# Electronic Reporting Guidance

**331-289 • December 2021**

This guide is designed to help laboratories (labs) prepare and electronically report analytical drinking water results to the state Department of Health, Office of Drinking Water (department).

## Special Notes

- To obtain a monitoring waiver for aTrying ny eligible panel, a public water system must submit results for all analytes listed on that panel on the templates below.
- **Special notification procedures.** For coliform detection or certain analyte exceedances, follow the notification procedures under WAC 246-390-065.
- **AFTER** the notification process is complete, follow the guidance below to submit the sample data.

## Overview

1) **Getting Started.** The lab initiates the process by submitting a written request for consideration to the Office of Drinking Water—Water Quality and Data Management Section at:

   Electronic Data Submittal Program
   DOH-EPH-ODW
   P.O. Box 47822
   Olympia, Washington, 98504-7822
   DOHdataentry@DOH.WA.GOV

2) **Testing Period—**The laboratory generates test files of sample data and uploads them to the department to determine if the:
   a) Data import procedures work correctly.
   b) Record structures are correct.
   c) Upload of data files occurred successfully without error.

3) **Auditing Period—**After successfully completing the testing period, the lab will start to upload batches of drinking water samples that they have analyzed. This period:
   a) Generally lasts two to three months.
   b) Is when the lab uploads batches of lab results that meet regulations stipulated in 246-390 WAC.
   c) Is when the lab also sends some form of hard copy to the department of all electronic sample results that they upload.

4) **Normal Reporting Period—**After successfully completing the testing and auditing periods the lab will start normal reporting procedures by:
   a) At least once a week, upload batches of lab results that meet regulations stipulated in chapter 246-390 WAC.

## Testing for contaminants not listed on a template below

In the event that testing is required for a contaminant that is not listed on the templates below, please follow the generic test panel procedures listed in this guidance.

## General Data Structure

A standard format is necessary to support the electronic transfer of drinking water sample data from certified labs to the department's database.

In addition to properly linking information from the sample to the correct public water system and source within the database, other factors influence the validity of sample information. Certain data combinations are illogical and not allowed by the department's database business rules.

- Structure the data as an XML document using elements and values. There are no attributes attached to the elements.
- Submit data to the department's FTP server using your department assigned user ID and password.
- The data elements "sources" and "analytes" have child elements that allow a one-to-many relationship to be described. Not all elements are required.

# Organic Chemicals

To comply with section 246-390-075 (13)(a) *"Labs shall attach to the analytical result, a copy of the method specific QA/QC results for any organic chemical detection that is reported to the department which is at or above the SDRLs listed in Table 1 of this section,"* a lab shall print a paper copy of the report and quality control and mail it to the department.

Listed in the embedded document below are the electronic file transfer structures for every organic chemical regulated by the department:

Organic Chemical File Structure

For all analyses with a standardized parameter grouping, the combination of the following fields uniquely defines one sample:

## Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid laboratory code.
- The department permanently assigns laboratory codes to uniquely identifying a certified water-testing laboratory. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.

- The lab can submit sample numbers greater than five characters; however, the department will only load the last five (right most) characters**.**

## Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

## Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below.
    - **D92** Flowing distribution sample (e.g. disinfected samples)
    - **C** Composite samples
    - **B** Blended samples
    - **S** Samples from a single source
    - **U** Unknown samples (sample will not be used by the department to determine public water system compliance)

## Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below.
    - **DIOXIN** Dioxin
    - **ENDO** Endothal
    - **FUMIGANT** Soil Fumigants
    - **GLYP** Glyphosate
    - **HAA5** Haloacetic Acids
    - **HERB1** Chlorophenoxy Herbicides
    - **INSECT1** Carbamate Insecticides
    - **PCB** PCB AS Decachlorobiphenyl
    - **PEST1** General Pesticides Suite
    - **QUAT** Diquat/Paraquat
    - **TOC-ALK** Total Organic Carbon
    - **THM** Total Trihalomethane
    - **VOC1** Volatile Organic Compounds

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department will permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values.
    - **SOC** Synthetic Organic Chemicals
    - **VOC** Volatile Organic Chemicals
    - **DBP** Disinfection Byproducts

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values.
    - **PT/R** Pretreatment /Raw Water Sample
    - **PT/F** Post treatment/Finished Water Sample
    - **U** Unknown

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values.
    - **RC** Routine Compliance
    - **O** Other purpose (not used for compliance)
    - **Confirm** Confirmation sample (chemical)

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values.
    - **F** Flowing
    - **S** Standing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long.
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- Element cannot be empty if <composition> is C, B, or S.
- Numeric field two characters in length.
- Element represents a unique source on the public water system.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7)

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes.
    - **A** Sample too old

