



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), Water Facility State Code and Sample Monitoring Point, indicate if the sample is 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 (for example, OH1234567) that identifies the water system. The Facility ID is generally 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 (for example, WL001). There are several Sample Monitoring Points. Refer to the chart at the end of this document for examples of the codes, an explanation of their usages and the corresponding facility IDs.

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 Tap Location field of the report.

Sample Types

Correct sample identification is key to receiving compliance credit and allowing laboratories to upload results to Ohio EPA's electronic Drinking Water Reports (eDWR) system.

- Routine – Select routine compliance if the sample is fulfilling a requirement on the water system's sample monitoring schedule.
- Special – Select special noncompliance if the sample is not a routine scheduled sample. Used for purposes such as sampling after maintenance or repairs.
- Repeat – Select repeat if the samples are required to be collected in response to a Routine Positive Coliform sample.
- Triggered – Select triggered for Source Water Sample from well(s) that were in use when the originating Routine positive was collected.
- Confirmation – Select confirmation if the sample is required due to E. Coli positive result on a well source.

Reporting on Time

- All chemical results 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. All other results of all chemical analyses must be reported by the 10th day following the month in which the chemical analyses are completed by the laboratory. A list of the MCL standards for drinking water can be accessed at epa.ohio.gov/Portals/28/documents/pws/DWStandardsList.pdf.
- 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. All other results for microbiological analyses must be reported by the 10th day following the month in which the sample was collected.
- All detections of microcystins in finished water, all results of microcystins collected in response to an exceedance of the microcystins action level and all results above 5 ug/L total microcystins in raw water and all results of cyanobacteria screening that indicate the potential for production of cylindrospermopsin, saxitoxins or anatoxin-a must be reported to Ohio EPA by the end of the next business day after the result was obtained. All other results for microcystins analyses must be reported by the 10th day following the month in which the sample was collected.

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 Tips for Laboratories

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 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

Ohio Administrative Code (OAC) Rule 3745-89-08 requires 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. If contact with the water system is unsuccessful, the lab may contact Ohio EPA or utilize the reference data in eDWR to obtain missing information. Otherwise, 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 Rule 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 reporting limits can be accessed at 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.

Reporting Tips for Laboratories

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 and Uranium Uranium	4000 – Gross Alpha, excl Radon and Uranium

Sample Location Information for Lead and Copper Reports

Reports for lead and copper (Pb/Cu) are required to include specific information about the 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 (tetrachloromethane)	2987	Tetrachloroethene (perchloroethene)
2380	cis-1,2-Dichloroethene	2991	Toluene
2964	Dichloromethane (methylene chloride)	2979	trans-1,2-Dichloroethene
2977	1,1-Dichloroethene (1,1-DCE)	2984	Trichloroethene
2980	1,2-Dichloroethane	2981	1,1,1-Trichloroethane (methyl chloroform)
2983	1,2-Dichloropropane	2378	1,2,4-Trichlorobenzene
2992	Ethylbenzene	2985	1,1,2-Trichloroethane
2989	Monochlorobenzene (chlorobenzene)	2976	Vinyl Chloride
2968	o-Dichlorobenzene (1,2-Dichlorobenzene)	2955	Xylenes (total)
2969	para-Dichlorobenzene (1,4-Dichlorobenzene)		

LT2 Sample Reporting

Long-term 2 enhanced surface water treatment (LT2) sample reporting includes sample results for the analysis of Cryptosporidium, E. coli and Turbidity, but the results for the three types of analyses must be submitted on reports with unique sample numbers. For Example: 1234A – for Cryptosporidium, 1234B – for E. coli count results and 1234C – for Turbidity. The procedures below should be followed:

- Reporting for Cryptosporidium: The water system is required to report results on the “LT2 ESWTR Cryptosporidium Sample Collection Form” which is available at 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) through eDWR as Routine, use the sample monitoring point LT200x (“x” is a number that corresponds to the sample location) and the Facility Code for the Plant/STU.

Reporting Tips for Laboratories

- Reporting for E. coli Enumeration: the sample type should be marked as “Routine” and the Sample Monitoring Point as LT200x (see above). The report must include results for Total Coliform and E. coli . New Reporting fields added on April 1, 2016 allow the reporting of enumerated Counts. A couple of examples are listed below.

