



Reporting Tips for Laboratories

Sample Identification

Laboratories should require samples submitted for drinking water analyses to have complete information for reporting to Ohio EPA. Water systems should provide the Public Water System ID (PWS ID), Facility ID and Sample Monitoring Point ID (SMP ID), indicate if the sample is routine (for compliance) or special (for purpose other than compliance), and specify the sample location by address or description.

The PWS ID is a seven digit number preceded by OH (i.e. OH1234567) that identifies the water system. The Facility ID will be one of three types: plant code as a six or seven digit number assigned to the water system, distribution code as DS1 or raw well code as WL followed by a three to six digit number (i.e. WL001). There are several SMP ID codes; refer to the chart below for the SMP ID codes, an explanation of their usages and the corresponding facility IDs.

Facility ID	SMP ID	Usage of Sample Monitoring Point (SMP) ID
6 or 7 #s	EP00x	Monitoring for NITRATE, NITRITE, INORGANICS, VOCs, SOCs and RADIOLOGICALS is required at the entry point (EP) to the distribution system. The 'x' is a number that corresponds to a specific entry point for a water system.
6 or 7 #s	AS00x	This code is used by a few systems that are required to monitor for arsenic at a point-of-use device. The 'x' is a number that corresponds to a specific point-of-use device.
DS1	DS20x	Monitoring for disinfection byproducts, TOTAL TRIHALOMETHANES (TTHM) and HALOACETIC ACIDS (HAA5) is required at 1 or more distribution locations depending on the source water and population size of a water system. The first location will always be DS201, then DS202, etc. Each sample monitoring point code is unique for a water system and should correspond to a location in the distribution system. All TTHM/HAA5 sample results should have the address where the sample was collected included in the comments field.
DS1	DS000	This code is used for all Total Coliform and E. coli samples collected in the distribution system. It represents a "generic" sampling point location. The "Street Address/Tap Location" field is used to specifically identify where the sample was collected. Typically, this code, along with the facility identification (DS1) is "defaulted" by Ohio EPA and does not have to be entered by the water system or laboratory. For labs generating their own file for upload to Ohio EPA, these two codes (DS1 for the water system facility and DS000 for the "generic" distribution sampling point) need to be included. This code is also used for routine lead and copper samples collected in the distribution system. It represents a "generic" sampling point location. Specifics on where each individual sample was collected should be identified in the comments field.
WLxxx	RS00x	Raw water monitoring (typically from a well) should be identified with an RS code, with the 'x' as a number that corresponds to a specific well for a water system.
DS1	GWR00x	This code represents a "generic" source water sampling point used as a representative raw water source location for the Ground Water Rule. It is to be used for all Total Coliform and E. coli source water samples. The samples should be marked "Special Purpose" and the GWR00x code included in the "Street Address/Tap Location" field. The 'x' is a number (1, 2, 3, etc.) that corresponds to the specific facility for a water system like for entry point (EP00x) samples.

All sample reports should be submitted to Ohio EPA with the information as it was given to the lab from the public water system or sample collector. Understanding the different sample monitoring point codes will help identify errors before submission. Sample results attributed to the wrong sample monitoring point codes will not be counted for compliance and may cause the issuance of violations. Ensure proper sample identification by including the sample location in the comment field of the report.

Reporting on Time

Results of all chemical analyses must be reported by the tenth day following the month in which the chemical analyses are completed by the laboratory. All chemical results that at or exceeding maximum contaminant levels (MCLs) and all resample results to confirm MCLs must be reported to Ohio EPA and to the water system by the end of the next business day from completion of analysis. Results for microbiological analyses must be reported by the tenth day following the month in which the sample was collected. All positive and all repeat sample results for microbiological analyses must be reported to Ohio EPA and to the water system by the end of the next business day after the result was obtained. A list of the MCL standards for drinking water can be accessed at the link: <http://epa.ohio.gov/Portals/28/documents/pws/DWStandardsList.pdf>

Analysis Completion Date

The analysis completion date on the report should include the time involved for verification of the data through Quality Control; it is not the date that the results were generated unless quality control was done the same day. Entering an analysis completion date that does not represent the entire process can cause a laboratory to be noted as late for submission of results and subject to receiving violations for late reporting.

