

Correction Note on Appendix F to the 2015 Greenbook:

1. Parameters Required for Complete Well Analysis for Nontransient Noncommunity Water Systems, Volatile Organic Chemicals
 - a. “Tetrachloroethylene (or -ethylene, perchloroethylene)” should read “Tetrachloroethene (or -ethylene, perchloroethylene),” as captured in the appendix to Ohio Administrative Code rule 3745-9-09.

2. Parameters Required for Complete Well Analysis for Transient Noncommunity Water Systems, Inorganic Chemicals
 - a. “Antimony Total, Sb” is not required for transient noncommunity systems, as captured in the appendix to Ohio Administrative Code rule 3745-9-09.

OHIO EPA DIVISION OF DRINKING AND GROUND WATERS
PARAMETERS REQUIRED FOR COMPLETE WELL ANALYSIS FOR
COMMUNITY WATER SYSTEMS

PARAMETER	MCL / Standard	Reporting Limit
INORGANIC CHEMICALS (IOCs)		
Alkalinity Total, as CaCO ₃	No standard	None
Antimony Total, Sb	0.006 mg/L (6 µg/L)	4.0 µg/L
Arsenic Total, As	0.010 mg/L (10 µg/L)	3.0 µg/L
Barium Total, Ba	2 mg/L (2000 µg/L)	300.0 µg/L
Beryllium Total, Be	0.004 mg/L (4 µg/L)	1.0 µg/L
Cadmium Total, Cd	0.005 mg/L (5 µg/L)	1.0 µg/L
Calcium Total, Ca	No standard	None
Chloride, Cl	250 mg/L SMCL	None
Chromium Total, Cr	0.1 mg/L (100 µg/L)	10.0 µg/L
Copper Total, Cu	1.3 mg/L (1,300 µg/L) AL	50.0 µg/L
Cyanide, CN	0.2 mg/L (200 µg/L)	20 µg/L
Fluoride Total, F	4.0 mg/L	0.5 µg/L
Iron Total, Fe	0.3 mg/L (300 µg/L) SMCL	None
Lead Total, Pb	0.015 mg/L (15 µg/L) AL	5.0 µg/L
Magnesium Total, Mg	No standard	None
Manganese Total, Mn	0.05 mg/L (50 µg/L) SMCL	None
Mercury Total, Hg	0.002 mg/L (2 µg/L)	0.5 µg/L
Nickel Total, Ni	No standard	20.0 µg/L
Nitrate, NO ₃ (as N)	10 mg/L	0.5 mg/L
Nitrate-Nitrite, NO ₃ -NO ₂ (as N)	10 mg/L	0.5 mg/L
Nitrite, NO ₂ (as N)	1 mg/L	0.1 mg/L
pH, Lab S.U.	6.5 – 8.5 SMCL	None
Selenium Total, Se	0.05 mg/L (50 µg/L)	5.0 µg/L
Silver Total, Ag	0.1 mg/L (100 µg/L) SMCL	None
Sodium Total, Na	No standard	None
Sulfate, SO ₄	250 mg/L SMCL	None
Thallium Total, Tl	0.002 mg/L (2 µg/L)	1.5 µg/L
Total Dissolved Solids	500 mg/L SMCL	None
Zinc Total, Zn	5 mg/L SMCL	None
RADIOLOGICALS (Rads)		
Gross Alpha	15 pCi/L MCL / 5 pCi/L AL	3 pCi/L
Gross Beta**	4 mrem/yr MCL / 50 pCi/L AL	4 pCi/L
Radium 228	5 pCi/L (sum with 226 result)	1 pCi/L
Radium 226***	5 pCi/L (sum with 228 result)	1 pCi/L
Uranium****	30 µg/L (20 pCi/L)	1 µg/L
SYNTHETIC ORGANIC CHEMICALS (SOCs)		
Atrazine	0.003 mg/L (3 µg/L)	0.3 µg/L
Alachlor	0.002 mg/L (2 µg/L)	0.2 µg/L
Simazine	0.004 mg/L (4 µg/L)	0.35 µg/L
BACTERIA STANDARDS		
Total Coliform (2 samples collected at least 30 min. apart)	1 Positive = Standard Exceeded	

