95	0.09	76	7.6	1.1	0.54	0	KD
13	0.90	0.09	0.56	0.91	0.10	77	7.6	1.1	0.53	0	KD
14	0.86	0.09	0.54	0.93	0.10	77	7.6	1.1	0.53	0	AM
15	0.83	0.10	0.56	0.92	0.10	76	7.6	1.1	0.54	0	AM
16	0.89	0.10	0.54	0.96	0.09	76	7.6	1.0	0.53	0	AM
17	0.82	0.09	0.52	0.93	0.10	75	7.6	1.0	0.55	0	KD
18	0.80	0.10	0.54	0.94	0.09	75	7.6	1.0	0.51	0	KD
19	0.83	0.09	0.54	0.96	0.09	74	7.6	1.1	0.52	0	AM
20	0.84	0.09	0.53	0.96	0.10	75	7.6	1.1	0.51	0	AM
21	0.87	0.10	0.52	0.94	0.09	75	7.7	1.0	0.53	0	KD
22	0.83	0.09	0.51	0.92	0.11	75	7.7	1.1	0.52	0	KD
23	0.87	0.09	0.51	0.91	0.11	75	7.6	1.1	0.53	0	KD
24	0.84	0.09	0.53	0.93	0.10	75	7.6	1.1	0.53	0	KD
25	0.86	0.10	0.52	0.92	0.09	75	7.6	1.1	0.54	0	AM
26	0.85	0.09	0.54	0.91	0.09	75	7.6	1.1	0.52	0	KD
27	0.83	0.10	0.55	0.92	0.09	74	7.6	1.0	0.53	0	KD
28	0.89	0.09	0.56	0.93	0.09	75	7.6	1.1	0.51	0	AM
29	0.91	0.10	0.52	0.95	0.10	75	7.6	1.1	0.56	0	AM
30	0.89	0.09	0.51	0.93	0.10	75	7.6	1.1	0.53	0	AM
31	0.90	0.09	0.53	0.94	0.09	75	7.7	1.1	0.51	0	AM
AVG	0.86	0.10	0.54	0.93	0.10	76	7.6	1.1	0.53	0.00	
MAX	0.91	0.12	0.56	0.97	0.12	78	7.7	1.1	0.56	0.00	
MIN	0.80	0.09	0.50	0.90	0.09	74	7.6	1.0	0.51	0.00	

