



## Monitoring Requirements

### A. Distribution System

*The following samples shall be taken randomly throughout the distribution system:*

ANALYTE	MONITORING FREQUENCY	DUE BY DATES and/or COMMENTS
Coliform Bacteria	70 per MONTH	Samples shall be taken according to a written sampling plan per 567 IAC 41.2(1)“c”.
Radionuclides	1 every 4 years	1 Sample due by 3/30/98 and analyzed for Gross Alpha and Radium 226/228 per 567 IAC 41.8.
Total Trihalomethanes	4 per QUARTER/PLANT	Sample(s) shall be taken in compliance with the requirements of 567 IAC 41.5(1)“e”.

### B. Point of Use

*The following samples shall be taken from selected drinking water taps, according to a written sampling plan and in compliance with the requirements of 567—41.4(455B) IAC:*

Lead and Copper	60 every 6 months, for 1 year	Sampling frequency effective through 9/31/96
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### C. Operational

*As a public water supply, obtaining its water from a surface water source, the following parameters shall be monitored, at a frequency equal to or greater than that specified below and in compliance with the requirements of 567—41.7(455B) and 567—43.5(455B):*

Turbidity	EVERY 4 HOURS	
Disinfectant residual entering the system	CONTINUOUS	
Disinfectant residual in the distribution system	70 samples per month	Taken at the same location and time as total coliform samples

*Note: See “Operation Permit—Attachment” for a listing of the contaminant’s Maximum Contaminant Level (MCL), Action Level, Treatment Technique or Health Advisory Level (HA)*

**Monitoring Requirements**

**Source/Entry Point (S/EP)**

*The following samples shall be taken from the Source Entry Points (S/EP), after treatment, as listed below:*

**S/EP #:1 Described as: Iowa River & WLS #1, 2 & 3**

Analytical Series (A/S)/Analyte (b)	INITIAL MONITORING FREQUENCY			REDUCED MONITORING FREQUENCY		
	# Samples (c)	Years (d)	Date Due (e)	(c)	(d)	(e)
Regulated Inorganic Series (IOCs)	1 per	1 yrs.	3/30/96	per	yrs.	
(f) Nitrate						
(g) Nitrites	1		3/30/96			
UNRegulated Inorganic Series (IOCs)	1		3/30/96			
Regulated Volatile Organic Series (VOCs)	4 per	3 yrs.	1/31/97	1 per	3 yrs.	1/31/00
UNRegulated Volatile Organic Series (VOCs)	1		1/31/97			
(h) Regulated Synthetic Organic Series (SOCs)	4 per	3 yrs.	1/31/97	1 per	3 yrs.	1/31/00
(i) UNRegulated Synthetic Organic Series (SOCs)	1		1/31/97			

*Footnotes:*

- (a) *Reduced Monitoring Frequency = After completing sampling listed under “Initial Monitoring Frequency” and results are satisfactory, the PWS shall sample at the frequency specified under “Reduced Monitoring Frequency”.*
- (b) *Analytical Series/Analyte . . . . . = See “Operation Permit—Attachments” for definition of analytical series, list of contaminants within each series and MCLs.*
- (c) *# Samples . . . . . = the number of consecutive calendar quarters (3 month period) in which samples must be taken. [e.g.: 4 = 1 sample must be taken every quarter, for 4 consecutive quarters]*
- (d) *Years . . . . . = the period of time, in years, when the specified number of samples shall be taken again. [e.g.: 4 per 3 yrs. = 4 consecutive quarterly samples taken every 3 years]*
- (e) *Due Date . . . . . = the point in time when ALL sampling must be completed. [e.g.: 4 per 3 yrs. due 12/31/00 = 4 consecutive quarterly samples required; taken between 1/1/00 and 12/31/00]*
- (f) *Nitrates . . . . . = If no monitoring frequency is given, an increased monitoring frequency will be specified in Part III, next page.*
- (g) *If column (d) is blank (or ONLY specified), only one sample is required and due by the date specified*
- (h) *This “Series” shall be considered to mean SOC A/S groups #1 through #8 as listed in “Operation Permits—Attachment”*
- (i) *This “Series” shall be considered to mean SOC A/S groups #1 through #4.*