- **M** Wrong or damaged container
- **X** Unknown

## Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
  - **EQ** Equals.
  - **NA** **Not Analyzed—**Use this code if you did not analyze any analyte that is required on a test panel.
  - **ND** No Detection.
- A lab shall use the above valid entries when the lab's established MRL is greater than the SDRL as:
  - "**ND**" when a lab's **<measurementresult>** is less than the SDRL and MRL;
  - "**EQ**" with a "**J**" **<resultqualifier>** indicating that the **<measurementresult>** is an estimated concentration when a result is equal to or greater than the SDRL, but less than the lab's established MRL; or
  - "**EQ**" when a **<measurementresult>** is equal to or greater than the lab's established MRL.
- A lab shall use the above valid entries when the lab's established MRL is less than the SDRL as:
  - "**ND**" when a lab's **<measurementresult>** is less than the MRL and SDRL;
  - "**ND**" when a **<measurementresult>** is equal to or greater than the lab's established MRL, but less than the SDRL; or
  - "**EQ**" when a **<measurementresult>** is equal to or greater than the SDRL.
- A lab shall use the above valid entries when their established MRL is equal to the SDRL as:
  - "**ND**" when a lab's **<measurementresult>** is less than the SDRL and MRL; or
  - "**EQ**" when a **<measurementresult>** is equal to or greater than the SDRL and the lab's established MRL.

## Sample Measurement < measurementresult>

- Element may be empty.
- Numeric field nine characters in length.
- Enter data using the format: 99999.9999
  - Unless the field is zero, there must be no more than five numbers before the decimal point and four after. For example, the following values would be transferred as indicated:
    - 1.7 • 00001.7000
    - 0.05 • 00000.0500
    - 5.4 • 00005.4000
- Report data in the units of measure listed in WAC 246-390-075 Tables 3-7.

- Enter numbers but not units of measure.
- **Do not report in improper units.**
- Maximum values are checked at data transfer. However, exceeding the maximum is not sufficient to prevent transfer of the sample records.

## Result Qualifier <resultqualifier>

- Element cannot be empty.
- Alpha field four characters in length.
- Valid entries for this element are:
  - **B** Also Detected in Blank.
  - **J** Estimated Concentration.
  - **N** None.
  - **NDDS** Not Detected in Duplicate Sample.

## Reporting Examples for organic chemicals in WAC 246-390-075(13) (b)–(d)

### Key Definitions

Method reporting limit **(MRL)** means the lowest concentration of a standard used for calibration.

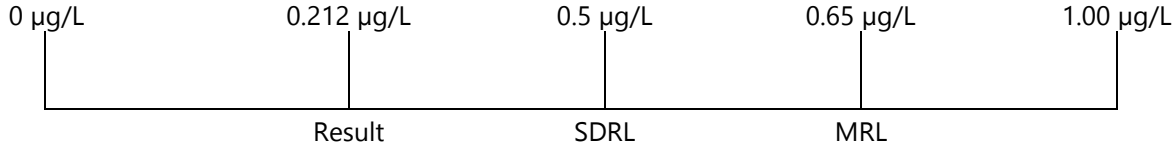
State detection reporting limit **(SDRL)** means the minimum reportable detection of an analyte as established in Tables 3 through 7 of WAC 246-390.

**µg/L** means micrograms per liter (1µg/L = 1ppb – parts per billion).

**(b)** A lab shall report organic chemical contaminant results when the lab's established MRL is greater than the SDRL as:

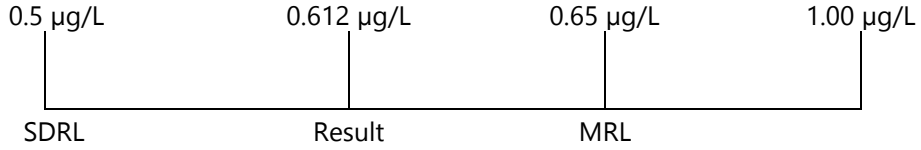
**(i) Nondetect or ND** when a lab's result is less than the SDRL and MRL;

**Results = ND**



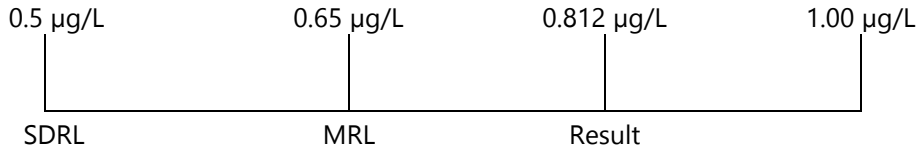

**(ii)** An estimated concentration, notated with a "J" data qualifier when a result is equal to or greater than the SDRL, but less than the lab's established MRL;