Terrance McGhee
Manager of Water Operations

EPA0912

DUPAGE WATER COMMISSION LABORATORY BENCH SHEET
MONTHLY REPORT FOR SEPTEMBER 2012

	LEXINGTON SUPPLY			DUPAGE DISCHARGE							
DAY	FREE CL_2 mg/l	TURBIDITY NTU	PO_4 mg/l	FREE CL_2 mg/l	TURBIDITY NTU	TEMP °F	pH	Fluoride	PO_4 mg/l	P.A.C. LBS/MG	ANALYST INT
1	0.89	0.09	0.53	0.99	0.10	75	7.6	1.1	0.52	0	AM
2	0.91	0.12	0.57	0.96	0.11	73	7.7	1.1	0.52	0	AM
3	0.94	0.09	0.58	0.99	0.10	72	7.7	1.1	0.53	0	AM
4	0.81	0.10	0.55	0.89	0.10	72	7.7	1.1	0.53	0	KD
5	0.82	0.09	0.51	0.91	0.10	72	7.7	1.1	0.50	0	AM
6	0.88	0.10	0.57	0.94	0.10	72	7.7	1.1	0.52	0	AM
7	0.86	0.11	0.58	0.96	0.12	72	7.7	1.1	0.52	0	CT
8	0.80	0.09	0.58	0.95	0.10	71	7.7	1.1	0.50	0	CT
9	0.84	0.10	0.57	0.94	0.11	71	7.7	1.1	0.51	0	FG
10	0.82	0.11	0.57	0.90	0.10	71	7.7	1.1	0.51	0	FG
11	0.83	0.10	0.51	0.91	0.10	72	7.7	1.0	0.52	0	CT
12	0.88	0.11	0.51	0.89	0.10	72	7.7	1.1	0.51	0	CT
13	0.81	0.11	0.52	0.92	0.11	72	7.7	1.0	0.50	0	CT
14	0.87	0.10	0.51	0.97	0.11	72	7.7	1.1	0.51	0	FG
15	0.82	0.11	0.50	0.92	0.10	72	7.6	1.0	0.51	0	FG
16	0.82	0.11	0.59	0.92	0.10	71	7.6	1.1	0.50	0	FG
17	0.84	0.10	0.51	0.98	0.10	71	7.6	1.0	0.52	0	FG
18	0.80	0.11	0.52	0.98	0.11	70	7.7	1.1	0.53	0	FG
19	0.85	0.11	0.51	0.99	0.11	70	7.7	1.1	0.50	0	FG
20	0.84	0.12	0.53	0.99	0.10	69	7.7	1.0	0.54	0	FG
21	0.88	0.10	0.59	1.00	0.10	68	7.7	1.1	0.53	0	FG
22	0.81	0.10	0.58	0.98	0.10	67	7.7	1.1	0.50	0	FG
23	0.84	0.10	0.58	0.98	0.09	67	7.7	1.0	0.51	0	FG
24	0.86	0.11	0.52	0.97	0.10	66	7.6	1.1	0.51	0	FG
25	0.91	0.10	0.54	0.99	0.08	67	7.6	1.1	0.53	0	FG
26	0.87	0.10	0.53	0.98	0.10	67	7.6	1.1	0.50	0	FG
27	0.88	0.09	0.54	0.97	0.09	67	7.7	1.1	0.54	0	FG
28	0.88	0.10	0.53	0.99	0.10	66	7.7	1.1	0.53	0	FG
29	0.90	0.10	0.51	0.98	0.09	66	7.6	1.0	0.52	0	FG
30	0.88	0.11	0.52	0.96	0.10	65	7.7	1.0	0.52	0	CT
AVG	0.85	0.10	0.54	0.96	0.10	70	7.7	1.1	0.52	0	
MAX	0.94	0.12	0.59	1.00	0.12	75	7.7	1.1	0.54	0	
MIN	0.80	0.09	0.50	0.89	0.08	65	7.6	1.0	0.50	0	

Terrance McGhee
Manager of Water Operations

Fact Sheet: Stage 2 Disinfectants and Disinfection Byproducts Rule

In the past 30 years, the Safe Drinking Water Act (SDWA) has been highly effective in protecting public health and has also evolved to respond to new and emerging threats to safe drinking water. Disinfection of drinking water is one of the major public health advances in the 20th century. One hundred years ago, typhoid and cholera epidemics were common through American cities; disinfection was a major factor in reducing these epidemics.

However, the disinfectants themselves can react with naturally-occurring materials in the water to form byproducts, which may pose health risks. In addition, in the past 10 years, we have learned that there are specific microbial pathogens, such as *Cryptosporidium*, which can cause illness, and are highly resistant to traditional disinfection practices.

Amendments to the SDWA in 1996 require EPA to develop rules to balance the risks between microbial pathogens and disinfection byproducts (DBPs). The Stage 1 Disinfectants and Disinfection Byproducts Rule and Interim Enhanced Surface Water Treatment Rule, promulgated in December 1998, were the first phase in a rulemaking strategy required by Congress as part of the 1996 Amendments to the Safe Drinking Water Act.

The Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) builds upon the Stage 1 DBPR to address higher risk public water systems for protection measures beyond those required for existing regulations.

The Stage 2 DBPR and the Long Term 2 Enhanced Surface Water Treatment Rule are the second phase of rules required by Congress. These rules strengthen protection against microbial contaminants, especially *Cryptosporidium*, and at the same time, reduce potential health risks of DBPs.

Questions and Answers

What is the Stage 2 DBPR?

The Stage 2 Disinfection Byproducts Rule will reduce potential cancer and reproductive and developmental health risks from disinfection byproducts (DBPs) in drinking water, which form when disinfectants are used to control microbial pathogens. Over 260 million individuals are exposed to DBPs.

