



Maryland
Department of
the Environment

Wes Moore, Governor
Aruna Miller, Lt. Governor

Serena McIlwain, Secretary
Suzanne E. Dorsey, Deputy Secretary

January 2, 2024

Dear Facility Operator:

The Maryland Department of the Environment (“Department”) is providing this notice as to a change in monitoring and reporting requirements. As of July 1, 2024, the Department will require all facilities conducting monitoring regulated under Code of Maryland Regulations (COMAR) 26.04.07.09, 26.04.07.17, 26.04.07.20 and/or 40 CFR Part 258 to analyze for PFOA, PFOS, PFHxS, PFNA, PFBS, and HFPO-DA (commonly referred to as a GenX Chemical). This requirement applies to all of the monitoring wells and surface water points in your network, and also sampling of leachate being collected at your facility on the same frequency.

There are multiple methods available to reliably measure and quantify the six PFAS at or below their proposed MCLs. The EPA Methods used are 533, 537.1, 8327, and/or 1633. The analysis used shall meet a practical quantitation limit of 2 ppt for all PFAS parameters. The enclosed Table I and Table II shall replace the existing Table I and Table II in the current facility permit.

As of July 1, 2024, you will be required to utilize EPA Method 533, 537.1, 8327, and/or 1633 (or equivalent) to analyze for PFOA, PFOS, PFHxS, PFNA, PFBS, and HFPO-DA. Please add these requirements to your facility monitoring plan.

If you are unable to comply with the July 1, 2024 deadline or have questions concerning this matter, please contact Andrew Grenzer, Chief, Solid Waste Operations Division, at (410) 537-3315 or andrew.grenzer@maryland.gov.

Sincerely,

Andrew Grenzer, Chief
Solid Waste Operations Division

Enclosure

cc: Tyler Abbott, Director, Land and Materials Administration (LMA)
Brian Coblentz, Chief, Solid Waste Compliance Division (SWCD), SWP/LMA

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	
<i>trans</i> -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
<i>cis</i> -1,2-Dichloroethene	µg/L	1.0	70		70
<i>trans</i> -1,2-Dichloroethene	µg/L	1.0	100	140	100
Methylene chloride	µg/L	1.0	5.0	46	5.0
Methyl <i>tert</i> -butyl ether; (MTBE)	µg/L	2.0			20
1,2-Dichloropropane	µg/L	1.0	5.0	5.0	5.0
<i>trans</i> -1,3-Dichloropropene	µg/L	1.0			
<i>cis</i> -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
<i>o</i> -Xylene	µg/L	1.0	10,000 (total)		10,000
<i>m</i> -+ <i>p</i> -Xylenes	µg/L	1.0			
Bromodichloromethane	µg/L	1.0	80 (total)	80 (total)	80
Dibromochloromethane	µg/L	1.0			80
Bromoform	µg/L	1.0			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

MDE MONITORING PARAMETERS - TABLE II

Elements & Indicator Monitoring Parameters	Units	PQL	MCL	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

AL = Action Level
 Cleanup STD = MDE Cleanup Standards for Groundwater
 MCL = Maximum Contaminant Level
 NCTS = Numerical Criteria for Toxic Substances in Surface Waters
 NTU = Nephelometric Turbidity Unit
 PQL = Practical Quantitation Limit
 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

MDE MONITORING PARAMETERS - TABLE I (cont.)

Per- and Polyfluoroalkyl Substances (PFAS)	Units	PQL	MCL	HI MCL ¹	HBWC
Perfluorooctanoic acid (PFOA)	ng/L	2.0	4.0		
Perfluorooctanesulfonic acid (PFOS)	ng/L	2.0	4.0		
Perfluorononanoic acid (PFNA)	ng/L	2.0		1.0 (unitless)	10
Perfluorohexanesulfonic acid (PFHxS)	ng/L	2.0			9.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	2.0			2000
Hexafluoropropylene oxide dimer acid (HFPO-DA; GenX)	ng/L	2.0			10

PQL = Practical Quantitation Limit (Method 1633)

MCL = Maximum Contaminant Level

HI MCL = Hazard Index MCL

HBWC = Health Based Water Concentrations

Note:

1 - A running annual average hazard index value greater than 1.0 is a violation of the HI MCL.

Formula: Hazard Index Value = (GenX ng/L)/(10 ng/L) + ((PFBS ng/L)/(2000 ng/L)) + ((PFNA ng/L)/(10 ng/L)) + ((PFHxS ng/L)/(9 ng/L))