### Monitoring Requirements

#### Source/Entry Point(s) (S/EPs) at INCREASED Frequency

*The following samples shall be taken at the frequency specified, from the SE/P(s) as listed below:*

S/EP #:1 Described as: Iowa River & WLS #1, 2 & 3

ANALYTICAL SERIES	CONTAMINANT		SAMPLING FREQUENCY	Comments
	Code #	Name		
I0C REG	1040	Nitrate (as N)	1 / MONTH	:
VOC REG	2961	Toluene	1 / QUARTER	:
	2974	Xylenes (Total)	1 / QUARTER	:

### Self-Monitoring Requirements

#### List of Self-Monitoring Requirements:

*As prescribed by 567—43.7(455B) IAC and Chapter 43 IAC Table B and as a condition of this operation permit, the permittee shall monitor for the parameter(s) listed below. Where indicated in the table below, the permittee shall also report, on a monthly basis, the results of the self-monitoring to the Department's Field Office (FO #6) in Washington.*

*Monthly Operation Report forms may be obtained by contacting the Field Office at 319/653-2135*

Self-Monitoring Parameter	Frequency	Location	Description of data that must be reported to FO
NITRATE (as N)	Daily	Raw, Final	Raw, Finished Nitrate; Public Notice of Acute MCL as required.

*Special Permit Conditions: The permittee shall monitor the drinking water nitrate concentration daily to ensure that the nitrate concentration is maintained below the maximum contaminant level (MCL) of 10 mg/l as N. The nitrate concentration shall be monitored daily in the raw and finished drinking water using a nitrate field test kit (or test method of equal or better sensitivity) and in compliance with the requirements of 567 IAC 43.7(1)(b)(3). The permittee shall report the results of the daily monitoring to the Department Field Office monthly, reporting the daily record of total water used and daily measurements of nitrates of the raw and finished water. The permittee shall notify the Department within 48 hours and the public within 72 hours of an Acute MCL violation by the methods prescribed and in compliance with the requirements of 567 IAC 41.10(455B).*

PUBLIC WATER SUPPLY OPERATION PERMIT  
GENERAL PERMIT CONDITIONS

1. ADMINISTRATIVE RULES

Rules of this Department which govern your facility operation, in connection with this permit, are published in 567 IAC Chapters 40, 41, and 43.

2. NOTICE OF CHANGED CONDITIONS

You are required to report any changes in existing conditions or information on which this permit is based. If any modification of, addition to, or construction of this water system is to be made, you must first obtain a written construction permit from this Department, in accordance with 567 IAC Chapters 40, 41, and 43.

3. PERMIT MODIFICATION, SUSPENSION, OR REVOCATION

- a. If a change in a standard is established by the Primary Drinking Water Regulations, this permit may be modified in accordance with the new standard.
- b. This permit may be modified by the Department due to changes in the conditions or information on which this permit is based either by issuance of a revised operation permit or, in instances pertaining to a specific contaminant and its monitoring frequency, by letter.
- c. If a contaminant level is exceeded in your drinking water and there are no immediate, unreasonable risks to the health of persons served by the system, this permit will be modified to obtain compliance on a compliance schedule {567 IAC 43.2(4)}
- d. This permit may be modified, suspended, or revoked for causes specified in 567 IAC 43.2(7).

4. INSPECTION OF PREMISES, RECORDS, EQUIPMENT, AND METHODS

You are required to permit authorized Department personnel to survey and inspect any construction, operation, and records of your water supply system in accordance with the Iowa Code, section 455B.174.