VOLATILE ORGANIC CHEMICALS (VOCs)	
REGULATED	MCL / Standard
Benzene	0.005 mg/L (5 µg/L)
Carbon Tetrachloride (tetrachloromethane)	0.005 mg/L (5 µg/L)
cis-1,2-Dichloroethene (or -ethylene)	0.07 mg/L (70 µg/L)
Dichloromethane (methylene chloride)	0.005 mg/L (5 µg/L)
1,1-Dichloroethene (or -ethylene, 1,1-DCE)	0.007 mg/L (7 µg/L)
1,2-Dichloroethane	0.005 mg/L (5 µg/L)
1,2-Dichloropropane	0.005 mg/L (5 µg/L)
Ethylbenzene	0.7 mg/L (700 µg/L)
Monochlorobenzene (chlorobenzene)	0.1 mg/L (1 µg/L)
ortho-Dichlorobenzene (1,2-Dichlorobenzene)	0.6 mg/L (600 µg/L)
para-Dichlorobenzene (1,4-Dichlorobenzene)	0.075 mg/L (75 µg/L)
Styrene	0.1 mg/L (100 µg/L)
Tetrachloroethylene (or -ethylene, perchloroethylene)	0.005 mg/L (5 µg/L)
Toluene	1 mg/L (1,000 µg/L)
trans-1,2-Dichloroethene (or -ethylene)	0.1 mg/L (100 µg/L)
Trichloroethene (or -ethylene)	0.005 mg/L (5 µg/L)
1,1,1-Trichloroethane (methyl chloroform)	0.2 mg/L (200 µg/L)
1,2,4-Trichlorobenzene	0.07 mg/L (70 µg/L)
1,1,2-Trichloroethane	0.005 mg/L (5 µg/L)
Vinyl Chloride	0.002 mg/L (2 µg/L)
Xylenes (total)	10 mg/L (10,000 µg/L)

NOTE: All samples must be analyzed by a certified laboratory in accordance with OAC Chapter 3745-89. All applicable sample results must be received and approved by the Ohio EPA before the well can be considered for use as a public water source. Additional analyses beyond those listed may be required.

- ** Analysis of all major radioactive constituents required if gross beta result exceeds 50 pCi/L.
- *** Radium 226 required if the gross alpha result exceeds 5 pCi/L or radium 228 exceeds 1 pCi/L.
- **** Uranium required if the gross alpha result exceeds 15 pCi/L

ABBREVIATIONS:

- MCL - Maximum Contaminant Level
- MCLG - Maximum Contaminant Level Goal
- mg/L - milligrams per liter (parts per million -ppm) = 1,000 µg/L
- µg/L - micrograms per liter (parts per billion - ppb) = .001 mg/L
- MFL - million fibers per liter
- pCi/L - picocuries per liter
- SMCL - Secondary Maximum Contaminant Level; Advisory limit only
- AL - Action Level; requires action to be taken mrem/yr - millirem per year

OHIO EPA DIVISION OF DRINKING AND GROUND WATERS
PARAMETERS REQUIRED FOR COMPLETE WELL ANALYSIS FOR
NONTRANSIENT NONCOMMUNITY WATER SYSTEMS