#	PWS	Facility	SMP	Type	Analyte	Method	Result	Count	Type	Unit
14B	OH2599912	2562342	LT2001	Routine-Compliance	3100 COLIFORM, TOTAL (TCR)	9223B- QT	Presence	155.0	Most Probable Number	100 Milliliters
14B	OH2599912	2562342	LT2001	Routine-Compliance	3014 COLIFORM, E. COLI	9223B- QT	Presence	105.0	Most Probable Number	100 Milliliters
15B	OH2599912	2562345	LT2002	Routine-Compliance	3100 COLIFORM, TOTAL (TCR)	9223B- QT	Presence	155.0	Most Probable Number	100 Milliliters
15B	OH2599912	2562345	LT2002	Routine-Compliance	3014 COLIFORM, E. COLI	9223B- QT	Absence			

Use Water System Monitoring Schedule as a Reference

Monitoring schedules for every water system in the state are posted 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 system’s 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	Brian Tarver Tyler Liston	brian.tarver@epa.ohio.gov tyler.liston@epa.ohio.gov
Inorganics/Asbestos/Radiologicals	Kathleen Pinto	kathleen.pinto@epa.ohio.gov
VOCs and SOCs	Emilie Eskridge	emilie.eskridge@epa.ohio.gov
Disinfection Byproducts (TTHM/HAA5)	Sara Starr	sara.starr@epa.ohio.gov
Nitrate/Nitrite	Anne Speakman	anne.speakman@epa.ohio.gov
Microcystins	Brandon Trigg	brandon.trigg@epa.ohio.gov
Lead and Copper	District Office	
Microbiological	District Office	

Reporting Tips for Laboratories

Chemical Sample Submission Reports

Monitoring Purpose	Sample Type	Water Facility State Code (Facility ID)	Sample Monitoring Point (SMP)	Description
NITRATE/ NITRITE	Routine or Special	6- or 7-digit Treatment Plant ID	EP00x	Monitoring for NITRATE and NITRITE is required at the entry point (EP) to the distribution system. The 'x' is a number that corresponds to a specific entry point corresponding to the plant facility ID for the water system. Samples should be marked as Routine for Compliance if the sample is fulfilling a requirement on the water system's sample monitoring schedule. Any results above the MCL (10 mg/L for nitrate and 1 mg/L for nitrite) must be reported by the end of the next business day.
INORGANICS	Routine or Special	6- or 7-digit Treatment Plant ID	EP00x	Monitoring for INORGANICS is required at the entry point (EP) to the distribution system. The 'x' is a number that corresponds to a specific entry point corresponding to the plant facility ID for the water system. Samples should be marked as Routine for Compliance if the sample is fulfilling a requirement on the water system's sample monitoring schedule. Any results above the MCL must be reported by the end of the next business day.
VOCs	Routine or Special	6- or 7-digit Treatment Plant ID	EP00x	Monitoring for VOCs is required at the entry point (EP) to the distribution system. The 'x' is a number that corresponds to a specific entry point corresponding to the plant facility ID for the water system. Samples should be marked as Routine for Compliance if the sample is fulfilling a requirement on the water system's sample monitoring schedule. Any results above the MCL must be reported by the end of the next business day.
SOCs	Routine or Special	6- or 7-digit Treatment Plant ID	EP00x	Monitoring for SOCs is required at the entry point (EP) to the distribution system. The 'x' is a number that corresponds to a specific entry point corresponding to the plant facility ID for the water system. Samples should be marked as Routine for Compliance if the sample is fulfilling a requirement on the water system's sample monitoring schedule. Any results above the MCL must be reported by the end of the next business day.
Radiologicals	Routine or Special	6- or 7-digit Treatment Plant ID	EP00x	Monitoring for Radiologicals is required at the entry point (EP) to the distribution system. The 'x' is a number that corresponds to a specific entry point corresponding to the plant facility ID for the water system. Samples should be marked as Routine for Compliance if the sample is fulfilling a requirement on the water system's sample monitoring schedule. Any results above the MCL must be reported by the end of the next business day.
Arsenic	Routine or Special	6- or 7-digit Treatment Plant ID	AS00x	These codes are 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. Samples should be marked as Routine for Compliance if the sample is fulfilling a requirement on the water system's sample monitoring schedule. Any results above the MCL (0.010 mg/L) must be reported by the end of the next business day.