5. OPERATION AND MAINTENANCE

All facilities and control systems shall be operated as efficiently as possible and maintained in good working order in accordance with 567 IAC Chapter 43. A sufficient number of staff, adequately trained and knowledgeable in the operation of your facility, shall be retained to achieve compliance with the terms of this permit.

6. REPORTING, PUBLIC NOTIFICATION, AND RECORDKEEPING REQUIREMENTS

- a. You are required to report all test, measurement, or analysis results to the Department in accordance with 567 IAC 41.10(1)“a”.
- b. You are required to report to the Department within 48 hours any violation of the drinking water regulations or monitoring requirements in accordance with 567 IAC 41.10(1)“b”.
- c. You are required to notify the public of any violation of the drinking water regulations or monitoring requirements in accordance with 567 IAC 41.10(2).
- d. Within 10 days of notifying the public, you are required to provide proof of such action to the Department in accordance with 567 IAC 41.10(1)“c”.
- e. You are required to maintain on file records of analyses, of action to correct violation of any of the drinking water regulations, correspondence, and permits for periods of 5 to 12 years depending on the nature of the records, in accordance with 567 IAC 41.106(6).

7. TRANSFER OF TITLE

If title to your facility or any part of it is transferred, the new owner shall be subject to this permit. You are required to notify the new owner of the requirements of this permit in writing prior to such transfer of title. The Director of this Department shall be notified in writing of such transfer within 30 days (567 IAC 43.2).

8. SEVERABILITY

If any provision or application of any provision to any circumstances is found to be invalid by this Department or by a court of law, all other provisions and conditions shall remain effective.

9. APPLICATION OF OTHER AUTHORITY

This permit does not relieve you of the responsibilities to comply with all local, state, and federal laws, ordinances, or other legal requirements applying to the operation of your facility.

**Operation Permit—Attachment  
SDWA Contaminants  
List of Chemicals by Analytical Series (A/S)**

#	Name	MCL/HA (mg/l)	Regulatory Status	2nd Name and/or comments
<i>Micro</i>				
3000	Coliform Bacteria	>1+ or 5%	REG	*(Total & Fecal Coliform based no. samples taken / 41.2(1)(b))
<i>Radionuclides</i>				
4000	Gross Alpha Excluding Uranium	15*	REG	*(MCL in pCi/l)
4010	Radium 226 & 228, Combined	5*	REG	*(MCL in pCi/l)
<i>TTHMs</i>				
2950	Trihalomethanes (Total)	0.10	REG	TTHM
<i>Lead/Copper</i>				
1022	Copper	1.3*	REG	*(Action Level)
1030	Lead	0.015*	REG	*(Action Level)
<i>Phy</i>				
0100	Turbidity	.5	REG	
<i>IOC-----Regulated-----A/S#1</i>				
1074	Antimony (total)	0.006	V-REG	
1005	Arsenic	0.05	REG	
1010	Barium	2	REG	
1075	Beryllium (total)	0.004	V-REG	
1015	Cadmium	0.005	REG	
1020	Chromium	0.1	REG	
1025	Fluoride	4.0	REG	
1035	Mercury	0.002	REG	
1036	Nickel	0.1	V-REG	
1045	Selenium	0.05	REG	
1052	Sodium	-		
1085	Thallium (total)	0.002	V-REG	
<i>Nitrate/Nitrite-----Regulated</i>				
1040	Nitrate (as N)	10	REG	
1041	Nitrite (as N)	1	REG	
<i>IOC-----Unregulated-----A/S#1</i>				
1055	Sulfate		UNREG	
<i>IOC-----Regulated------(w)</i>				
1094	Asbestos	7MF/L*	REG	*(MCL = 7 million fibers/l)
1024	Cyanide	0.2	V-REG	