PARAMETER	MCL / Standard	Reporting Limit
INORGANIC CHEMICALS (IOCs)		
Alkalinity Total, as CaCO ₃	No standard	None
Antimony Total, Sb	0.006 mg/L (6 µg/L)	4.0 µg/L
Arsenic Total, As	0.010 mg/L (10 µg/L)	3.0 µg/L
Barium Total, Ba	2 mg/L (2000 µg/L)	300.0 µg/L
Beryllium Total, Be	0.004 mg/L (4 µg/L)	1.0 µg/L
Cadmium Total, Cd	0.005 mg/L (5 µg/L)	1.0 µg/L
Calcium Total, Ca	No standard	None
Chloride, Cl	250 mg/L SMCL	None
Chromium Total, Cr	0.1 mg/L (100 µg/L)	10.0 µg/L
Copper Total, Cu	1.3 mg/L (1,300 µg/L) AL	50.0 µg/L
Cyanide, CN	0.2 mg/L (200 µg/L)	20 µg/L
Fluoride Total, F	4.0 mg/L	0.5 µg/L
Iron Total, Fe	0.3 mg/L (300 µg/L) SMCL	None
Lead Total, Pb	0.015 mg/L (15 µg/L) AL	5.0 µg/L
Magnesium Total, Mg	No standard	None
Manganese Total, Mn	0.05 mg/L (50 µg/L) SMCL	None
Mercury Total, Hg	0.002 mg/L (2 µg/L)	0.5 µg/L
Nickel Total, Ni	No standard	20.0 µg/L
Nitrate, NO ₃ (as N)	10 mg/L	0.5 mg/L
Nitrate-Nitrite, NO ₃ -NO ₂ (as N)	10 mg/L	0.5 mg/L
Nitrite, NO ₂ (as N)	1 mg/L	0.1 mg/L
pH, Lab S.U.	6.5 - 8.5 SMCL	None
Selenium Total, Se	0.05 mg/L (50 µg/L)	5.0 µg/L
Silver Total, Ag	0.1 mg/L (100 µg/L) SMCL	None
Sodium Total, Na	No standard	None
Sulfate, SO ₄	250 mg/L SMCL	None
Thallium Total, Tl	0.002 mg/L (2 µg/L)	1.5 µg/L
Total Dissolved Solids	500 mg/L SMCL	None
Zinc Total, Zn	5 mg/L SMCL	None
RADIOLOGICALS (Rads)		
Gross Alpha	15 pCi/L MCL / 5 pCi/L AL	3 pCi/L
Gross Beta**	4 mrem/yr MCL / 50 pCi/L AL	4 pCi/L
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1,2-Dichloroethane	0.005 mg/L (5 µg/L)
1,2-Dichloropropane	0.005 mg/L (5 µg/L)
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Monochlorobenzene (chlorobenzene)	0.1 mg/L (1 µg/L)
ortho-Dichlorobenzene (1,2-Dichlorobenzene)	0.6 mg/L (600 µg/L)
para-Dichlorobenzene (1,4-Dichlorobenzene)	0.075 mg/L (75 µg/L)
Styrene	0.1 mg/L (100 µg/L)
Tetrachloroethylene (or -ethylene, perchloroethylene)	0.005 mg/L (5 µg/L)
Toluene	1 mg/L (1,000 µg/L)
trans-1,2-Dichloroethene (or -ethylene)	0.1 mg/L (100 µg/L)
Trichloroethene (or -ethylene)	0.005 mg/L (5 µg/L)
1,1,1-Trichloroethane (methyl chloroform)	0.2 mg/L (200 µg/L)
1,2,4-Trichlorobenzene	0.07 mg/L (70 µg/L)
1,1,2-Trichloroethane	0.005 mg/L (5 µg/L)
Vinyl Chloride	0.002 mg/L (2 µg/L)
Xylenes (total)	10 mg/L (10,000 µg/L)

NOTE: All samples must be analyzed by a certified laboratory in accordance with OAC Chapter 3745-89. All applicable sample results must be received and approved by the Ohio EPA before the well can be considered for use as a public water source. Additional analyses beyond those listed may be required.

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Chloride, Cl	250 mg/L SMCL	None
Copper Total, Cu	1.3 mg/L (1,300 µg/L) AL	50.0 µg/L
Fluoride Total, F	4.0 mg/L	0.5 µg/L
Iron Total, Fe	0.3 mg/L (300 µg/L) SMCL	None
Lead Total, Pb	0.015 mg/L (15 µg/L) AL	5.0 µg/L
Magnesium Total, Mg	No standard	None
Manganese Total, Mn	0.05 mg/L (50 µg/L) SMCL	None
Nitrate, NO ₃ (as N)	10 mg/L	0.5 mg/L
Nitrate-Nitrite, NO ₃ -NO ₂ (as N)	10 mg/L	0.5 mg/L
Nitrite, NO ₂ (as N)	1 mg/L	0.1 mg/L
pH, Lab S.U.	6.5 - 8.5 SMCL	None
Sodium Total, Na	No standard	None
Sulfate, SO ₄	250 mg/L SMCL	None
Total Dissolved Solids	500 mg/L SMCL	None
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Gross Alpha	15 pCi/L MCL / 5 pCi/L AL	3 pCi/L
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