**Results = 0.61µg/L (J)**




**(iii)** A number when a result is equal to or greater than the lab's established MRL.

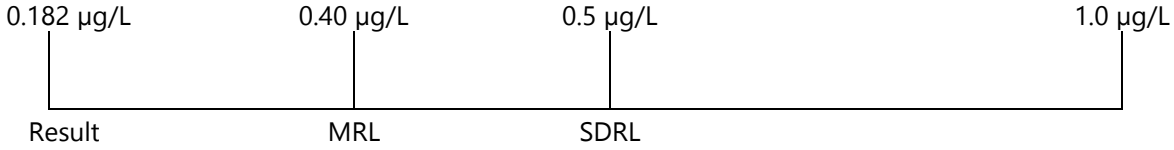
**Result = 0.81µg/L**



**(c)** A lab shall report organic chemical contaminant results when the lab's established MRL is less than the SDRL as:

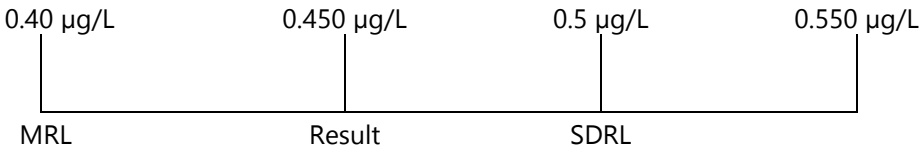
**(i) Nondetect or ND** when a lab's result is less than the lab's established MRL;

**Result = ND**



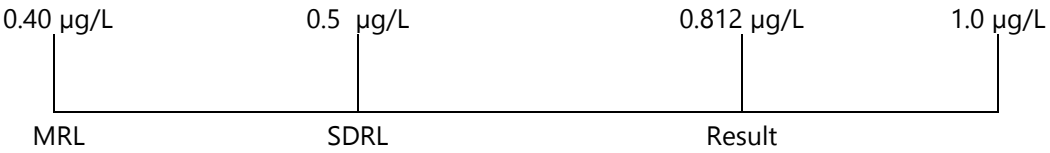

**(ii) Nondetect or ND** when a lab's result is less than the established SDRL; or

**Result = ND**




**(iii)** A number when a result is equal to or greater than the SDRL.

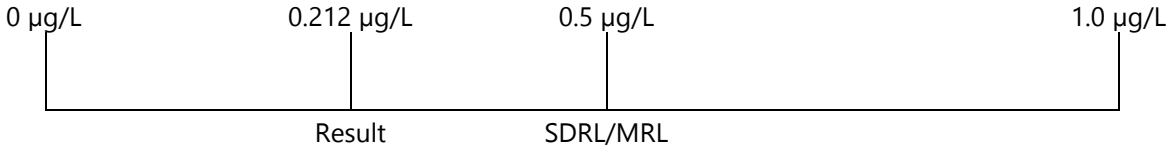
**Result = 0.81µg/L**




**(d)** A lab shall report organic chemical contaminant results when their established MRL is equal to the SDRL as:

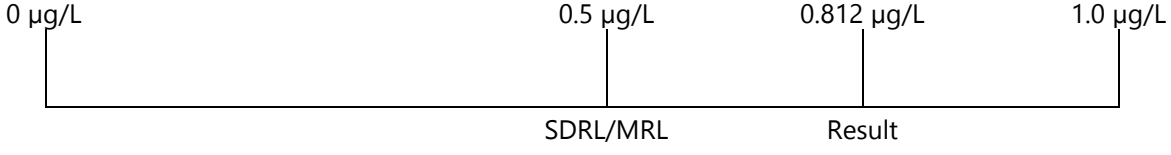
**(i) Nondetect or ND** when a lab's result is less than the SDRL and MRL; or

**Result = ND**




**(ii)** A number when a result is equal to or greater than the SDRL and the lab's established MRL.

**Result = 0.81µg/L**



## Inorganic Chemicals

Listed in the embedded document below are the electronic file transfer structures for every inorganic chemical regulated by the department.