#	Name	MCL/HA (mg/l)	Regulatory Status	2nd Name and/or comments
<b>VOCs-----Regulated-----A/S#1</b>				
2990	Benzene	0.005	REG	
2982	Carbon Tetrachloride	0.005	REG	
2968	o-Dichlorobenzene	0.6	REG	
2969	p-Dichlorobenzene	0.075	REG	
2980	1,2-Dichloroethane	0.005	REG	(detect=Vinyl Cl~ monitoring)
2380	cis-1,2-Dichloroethylene	0.07	REG	
2977	1,1-Dichloroethylene	0.007	REG	(detect=Vinyl Cl~ monitoring)
2979	trans-1,2 Dichloroethylene	0.1	REG	
2964	Dichloromethane	0.005	V-REG	Methylene Chloride
2325	1,2-Dichloropropane	0.005	REG	
2992	Ethylbenzene	0.7	REG	
2989	Monochlorobenzene	0.1	REG	Chlorobenzene
2996	Styrene	0.1	REG	
2987	Tetrachloroethylene	0.005	REG	
2991	Toluene	1	REG	
2378	1,2,4-Trichlorobenzene	0.07	V-REG	
2981	1,1,1-Trichloroethane	0.2	REG	(detect=Vinyl Cl~ monitoring)
2985	1,1,2-Trichloroethane	0.005	V-REG	
2984	Trichloroethylene	0.005	REG	(detect=Vinyl Cl~ monitoring)
2976	Vinyl Chloride	0.002	REG	
2974	Xylenes (Total)	10	REG	
<b>VOCs-----Unregulated-----A/S#1</b>				
2993	Bromobenzene		UNREG	
2943	Bromodichloromethane	0.1	UNREG	(THM component)
2942	Bromoform	0.1	UNREG	(THM component)
2214	Bromomethane	0.01*	UNREG	*(HA)
2944	Chlorodibromomethane	0.1	UNREG	Dibromochloromethane (THM cmp)
2216	Chloroethane		UNREG	
2941	Chloroform	0.1	UNREG	(THM component)
2210	Chloromethane	0.003*	UNREG	*(HA)
2965	o-Chlorotoluene	0.1*	UNREG	*(HA)
2966	p-Chlorotoluene	0.1*	UNREG	*(HA)
2295	Dibromomethane		UNREG	
2967	m-Dichlorobenzene	0.6	UNREG	
2978	1,1-Dichloroethane		UNREG	
2341	1,3-Dichloropropane		UNREG	
2416	2,2-Dichloropropane		UNREG	
2413	1,3-Dichloropropene	0.02*	UNREG	1,3-Dichloropropylene (2655HA)
2500	1,1-Dichloropropene		UNREG	
2986	1,1,1,2-Tetrachloroethane	0.07*	UNREG	*(HA)
2988	1,1,2,2-Tetrachloroethane		UNREG	
2361	1,2,3-Trichloropropane	0.04*	UNREG	*(HA)