This final rule strengthens public health protection for customers by tightening compliance monitoring requirements for two groups of DBPs, trihalomethanes (TTHM) and haloacetic acids (HAA5). The rule targets systems with the greatest risk and builds incrementally on existing rules. This regulation will reduce DBP exposure and related potential health risks and provide more equitable public health protection.

The Stage 2 DBPR is being promulgated simultaneously with the Long Term 2 Enhanced Surface Water Treatment Rule to address concerns about risk tradeoffs between pathogens and DBPs.

What does the rule require?

Under the Stage 2 DBPR, systems will conduct an evaluation of their distribution systems, known as an Initial Distribution System Evaluation (IDSE), to identify the locations with high disinfection byproduct concentrations. These locations will then be used by the systems as the sampling sites for Stage 2 DBPR compliance monitoring.

Compliance with the maximum contaminant levels for two groups of disinfection byproducts (TTHM and HAA5) will be calculated for each monitoring location in the distribution system. This approach, referred to as the locational running annual average (LRAA), differs from current requirements, which determine compliance by calculating the running annual average of samples from all monitoring locations across the system.

The Stage 2 DBPR also requires each system to determine if they have exceeded an operational evaluation level, which is identified using their compliance monitoring results. The operational evaluation level provides an early warning of possible future MCL violations, which allows the system to take proactive steps to remain in compliance. A system that exceeds an operational evaluation level is required to review their operational practices and submit a report to their state that identifies actions that may be taken to mitigate future high DBP levels, particularly those that may jeopardize their compliance with the DBP MCLs.

Who must comply with the rule?

Entities potentially regulated by the Stage 2 DBPR are community and nontransient noncommunity water systems that produce and/or deliver water that is treated with a primary or residual disinfectant other than ultraviolet light.

A community water system (CWS) is a public water system that serves year-round residents of a community, subdivision, or mobile home park that has at least 15 service connections or an average of at least 25 residents.

A nontransient noncommunity water system (NTNCWS) is a water system that serves at least 25 of the same people more than six months of the year, but not as primary residence, such as schools, businesses, and day care facilities.

What are disinfection byproducts (DBPs)?

Disinfectants are an essential element of drinking water treatment because of the barrier they provide against waterborne disease-causing microorganisms. Disinfection byproducts (DBPs) form when disinfectants used to treat drinking water react with naturally occurring materials in the water (e.g., decomposing plant material).

Total trihalomethanes (TTHM - chloroform, bromoform, bromodichloromethane, and dibromochloromethane) and haloacetic acids (HAA5 - monochloro-, dichloro-, trichloro-, monobromo-, dibromo-) are widely occurring classes of DBPs formed during disinfection with chlorine and chloramine. The amount of trihalomethanes and haloacetic acids in drinking water can change from day to day, depending on the season, water temperature, amount of disinfectant added, the amount of plant material in the water, and a variety of other factors.

Are THMs and HAAs the only disinfection byproducts?

No. The four THMs (TTHM) and five HAAs (HAA5) measured and regulated in the Stage 2 DBPR act as indicators for DBP occurrence. There are many other known DBPs, in addition to the possibility of unidentified DBPs present in disinfected water. THMs and HAAs typically occur at higher levels than other known and unknown DBPs. The presence of TTHM and HAA5 is representative of the occurrence of many other chlorination DBPs; thus, a reduction in the TTHM and HAA5 generally indicates a reduction of DBPs from chlorination.

What are the costs and benefits of the rule?

Quantified benefits estimates for the Stage 2 DBPR are based on reductions in fatal and non-fatal bladder cancer cases. EPA has projected that the rule will prevent approximately 280 bladder cancer cases per year. Of these cases, 26% are estimated to be fatal. Based on bladder cancer alone, the rule is estimated to provide annualized monetized benefit of $763 million to $1.5 billion.

The rule applies to approximately 75,000 systems; a small subset of these (about 4%) will be required to make treatment changes. The mean cost of the rule is $79 million annually. Annual household cost increases in the subset of plants adding treatment are estimated at an average of $5.53, with 95 percent paying less than $22.40.