Reporting Acute MCL Violations

Nitrate/nitrite MCL exceedances (nitrate results of 10 mg/L or greater and nitrite results of 1 mg/L or greater) and positive results for microbiological analyses MUST be reported to DDAGW by no later than the end of the next business day from completion of the analysis. These results are acute MCL violations that indicate serious health concerns and require immediate action by the water systems. Delays in reporting could unnecessarily put the public at risk.

Reporting Disinfection Byproduct (DBP) MCL Exceedances

For Disinfection Byproduct (DBP) MCL exceedances, compliance is based on the sum of the results for the chemicals in the Total Trihalomethanes (TTHM) and Five Haloacetic Acid (HAA5) groups listed below. For this reason, laboratories are required to report total results for TTHM and HAA5 with the individual chemical results. If results for TTHM and HAA5 are not determined, MCL exceedances may be missed and reporting will not be completed by the required deadline.

Disinfection Byproducts (DBPs)	MCL (ug/L)
Total Trihalomethanes (TTHM - 2950): the sum of the concentrations of Bromodichloromethane (2943), Dibromochloromethane (2944), Bromoform (2942) and Chloroform (2941)	80
Five Haloacetic Acids (HAA5 – 2456): the sum of the concentrations of Monochloroacetic acid (2450), Dichloroacetic acid (2451), Trichloroacetic acid (2452), Monobromoacetic acid (2453) and Dibromoacetic acid (2454)	60

Apparent Violation Lists

Apparent violation lists are issued by DDAGW about reports that have not been received for water systems as scheduled, either due to late reporting or failure to monitor. For compliance updates and notification when new apparent violation lists are available from the division, go to epa.ohio.gov/ddagw/listserv.aspx and subscribe to

the DDAGW mailing list for Monitoring and Compliance Information. New apparent violation lists are posted monthly for nitrate/nitrite and quarterly for all other chemical monitoring.

Complete and Accurate Reporting

It is required by Ohio Administrative Code (OAC) 3745-89-08 that reports be complete and correct. The forms and instructions laboratories provide to their clients should request all pertinent information for sample report submission by the laboratory. If this information is incomplete, the laboratory should contact the water system to obtain the information or reject the sample for analysis. In addition to the critical sample information, laboratories should be aware of the following issues with submitting complete and accurate results.

Reporting Limits

Laboratories are required to meet the reporting limits established in OAC 3745-89-03 in appendix B. Values reported as non-detections at levels higher than these reporting limits are not acceptable for compliance and will need to be corrected by the laboratory. The list of the reporting limits can be accessed at the link: http://epa.ohio.gov/portals/28/documents/rules/Final/3745-89-03_effective_5-4-15.pdf

Unit Conversion Errors

Be careful when converting units from micrograms to milligrams and vice versa. Mistakes do happen and could be costly for your clients. To avoid this type of problem, contaminants should be reported in appropriate units. Nitrate, nitrite, cyanide and fluoride results should be reported in mg/L. Metals, Synthetic Organic Chemical (SOC), Volatile Organic Chemical (VOC) and Disinfection Byproduct (DBP) results should be reported in ug/L. Dioxin results should be reported in ng/L. Radiological results should be reported as pCi/L.

Significant Figures

Regarding significant figures, please note that arsenic results should be reported to the nearest 0.001 mg/L. Analytical data should be rounded, if necessary, to meet this requirement. For example, a result of 0.0085 mg/L should be reported as 0.009 mg/L and a result of 0.0084 should be reported as 0.008 mg/L.

Incorrect Contaminant Codes

Contaminants have assigned codes that are recognized for compliance purposes. If results are submitted under the wrong contaminant codes, the data are not assessed for compliance and systems may receive violations. The following table provides a summary of contaminants that have had incorrect code submissions and lists the proper codes. Please note that contaminant codes are specified on the monitoring schedules for systems.