Inorganic Chemical File Structures.doc

For all analyses with a standardized parameter grouping, the combination of the following fields uniquely defines one sample:

# Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid laboratory code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.
- The lab can submit sample numbers greater than five characters; however, the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **D93** Standing distribution sample (e.g. lead and copper samples)
    - **C** Composite samples
    - **B** Blended samples
    - **S** Samples from a single source
    - U Unknown samples (sample will not be used by the department to determine public water system compliance)

### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
    - **AR** Arsenic
    - **ASB** Asbestos
    - **BROMATE** Bromate
    - **CHLORITE** Chlorite
    - **IOC** Complete Inorganic Analysis
    - **IOC_SHORT** Inorganic Short Form
    - **LCR** Lead Copper
    - **NIT** Nitrate Suite

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - **DBP** Disinfection Byproducts
    - **IOC** Inorganic Contaminants

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/R** Pretreatment /Raw Water Sample
    - **PT/F** Post treatment/Finished Water Sample
    - **U** Unknown

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **RC** Routine Compliance

- **O** Other purpose (not used for compliance)
- **Confirm** Confirmation sample (chemical)

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values:
  - **F** Flowing
  - **S** Standing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- Element cannot be empty if <composition> is C, B, or S.
- Numeric field two characters in length.
- Element represents a unique source on the public water system.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.

- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7)

## Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **M** Wrong or damaged container
    - **X** Unknown

## Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
    - **EQ** Equals
    - **LT** Less Than
    - **NA** **Not Analyzed—**Use this code if you did not analyze any analyte that is required on a test panel.
    - **ND** No Detection

- A lab shall use the above valid entries when the lab's established MRL is greater than the SDRL as:
    - "**ND**" when a lab's **<measurementresult>** is less than the SDRL and MRL;
    - "**EQ**" with a "**J**" **<resultqualifier>** indicating that the **<measurementresult>** is an estimated concentration when a result is equal to or greater than the SDRL, but less than the lab's established MRL; or
    - "**EQ**" when a **<measurementresult>** is equal to or greater than the lab's established MRL.
- A lab shall use the above valid entries when the lab's established MRL is less than the SDRL as:
    - "**ND**" when a lab's **<measurementresult>** is less than the SDRL and MRL;
    - "**ND**" when a lab's **<measurementresult>** is greater than the MRL, but less than the SDRL;
    - "**EQ**" when a **<measurementresult>** is equal to or greater than the SDRL.
- A lab shall use the above valid entries when their established MRL is equal to the SDRL as:
    - "**ND**" when a lab's **<measurementresult>** is less than the SDRL and MRL; or
    - "**EQ**" when a **<measurementresult>** is equal to or greater than the SDRL and the lab's established MRL.

### Sample Measurement < measurementresult>

- Element may be empty.
- Numeric field nine characters in length.
- Enter data using the format: 99999.9999
    - Unless the field is zero, there must be no more than five numbers before the decimal point and four after. For example, the following values would be transferred as indicated:
        - 1.7 • 00001.7000
        - 0.05 • 00000.0500
        - 5.4 • 00005.4000
- Report data in the units of measure listed in WAC 246-390-075 tables 3-7.
    - Enter the numbers but not the units of measure.
    - **Do not report in improper units.**
    - Maximum values are checked at data transfer. However, exceeding the maximum is not sufficient to prevent transfer of the sample records.

### Result Qualifier <resultqualifier>

- Element cannot be empty.
- Alpha field four characters in length.
- Valid entries for this element are:
    - **B** Also Detected in Blank
    - **J** Estimated Concentration
    - **N** None
    - **NDDS** Not Detected in Duplicate Sample

## Reporting Examples for inorganic chemicals in WAC 246-390-075(14) (a)–(c)

### Key Definitions

Method reporting limit **(MRL)** means the lowest concentration of a standard used for calibration.

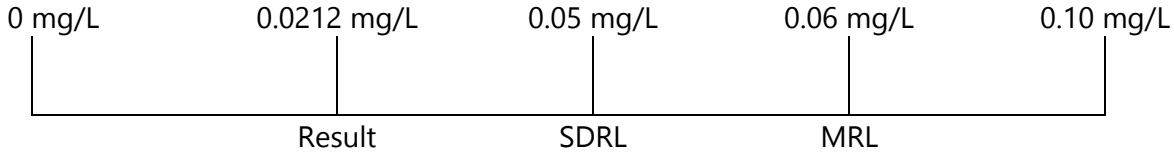
State detection reporting limit **(SDRL)** means the minimum reportable detection of an analyte as established in Tables 3 through 7 of WAC 246-390.

**mg/L** means milligrams per liter (1 mg/L = 1ppm – parts per million).

**(a)** A lab shall report inorganic chemical contaminant results when the lab's established MRL is greater than the SDRL as:

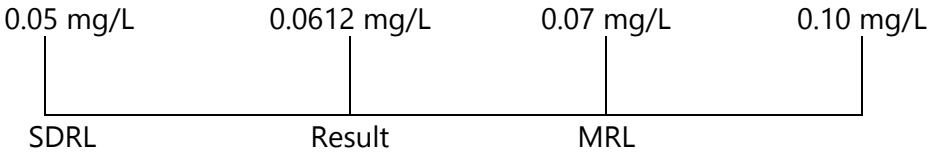
**(i) Nondetect or ND** when a lab's result is less than the SDRL and MRL;

