MDE MONITORING PARAMETERS - TABLE I

Volatile Organic Compound Monitoring Parameters	Units	PQL	MCL	NCTS	Cleanup STD
Acetone	µg/L	5.0			1400
Acrylonitrile	µg/L	5.0		0.51	
Benzene	µg/L	1.0	5.0	22	5.0
Bromochloromethane	µg/L	1.0			
Bromomethane	µg/L	1.0			0.75
2-Butanone	µg/L	5.0			560
Carbon disulfide	µg/L	1.0			81
Carbon tetrachloride	µg/L	1.0	5.0	2.3	5.0
Chlorobenzene	µg/L	1.0	100	130	100
Chloroethane	µg/L	1.0			
Chloromethane	µg/L	1.0			19
1,2-Dibromo-3-chloropropane; (DBCP)	µg/L	0.04	0.2		0.20
1,2-Dibromoethane; (EDB)	µg/L	0.04	0.05		0.050
Dibromomethane	µg/L	1.0			
1,2-Dichlorobenzene	µg/L	1.0	600	420	
1,4-Dichlorobenzene	µg/L	1.0	75	63	
trans-1,4-Dichloro-2-butene	µg/L	5.0			
1,1-Dichloroethane	µg/L	1.0			2.8
1,2-Dichloroethane	µg/L	1.0	5.0	3.8	5.0
1,1-Dichloroethene	µg/L	1.0	7.0	330	7.0
cis-1,2-Dichloroethene	µg/L	1.0	70		70
trans-1,2-Dichloroethene	µg/L	1.0	100	140	100
Methylene chloride	µg/L	1.0	5.0	46	5.0
Methyl *tert*-butyl ether; (MTBE)	µg/L	2.0			20
1,2-Dichloropropane	µg/L	1.0	5.0	5.0	5.0
trans-1,3-Dichloropropene	µg/L	1.0			
cis-1,3-Dichloropropene	µg/L	1.0			
Ethylbenzene	µg/L	1.0	700	530	700
2-Hexanone	µg/L	5.0			
Iodomethane	µg/L	1.0			
4-Methyl-2-pentanone	µg/L	5.0			630
Styrene	µg/L	1.0	100		100
1,1,1,2-Tetrachloroethane	µg/L	1.0			
1,1,2,2-Tetrachloroethane	µg/L	1.0		1.7	0.076
Tetrachloroethene; (PCE)	µg/L	1.0	5.0	6.9	5.0
Toluene	µg/L	1.0	1000	1300	1000
1,1,1-Trichloroethane	µg/L	1.0	200	200	200
1,1,2-Trichloroethane	µg/L	1.0	5.0	5.9	5.0
Trichloroethene; (TCE)	µg/L	1.0	5.0	25	5.0
Trichlorofluoromethane; (CFC-11)	µg/L	1.0			
1,2,3-Trichloropropane	µg/L	1.0			
Vinyl acetate	µg/L	1.0			
Vinyl chloride	µg/L	1.0	2.0	0.25	2.0
o-Xylene	µg/L	1.0	10,000		10,000
m-+*p*-Xylenes	µg/L	1.0	(total)		
Bromodichloromethane	µg/L	1.0			80
Dibromochloromethane	µg/L	1.0	80	80	80
Bromoform	µg/L	1.0	(total)	(total)	80
Chloroform	µg/L	1.0			80

PQL = Practical Quantitation Limit
MCL = Maximum Contaminant Level
NCTS = Numerical Criteria for Toxic Substances in Surface Waters
Cleanup STD = MDE Cleanup Standards for Groundwater (for Assessment Monitoring)
µg/L = microgram per liter (parts per billion, ppb)

MDE MONITORING PARAMETERS - TABLE I (cont.)

Per- and Polyfluoroalkyl Substances (PFAS)	Units	PQL	MCL	HI MCL[1]	HBWC
Perfluorooctanoic acid (PFOA)	ng/L	4.0	4.0		
Perfluorooctanesulfonic acid (PFOS)	ng/L	4.0	4.0		
Perfluorononanoic acid (PFNA)	ng/L	4.0	10	1.0 (unitless)	10
Perfluorohexanesulfonic acid (PFHxS)	ng/L	3.0	10		10
Hexafluoropropylene oxide dimer acid (HFPO-DA; GenX)	ng/L	5.0	10		10
Perfluorobutanesulfonic acid (PFBS)	ng/L	3.0			2000