Contaminant	Code for Compliance	Do Not Use
Alachlor	2051 – Lasso (alachlor trade name)	2004 – Alachlor ESA (alachlor metabolite)
Gross Alpha	4002 – Gross Alpha, incl Radon & Uranium	4000 – Gross Alpha, excl Radon & Uranium

Sample Location Information for Lead and Copper Reports

Reports for lead and copper are required to include specific information about the lead and copper (Pb/Cu) location where the sample was collected and designate the Pb/Cu location type as flushed, at source, first draw or Pb service line. If the street address location field of the report does not have enough space to enter the sample location, use the sample comments field. Reports that do not provide this information cannot be used for compliance and may cause violations to be issued to your clients.

Incomplete VOC Sample Reports

Water systems are required to monitor 21 VOC contaminants. If one or more of these contaminants are missing, the system will not be in compliance. A list of the required 21 VOCs and their synonyms follows for your reference.

Code	VOC	Code	VOC
2990	Benzene	2996	Styrene
2982	Carbon Tetrachloride (<i>tetrachloromethane</i>)	2987	Tetrachloroethene (<i>perchloroethene</i>)
2380	cis-1,2-Dichloroethene	2991	Toluene
2964	Dichloromethane (<i>methylene chloride</i>)	2979	trans-1,2-Dichloroethene
2977	1,1-Dichloroethene (<i>1,1-DCE</i>)	2984	Trichloroethene
2980	1,2-Dichloroethane	2981	1,1,1-Trichloroethane (<i>methyl chloroform</i>)
2983	1,2-Dichloropropane	2378	1,2,4-Trichlorobenzene
2992	Ethylbenzene	2985	1,1,2-Trichloroethane
2989	Monochlorobenzene (<i>chlorobenzene</i>)	2976	Vinyl Chloride
2968	o-Dichlorobenzene (<i>1,2-Dichlorobenzene</i>)	2955	Xylenes (total)
2969	para-Dichlorobenzene (<i>1,4-Dichlorobenzene</i>)		

LT2 Sample Reporting

LT2 sample reporting includes results for the analysis of Cryptosporidium, E.coli and Turbidity. Since the results for the three types of analyses are submitted on different reports, unique sample numbers must be used. For Example: 1234A – for Cryptosporidium, 1234B – for E. coli count results and 1234C – for Turbidity. Guidance for LT2 reporting follows.

Reporting for Cryptosporidium: The water system is required to report results on the “LT2 ESWTR Cryptosporidium Sample Collection Form” which is available at the link <http://epa.ohio.gov/ddagw/reporting.aspx#130597508-lt-2>. The form should be submitted by email as a pdf (preferred) or as a paper copy through mail or fax.

Reporting for Turbidity: Report the sample result (0100 - TURBIDITY) as Routine, enter the Sample Monitoring Point as LT200x (“x” is a number that corresponds to the sample location) and enter the Facility Code for the Plant/STU.

Reporting for E.coli Enumeration: Mark “Special” for the sample type. The report must include results for Total Coliform and E. coli . Use the comments field to enter the LT200x sample location and the counts in both the Total Coliform and E. coli rows. **NOTE:** the comments entry must be identical for the E. coli and the Total Coliform rows. For Example:

Analyte Code: 3100 – Total Coliform (TCR) *Comments:* LT2001, TC = 155mpn/100ml, EC = 20mpn/100ml

Analyte Code: 3014 – Coliform, E. coli *Comments:* LT2001, TC = 155mpn/100ml, EC = 20mpn/100ml

Use Water System Monitoring Schedule as a Reference

Monitoring schedules for every water system in the state are posted on our website at epa.ohio.gov/ddagw/schedules.aspx. The schedules include key information for water systems such as PWSID and Facility ID numbers and list the water systems monitoring requirements as determined by DDAGW.

Questions

If you have any questions regarding this information or chemical monitoring and reporting requirements, please contact a DDAGW staff member at (614) 644-2752 or by email, as listed below.

- eDWR Data Submission/LT2 Reporting – Brian Tarver (brian.tarver@epa.ohio.gov)
- Inorganics/Asbestos - Kathleen Pinto (kathleen.pinto@epa.ohio.gov)
- Nitrate/Nitrite, SOCs and Radiologicals - Wendy Sheeran (wendy.sheeran@epa.ohio.gov)
- Disinfection Byproducts (TTHM/HAA5), VOCs - Michael Deal (michael.deal@epa.ohio.gov)
- Lead and Copper - Kenneth Baughman (kenneth.baughman@epa.ohio.gov)