What are the compliance deadlines?

Compliance deadlines are based on the sizes of the public water systems (PWSs). Wholesale and consecutive systems of any size must comply with the requirements of the Stage 2 DBPR on the same schedule as required for the largest system in the combined distribution system (defined as the interconnected distribution system consisting of wholesale systems and consecutive systems that receive finished water). Compliance activities are outlined in the following table.

PUBLIC WATER SYSTEMS	ACTIONS			
	Submit IDSE monitoring plan, system specific study plan, or 40/30 certification	**Complete an initial distribution system evaluation (IDSE)**	**Submit IDSE Report**	**Begin subpart V (Stage 2) compliance monitoring**
CWSs and NTNCWSs serving at least 100,000	October 1, 2006	September 30, 2008	January 1, 2009	April 1, 2012
CWSs and NTNCWSs serving 50,000 - 99,999	April 1, 2007	March 31, 2009	July 1, 2009	October 1, 2012
CWSs and NTNCWSs serving 10,000 - 49,999	October 1, 2007	September 30, 2009	January 1, 2010	October 1, 2013
CWSs serving fewer than 10,000	April 1, 2008	March 31, 2010	July 1, 2010	October 1, 2013
NTNCWSs serving fewer than 10,000	NA	NA	NA	October 1, 2013

*States may grant up to an additional two years for systems making capital improvements.

What technical information will be available on the rule?

The following Guidance Documents will be available:

- Initial Distribution System Evaluation (IDSE) Guidance Manual
- Operational Evaluation Guidance Manual
- Consecutive Systems Guidance Manual
- Small Systems (SBREFA) Guidance Manual
- Simultaneous Compliance Guidance Manual

Where can I find more information about this notice and the Stage 2 DBPR?

For general information on the rule, please visit the EPA Safewater website at http://www.epa.gov/safewater/disinfection/stage2 or contact the Safe Drinking Water Hotline at 1-800-426-4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding legal holidays, from 10:00 a.m. to 4:00 p.m., Eastern Time. For technical inquiries, email stage2mdbp@epa.gov.

Office of Water (4607M) EPA 815-F-05-003 December 2005 www.epa.gov/safewater

United States Environmental Protection Agency

The Third Unregulated Contaminant Monitoring Rule (UCMR 3)

Fact Sheet for Assessment Monitoring of 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 chemical contaminants using six EPA-approved analytical methods and four equivalent consensus methods. 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.

UCMR 3 List 1 Contaminants

Contaminant / CASRN[1]	MRL[2] (µg/L)	Use or Environmental Source[3]	Health Effects[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	**Reference Dose (RfD)**: – 0.006 mg/kg/day (Integrated Risk Information System [IRIS]) associated with changes in blood chemistry and reduction in red blood cell mass in rats – 0.004 mg/kg/day (IRIS) associated with increased liver weight in male rats **Slope Factor**: 30 $(mg/kg/day)^{-1}$ (IRIS)
1,3-butadiene 106-99-0	0.1	Alkene; used in rubber manufacturing and occurs as a gas	**EPA Cancer Class:** B2 – probable human carcinogen (sufficient evidence from animal studies and inadequate/no epidemiologic studies)
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	**RfD**: 0.004 mg/kg/day associated with mild neurological effects in humans (EPA Health Advisory [HA])
1,1-dichloroethane 75-34-3	0.03	Halogenated alkane; used as a solvent	**EPA Cancer Class:** C – possible human carcinogen
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	**RfD**: 0.0014 mg/kg/day (IRIS) associated with lesions in the forestomach **EPA Cancer Class:** D – not classifiable as to human carcinogenicity
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	Associated with degenerative effects on the brain and coverings; changes in the blood cell count (unspecified); and nutritional and metabolic effects, such as weight loss or decreased weight gain