PQL = Practical Quantitation Limit (Method 1633)
MCL = Maximum Contaminant Level
HI MCL = Hazard Index MCL (Mixture of two or more: PFNA, PFHxS, HFPO-DA, and PFBS)
HBWC = Health-Based Water Concentrations
ng/L = nanogram per liter (parts per trillion, ppt)

Note:
1 – A running annual average hazard index value greater than 1.0 is a violation of the HI MCL. Hazard Index level for two or more of four PFAS as a mixture: PFNA, PFHxS, HFPO-DA, and PFBS.
Formula: Hazard Index Value = ((PFNA ng/L)/(10 ng/L)) + ((PFHxS ng/L)/(10 ng/L)) + (GenX ng/L)/(10 ng/L)) + ((PFBS ng/L)/(2000 ng/L))

To calculate the Hazard Index, follow the steps:

1. Step 1. Divide the measured concentration of HFPO-DA(GenX) by its health-based value of 10 ppt.
2. Step 2. Divide the measured concentration of PFBS by its health- based value of 2000 ppt.
3. Step 3. Divide the measured concentration of PFNA by its health-based value of 10 ppt.
4. Step 4. Divide the measured concentration of PFHxS by its health-based value of 10 ppt.
5. Step 5. Add the ratios from steps 1, 2, 3 and 4 together using the Health Index Value
6. Step 6. Compliance with the Hazard Index MCL is determined by a running annual average. To determine the running annual average, repeat steps 1-5 for each sample collected in the past year and calculate the average of these Hazard Index results.
7. Step 7. If the running annual average Hazard Index is greater than the MCL of 1, it is a violation of the Hazard Index MCL

For Reference: Understanding the Final PFAS National Primary Drinking Water Regulation Hazard Index Maximum Contaminant Level:
https://www.epa.gov/system/files/documents/2024-04/pfas-npdwr_fact-sheet_hazard-index_4.8.24.pdf

MDE MONITORING PARAMETERS - TABLE II

Elements & Indicator Monitoring Parameters	Units	PQL	MCL / SMCL	NCTS[1]	Cleanup STD
Total Antimony	µg/L	2	6	5.6	6.0
Total Arsenic	µg/L	2	10	0.18	10
Total Barium	µg/L	10	2000	1000	2000
Total Beryllium	µg/L	2	4	4.0	4.0
Total Cadmium	µg/L	4	5	0.25	5.0
Total Calcium*	µg/L	80			
Total Chromium	µg/L	10	100	100	100
Total Cobalt*	µg/L	10			
Total Copper+	µg/L	10	1300 (AL)	9	1300
Total Iron**	µg/L	5	300		1400
Total Lead	µg/L	2	15 (AL)	2.5	15
Total Magnesium*	µg/L	4			
Total Manganese**	µg/L	10	50		43
Total Mercury	µg/L	0.2	2	0.77	2.0
Total Nickel+	µg/L	11	100	52	39
Total Potassium*	µg/L	390			
Total Selenium	µg/L	35	50	5	50
Total Silver**	µg/L	10	100	3.2	9.4
Total Sodium*	µg/L	200			
Total Thallium	µg/L	2	2	0.24	2.0
Total Vanadium*	µg/L	10			8.6
Total Zinc**	µg/L	10	5000	120	600
Alkalinity*	mg/L	1.0			
Ammonia (as N)*	mg/L	1.0		See note[2]	
Chemical oxygen demand*	mg/L	10			
Chloride**	mg/L	0.39	250		
Hardness*	mg/L	0.50			
Nitrate (as N)	mg/L	0.06	10		
pH**	SU	0.1	6.5-8.5		
Specific conductance*	µS/cm	1.0			
Sulfate**	mg/L	0.38	250		
Total dissolved solids**	mg/L	10	500		
Turbidity	NTU	0.11	5		

Primary MCL
* = No MCL
* *= Secondary MCL
+ = No MCL but recommended level by EPA

PQL = Practical Quantitation Limit
MCL = Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
NCTS = Numerical Criteria for Toxic Substances in Surface Waters
Cleanup STD = MDE Cleanup Standards for Groundwater (for Assessment Monitoring)
AL = Action Level
µg/L = microgram per liter (parts per billion, ppb)
mg/L = milligram per liter (parts per million, ppm)
µS/cm = microsiemens per centimeter
NTU = Nephelometric Turbidity Unit
SU = Standard Unit (logarithmic unit)

Note:
1 - Per COMAR 26.08.02.03-2F(1) - The metals shall be measured as dissolved metal …
2 - See COMAR 26.08.02.03-2 for ammonia