**Result = ND**



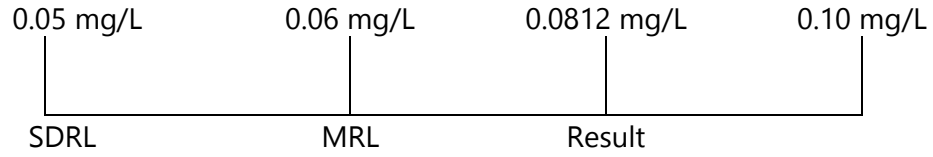

**(ii)** An estimated concentration, notated with a "J" data qualifier, when a result is equal to or greater than the SDRL, but less than the lab's established MRL;

**Result = 0.061mg/L (J)**




**(iii)** A number when a result is equal to or greater than the lab's established MRL.

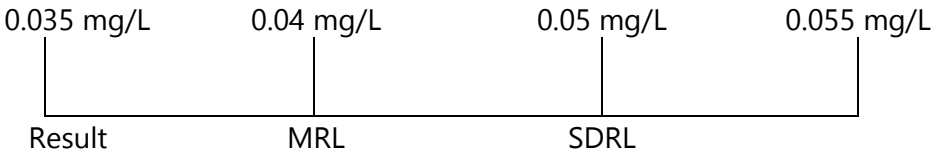
**Result = 0.081mg/L**




**(b)** A lab shall report inorganic chemical contaminant results when the lab's established MRL is less than the SDRL as:

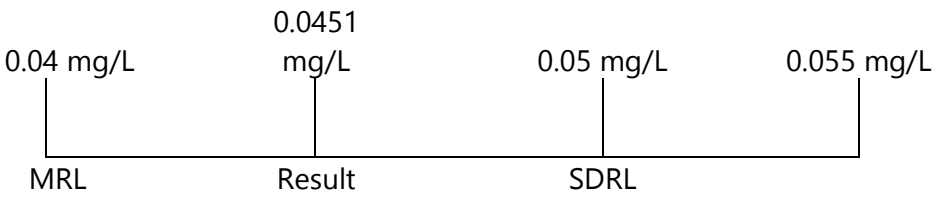
**(i) Nondetect or ND** when a lab's result is less than the lab's established MRL;

**Result = ND**




**(ii) Nondetect or ND** when a lab's result is less than the department's established SDRL, but greater than the lab's established MRL; or

**Result = ND**



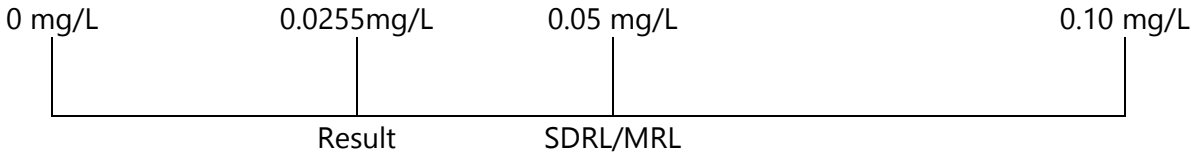
**(iii)** A number when a result is equal to or greater than the SDRL.

**Result = 0.081 mg/L**


**(c)** A lab shall report inorganic chemical contaminant results when the lab's established MRL is equal to the SDRL as:

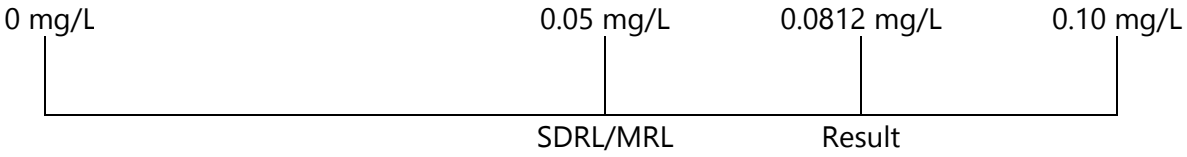
**(i) Nondetect or ND** when a lab's result is less than the SDRL and MRL; or

**Result = ND**




**(ii)** A number when a result is equal to or greater than the SDRL and the lab's established MRL.

**Result = 0.081mg/L**



## Radionuclides

Listed in the embedded document below are the electronic file transfer structures for every radionuclide chemical regulated by the department:

Radiochemistry File Structures.doc

For all analyses with a standardized parameter grouping, the combination of the following fields uniquely defines one sample.

## Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid lab code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.
- The lab can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **C** Composite samples
    - **B** Blended samples
    - **S** Samples from a single source

- **U** Unknown samples (sample will not be used by the department to determine public water system compliance)

### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
  - **RAD** Radionuclides

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
  - **RAD** Radionuclides

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
  - **PT/R** Pretreatment /Raw Water Sample
  - **PT/F** Post treatment/Finished Water Sample
  - **U** Unknown

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
  - **RC** Routine Compliance
  - **O** Other purpose (not used for compliance)
  - **Confirm** Confirmation sample (chemical)

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.

- It must contain one of the following values:
    - **F** Flowing
    - **S** Standing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- Element cannot be empty if <composition> is C, B, or S.
- Numeric field two characters in length.
- Element represents a unique source on the public water system.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7)

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.

- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **M** Wrong or damaged container
    - **X** Unknown

## Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
    - **EQ** Equals
    - **LT** Less Than
    - **NA** **Not Analyzed—**Use this code if you did not analyze any analyte that is required on a test panel.
- A lab shall use the above valid entries when the lab's established MDA is less than or equal to SDRL as:
    - "**LT**" indicating that the analyte was analyzed for, but not detected at or above the lab's established MDA. Additionally report the lab's established MDA value in the **<measurementresult>**field;
    - "**EQ**" when a **<measurementresult>** is equal to or greater than the lab's established MDA.

## Sample Measurement < measurementresult>

- Element may be empty.
- Numeric field nine characters in length.
- Enter data using the format: 99999.9999
    - Unless the field is zero, there must be no more than five numbers before the decimal point and four after. For example, the following values would be transferred as indicated:
        - 1.7 • 00001.7000
        - 0.05 • 00000.0500
        - 5.4 • 00005.4000
- Report data in the units of measure listed in WAC 246-390-075 tables 3-7.
    - Enter the numbers but not the units of measure.
    - **Do not report in improper units.**
    - Maximum values are checked at data transfer. However, exceeding the maximum is not sufficient to prevent transfer of the sample records.

## Result Qualifier <resultqualifier>

- Element cannot be empty.
- Alpha field four characters in length.
- Valid entries for this element are:

- **B** Also Detected in Blank
- **J** Estimated Concentration
- **N** None
- **NDDS** Not Detected in Duplicate Sample

## Reporting Examples for radiochemistry in WAC 246-390-075(15) (a)–(b)

### Key Definitions

Minimum detectable activity (**MDA**) means the smallest activity or concentration of radioactive material in a sample that will yield a net count (above sample background) that can be detected with ninety-five percent probability.

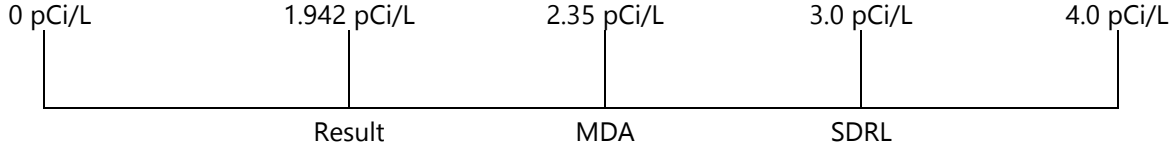
State detection reporting limit **(SDRL)** means the minimum reportable detection of an analyte as established in Tables 3 through 7 of WAC 246-390.
**pCi/L** means picocuries per liter.

**(a)** A lab's MDA **must** meet the established SDRL levels for the analysis to be considered for compliance purposes.

**(b)** A lab shall report radiochemistry contaminant results as:

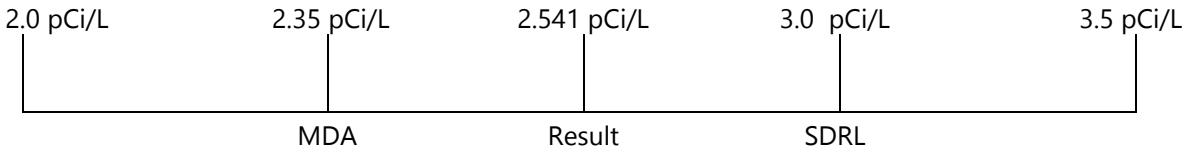
**(i)** A number and a "U" qualifier if the contaminant was analyzed for, but not detected at or above the lab's established MDA; or

**Result = 1.94 pCi/L U**




**(ii)** A number when a result is equal to or greater than the lab's established MDA.

**Result = 2.54 pCi/L**



## Per- and Polyfluoroalkyl Substances (PFAS)

For all analyses with a standardized parameter grouping, the combination of the following fields uniquely defines one sample:

Listed in the embedded document below are the electronic file transfer structures for every organic chemical regulated by the department