#	Name	MCL/HA (mg/l)	Regulatory Status	2nd Name and/or comments
<b>VOCs-----Discretionary-----A/S#1</b>				
2430	Bromochloromethane	0.09*	DISC	*(HA)
2422	n-Butylbenzene		DISC	
2426	tert-Butylbenzene		DISC	
2428	sec-Butylbenzene		DISC	
2212	Dichlorodifluoromethane	1*	DISC	*(HA)
2246	Hexachlorobutadiene	0.001*	DISC	*(HA)
2994	Isopropylbenzene		DISC	
2030	p-Isopropyltoluene		DISC	p-Cymene
2248	Naphthalene	0.02*	DISC	*(HA)
2998	n-Propylbenzene		DISC	
2420	1,2,3-Trichlorobenzene		DISC	
2218	Trichlorofluoromethane		DISC	Fluorotrichloromethane
2418	1,2,4-Trimethylbenzene		DISC	
2424	1,3,5-Trimethylbenzene		DISC	
<b>VOCs-----Certified</b>				
2265	Acrylamide	TT*	REG	*(Treatment Technique)
2257	Epichlorohydrin	TT*	REG	*(Treatment Technique)
<b>SOCs-----Regulated-----A/S#1</b>				
2959	Chlordane	0.002	REG	
2005	Endrin	0.0002	REG	
2065	Heptachlor	0.0004	REG	H-34, Heptox
2067	Heptachlor epoxide	0.0002	REG	
2274	Hexachlorobenzene	0.002	V-REG	(HCB)
2042	Hexachlorocyclopentadiene	0.05	V-REG	
2010	Lindane	0.0002	REG	gamma-BHC,1,2,3,4,5,6 hexachlo
2015	Methoxychlor	0.04	REG	1,1,1-trichloro-2,2-bis[p-meth
2383	Polychlorinated biphenyls Total	0.0005	REG	(PCB)
2020	Toxaphene	0.003	REG	C10H10Cl8-Technical chlorinate
<b>SOCs-----Unregulated-----A/S#1</b>				
2356	Aldrin	0.0002*	UNREG	*(HA)
2070	Dieldrin	0.0002*	UNREG	*(HA)
<b>SOCs-----Regulated-----A/S#2</b>				
2047	Aldicarb	0.002	REG	
2044	Aldicarb sulfone	0.002	REG	
2043	Aldicarb sulfoxide	0.004	REG	
2046	Carbofuran	0.04	REG	Rudan 4F
2036	Oxamyl	0.2	V-REG	Vydate
<b>SOCs-----UnRegulated-----A/S#2</b>				
2066	Carbaryl	0.7*	UNREG	Sevin *(HA)
2048	3-Hydroxycarbofuran		UNREG	
2049	Methomyl	0.2*	UNREG	*(HA)

#	Name	MCL/HA (mg/l)	Regulatory Status	2nd Name and/or comments
<i>SOCs-----Regulated-----A/S#3</i>				
2105	2,4-D	0.07	REG	2,4-Dichlorophenoxyacetic acid
2031	Dalapon	0.2	V-REG	
2041	Dinoseb	0.007	V-REG	
2326	Pentachlorophenol	0.001	REG	
2040	Picloram	0.5	V-REG	Tordan
2110	2,4,5-TP (Silvex)	0.05	REG	2,4,5-Trichlorophenoxypropioni
<i>SOCs-----Unregulated-----A/S#3</i>				
2440	Dicamba	0.2*	UNREG	Banvel *(HA)
<i>SOCs-----Regulated-----A/S#4</i>				
2051	Atachlor	0.002	REG	Lasso
2050	Atrazine	0.003	REG	Atrex
2037	Simazine	0.004	V-REG	
<i>SOCs-----Unregulated-----A/S#4</i>				
2076	Butachlor		UNREG	
2045	Metolachlor	0.1*	UNREG	Dual *(HA)
2595	Metribuzin	0.2*	UNREG	Sencor *(HA)
2077	Propachlor	0.09*	UNREG	Ramrod *(HA)
<i>SOCs-----Regulated-----A/S#5</i>				
2931	1,2-Dibromo-3-Chloropropane	0.0002	REG	DBCP, Nemaforme
2946	Ethylene dibromide	0.00005	REG	EDB, Bromofume
<i>SOCs-----Regulated-----A/S#6</i>				
2035	Di(2-ethylhexyl)adipate	0.4	V-REG	Adipates(diethylhexyl)
2039	Di(2-ethylhexyl)phthalates	0.006	V-REG	Phthalates
<i>SOCs-----Regulated-----A/S#7</i>				
2306	Benzo (a) pyrene	0.0002	V-REG	(PAH)
<i>SOCs-----Regulated-----A/S#8</i>				
2034	Glyphosate	0.7	V-REG	Roundup
<i>SOCs---Regulated---A/S#9---(w)</i>				
2032	Diquat	0.02	V-REG	
<i>SOCs---Regulated---A/S#10---(w)</i>				
2033	Endothall	0.1	V-REG	
<i>SOCs---Regulated---A/S#11---(w)</i>				
2063	2,3,7,8-TCDD	3x10 <sup>-8</sup>	V-REG	Dioxin