Reporting Tips for Laboratories

Monitoring Purpose	Sample Type	Water Facility State Code (Facility ID)	Sample Monitoring Point (SMP)	Description
Disinfection Byproducts	Routine or Special	DS1	DS20x	Monitoring for disinfection byproducts, TOTAL TRIHALOMETHANES (TTHM) and HALOACETIC ACIDS (HAA5) is required at one 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 Collection Address/Tap Location field. Samples should be marked as Routine for Compliance if the sample is fulfilling a requirement on the water system's sample monitoring schedule. Any results above the MCL must be reported by the end of the next business day. The MCL for TTHM is 0.080 mg/L and the MCL for HAA5 is 0.060 mg/L both based on the total of the individual analytes.
Lead and Copper	Routine or Special	DS1	DS000	These codes are 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 Tap Location field. Lead and Copper samples require the address/tap location to be entered and the PB/CU sample type to be selected.
LT2 Turbidity (0100)	Routine	6- or 7-digit Treatment Plant ID	LT200x	LT2 Monitoring for turbidity is required to be reported at the LT200x sample point paired with the Treatment Plant Facility Code. Each Plant will have a unique sample point (LT2001, LT2002....). The Sample should be reported as Routine. The Analyte code for Turbidity is "0100".
HABs	Routine or Special	6- or 7-digit Treatment Plant ID	LT200x or EP00x	These codes are used to report HAB results. Each Plant will have a unique sample point (LT2001, LT2002....) that corresponds to a specific treatment plant ID for the water system. Raw water samples will use the LT200x monitoring point. Finished water will use the EP00x monitoring point. All detections of microcystins in finished water samples, all results of microcystins repeat or resamples collected in response to an exceedance of the microcystins action level and all raw sample results > 5 µg/L must be reported by the end of the next business day.
Raw Water Sampling	Routine or Special	WLxxx or INxxx	RS00x or IN00x	Raw water monitoring (typically from a well or Intake) should be identified with an RS or IN sample point, with the 'x' as a number that corresponds to a specific well for a water system. (WL001, WL12345, IN001, etc...). The specific Facility Code and Sample Point can be found in eDWR under the reference data menu. Use Routine if raw sampling is required for 12 months due to special condition of plan approval. Use Special if raw sampling is due to well maintenance.

Reporting Tips for Laboratories

Coliform Sample Submission Reports

Monitoring Purpose	Sample Type	Water Facility State Code (Facility ID)	Sample Monitoring Point (SMP)	Description
Routine Scheduled Coliform Samples	Routine	DS1	DS000	These codes are used for all Total Coliform and E. coli samples collected in the distribution system. It represents a “generic” sampling point location. The “Collection Address/Tap Location” field is used to specifically identify where the sample was collected. Coliform positive samples must be reported the following business day from when the analysis was completed.
Repeat Coliform Samples	Repeat	DS1	DS000	Samples required to be collected in response to a Routine Positive Coliform sample. Must also identify originating Routine Positive sample number on lab sheet. Note the Repeat sample type is only used when collecting follow up samples to a ROUTINE Positive sample. If the original positive was not a routine, then the sample cannot be labeled a repeat. Repeat samples must be reported the following business day from when the analysis was completed.
Special (distribution)	Special	DSI	DS000	Sample required due to a depressurization on a water main or any other Non-Compliance sampling collected out in the Distribution facility of the water system.
Special (Facility)	Special	Facility Code	Sample Point	Sample required due to maintenance on a storage tower; maintenance of treatment process, etc... The specific Facility Code and Sample Point can be looked up in eDWR under the reference data menu.
Special (wellhead)	Special	WL00x	RS00X	Sample required due to maintenance on wellhead
Coliform Start Up Sampling	Special	DS1	SUP01**	Seasonal Systems Start Up sample required before opening and serving water to the public. Enter “Start Up” in Comments. **Use SUP01 in 2017.
Triggered Ground Water Rule (GWR)	Triggered	6- or 7-digit Treatment Plant ID	GWR00x	Source Water Sample from well(s) that were in use when the originating Routine positive was collected. Sample must identify originating Routine positive sample number on lab sheet. Note the ‘x’ is a number that corresponds to a specific plant Facility ID for the water system. If known, the specific source or well should be identified in the street address/Tap Location field. Typically, if a PWS only has one TP then the value of the X in GWR00x should default to 1.
ASWM per GWR	Routine	6- or 7-digit Treatment Plant ID	GWR00x	12 months of Assessment Source Water Monitoring (ASWM) due to GWR Corrective Action. Samples need to be analyzed via Quanti-Tray method. Note the ‘x’ is a number that corresponds to a specific treatment plant Facility ID for the water system. The well ID should be noted in the street address/Tap Location field.

Reporting Tips for Laboratories

Monitoring Purpose	Sample Type	Water Facility State Code (Facility ID)	Sample Monitoring Point (SMP)	Description
Confirmation per GWR	Confirmation	6 or 7 digit Treatment Plant ID	GWR00x	Samples required due to E.Coli positive result on a well source. Samples must identify originating TG positive sample number on lab sheet. Note the 'x' is a number that corresponds to a specific treatment plant Facility ID for the water system. The well id should be noted in the street address/Tap Location field.
LT2 Coliform Sampling	Routine	6 or 7 digit Treatment Plant ID	LT200x	LT2 Monitoring for E.Coli is requires to be reported at the LT200x sample point paired with the Treatment Plant Facility Code. Each Plant will have a unique sample point (LT2001, LT2002....). The Sample should be reported as Routine. LT2 Requires E.Coli to be reported. All Coliform samples must have a Total Coliform result also. LT2 samples will be reported with both Total Coliform and E.Coli. LT2 samples require e.Coli enumeration. These samples, if positive, require Counts, Count Type (Most Probable Number) and Count Units (100 ml)