PFAS Templates.doc

# Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid laboratory code.
- The department permanently assigns laboratory codes to uniquely identifying a certified water-testing laboratory. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.
- The lab can submit sample numbers greater than five characters; however, the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **C** Composite samples
    - **B** Blended samples
    - **S** Samples from a single source
    - **U** Unknown samples (sample will not be used by the department to determine public water system compliance)

### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
    - **PFAS** Per-&Poly-Fluoroalkyl substances

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - **SOC** Synthetic Organic Chemicals

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/R** Pretreatment /Raw Water Sample
    - **PT/F** Post treatment/Finished Water Sample
    - **U** Unknown

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **RC** Routine Compliance
    - **O** Other purpose (not used for compliance)
    - **Confirm** Confirmation sample

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values:
    - **F** Flowing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- Element cannot be empty if <composition> is C, B, or S.
- Numeric field two characters in length.
- Element represents a unique source on the public water system.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7)

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **M** Wrong or damaged container
    - **X** Unknown

## Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
    - **EQ** Equals
    - **NA** **Not Analyzed—**Use this code if you did not analyze any analyte that is required on a test panel.
    - **ND** No Detection
- A lab shall use the above valid entries when the lab's established MRL is greater than the SDRL as:
    - "**ND**" when a lab's **<measurementresult>** is less than the SDRL and MRL;
    - "**EQ**" with a "**J**" **<resultqualifier>** indicating that the **<measurementresult>** is an estimated concentration when a result is equal to or greater than the SDRL, but less than the lab's established MRL; or
    - "**EQ**" when a **<measurementresult>** is equal to or greater than the lab's established MRL.
- A lab shall use the above valid entries when the lab's established MRL is less than the SDRL as:
    - "**ND**" when a lab's **<measurementresult>** is less than the MRL and SDRL;
    - "**ND**" when a **<measurementresult>** is equal to or greater than the lab's established MRL, but less than the SDRL; or
    - "**EQ**" when a **<measurementresult>** is equal to or greater than the SDRL.
- A lab shall use the above valid entries when their established MRL is equal to the SDRL as:
    - "**ND**" when a lab's **<measurementresult>** is less than the SDRL and MRL; or
    - "**EQ**" when a **<measurementresult>** is equal to or greater than the SDRL and the lab's established MRL.

## Sample Measurement < measurementresult>

- Element may be empty.
- Numeric field nine characters in length.
- Enter data using the format: 99999.9999
    - Unless the field is zero, there must be no more than five numbers before the decimal point and four after. For example, the following values would be transferred as indicated:
        - 1.7 • 00001.7000
        - 0.05 • 00000.0500
        - 5.4 • 00005.4000
- Report data in the units of measure listed in WAC 246-390-075 Tables 3-7.
    - Enter the numbers but not the units of measure.
    - **Do not report in improper units.**

- Maximum values are checked at data transfer. However, exceeding the maximum is not sufficient to prevent transfer of the sample records.

### Result Qualifier <resultqualifier>

- Element cannot be empty.
- Alpha field four characters in length.
- Valid entries for this element are:
  - **B** Also Detected in Blank
  - **J** Estimated Concentration
  - **N** None
  - **NDDS** Not Detected in Duplicate Sample

## Reporting Examples for PFAS chemicals in WAC 246-390-075(17) (a) - (d):

### Key Definitions

Method reporting limit **(MRL)** means the lowest concentration of a standard used for calibration.

State detection reporting limit **(SDRL)** means the minimum reportable detection of an analyte as established in Tables 3 through 7 of WAC 246-390.

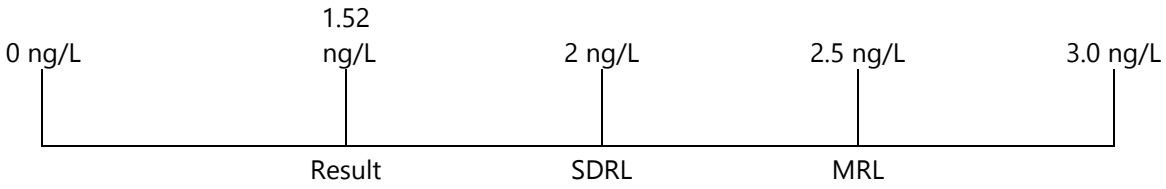
**ng/L** means nanograms per liter (1ng/L = 1ppt – parts per trillion)

**(a)** A lab shall analyze PFAS samples using EPA method 537.1, or EPA method 533, or with written approval, other department-approved methods.