Contaminant / CASRN[1]	MRL[2] (µg/L)	Use or Environmental Source[3]	Health Effects[3]
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	**RfD**: 0.01 mg/kg/day associated with increased liver-to-body weight ratio and other metabolic effects (EPA HA)
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	**RfD**: 0.03 mg/kg/day associated with liver and kidney toxicity (IRIS) **EPA 10^{-4} Lifetime Cancer Risk**: 0.3 mg/L **Slope Factor**: – 0.011 $(mg/kg/day)^{-1}$ (IRIS) – 0.19 $(mg/kg/day)^{-1}$ (IRIS Draft; 74 FR 21361) **EPA Cancer Class:** B2 – probable human carcinogen (sufficient evidence from animal studies and inadequate/no epidemiologic studies)
Metals: EPA Method 200.8; SM 3125; ASTM D5763-10[4]			
vanadium 7440-62-2	0.2	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst	Associated with altered kidney function indicated by increased blood urea and mild tissue changes
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	**RfD**: 0.005 mg/kg/day (IRIS) associated with increased uric acid levels **EPA Cancer Class:** D – not classifiable as to human carcinogenicity
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	Associated with effects on blood (increased hemoglobin, polycythemia) and effects on lung function
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	**RfD**: 0.6 mg/kg/day associated with rachitic bone (rickets) (IRIS) **EPA Cancer Class:** D – not classifiable as to human carcinogenicity
chromium[5] 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	See chromium-6 for health effects information
Chromium-6: EPA Method 218.7			
chromium-6[6] 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	**RfD**: – 0.005 mg/kg/day (IRIS, 1998) (basis for MCL) – 0.003 mg/kg/day (IRIS, 2005) (basis for HRL) – Draft RfD: 0.0009 mg/kg/day associated with intestinal lesions (IRIS, Draft 75 FR 60454) **Draft Slope Factor**: 0.5 $(mg/kg/day)^{-1}$ (IRIS, Draft 75 FR 60454)

Contaminant / CASRN[1]	MRL[2] (µg/L)	Use or Environmental Source[3]	Health Effects[3]
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	**RfD**: 0.03 mg/kg/day associated with enlarged thyroid and mineralization (Office of Pesticide Programs)
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	**NOAEL**: 0.03 mg/kg/day associated with decreased body weights, increased liver weights, lowered total cholesterol, lowered triiodothyronine (T3) concentration, and lowered estradiol levels (EPA Provisional HA)
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	Associated with body weight reduction, and increased liver, kidney and brain weight relative to body weight
perfluorononanoic acid (PFNA) 375-95-1	0.02	Manmade chemical; used in products to make them stain, grease, heat and water resistant	Associated with liver effects
perfluorohexanesulfonic acid (PFHxS) 355-46-4	0.03	Manmade chemical; used in products to make them stain, grease, heat and water resistant	Associated with immune and lymphatic system, neurological, reproductive and developmental effects
perfluoroheptanoic acid (PFHpA) 375-85-9	0.01	Manmade chemical; used in products to make them stain, grease, heat and water resistant	Contaminant is similar to other perfluorinated compounds
perfluorobutanesulfonic acid (PFBS) 375-73-5	0.09	Manmade chemical; used in products to make them stain, grease, heat and water resistant	Associated with decreased blood proteins and

1. CASRN - Chemical Abstracts Service Registry Number
2. MRL - Minimum Reporting Level
3. "Use or Environmental Source" and "Health Effects" 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)

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. EPA-approved laboratories will be listed on the UCMR website at http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/laboratories.cfm.

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**. For more information see: http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/laboratories.cfm.		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; at http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/reporting.cfm.
2. Contact via email at: UCMR_Sampling_Coordinator@epa.gov.

UCMR List 1 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), available on EPA's website at: http://water.epa.gov/lawsregs/rulesregs/sdwa/publicnotification/upload/PNrevisedPNHandbookMarch2010.pdf

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 to be sent 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 at: http://water.epa.gov/drink/info/ccr/regulations.cfm

For More Information

- Safe Drinking Water Hotline: (800) 426 – 4791
- CDX/SDWARS Help Desk: (888) 890 – 1995
- http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/