**(b)** A lab shall report PFAS contaminant results when the lab's established MRL is greater than the SDRL as follows:

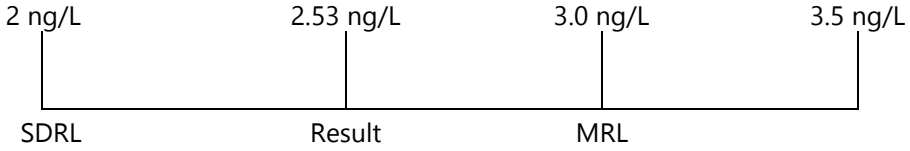
**(i) Nondetect or ND** when a lab's result is less than the SDRL and MRL;

**Result = ND**



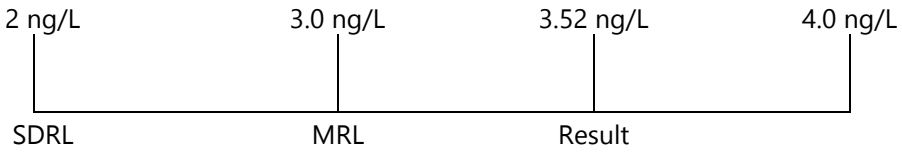

**(ii)** An estimated concentration, notated with a "J" data qualifier when a result is equal to or greater than the SDRL, but less than the lab's established MRL; or

**Result = 2.5 ng/L (J)**




**(iii)** A number when a result is equal to or greater than the lab's established MRL.

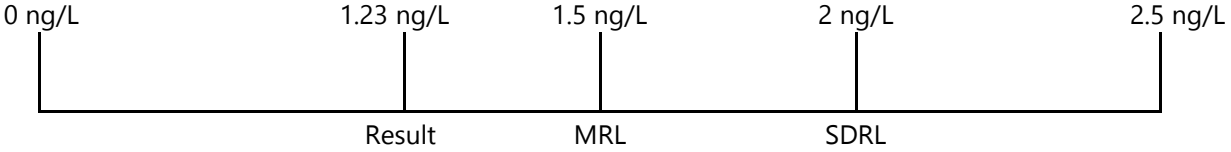
**Result = 3.5 ng/L**




**(c)** A lab shall report PFAS contaminant results when the lab's established MRL is less than the SDRL as follows:

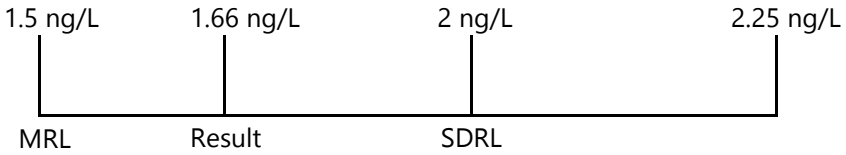
**(i) Nondetect or ND** when a lab's result is less than the lab's established MRL;

**Result = ND**



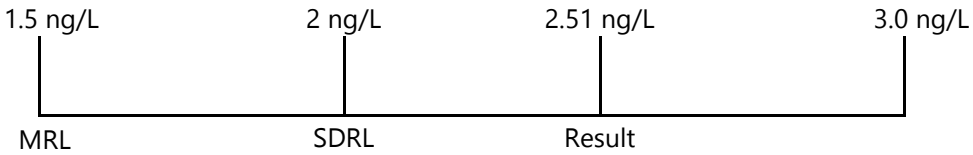

**(ii) Nondetect or ND** when a lab's result is less than the established SDRL; or

**Result = ND**




**(iii)** A number when a result is equal to or greater than the SDRL.

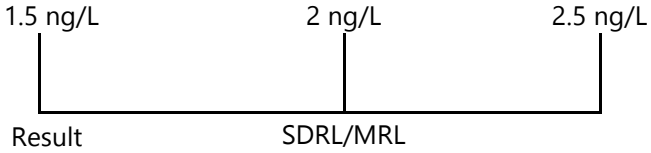
**Result = 2.5 ng/L**




**(d)** A lab shall report PFAS contaminant results when the lab's established MRL is equal to the SDRL as follows:

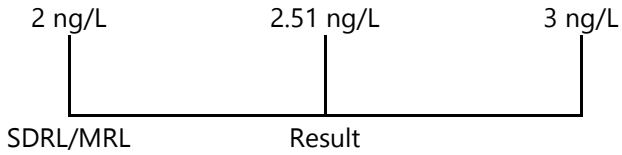
**(i) Nondetect or ND** when a lab's result is less than the SDRL and MRL; or

**Result = ND**




**(ii)** A number when a result is equal to or greater than the SDRL and the lab's established MRL.

**Result = 2.5 ng/L**



## Coliforms

Listed in the embedded document below are the electronic file transfer structures for every inorganic chemical regulated by the department.

Coliform File Structures.doc

For all analyses with a standardized parameter grouping, the combination of the following fields uniquely defines one sample.

## Routine Coli AP Sample

### Header Information

#### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid lab code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

#### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.
- The lab can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

#### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

#### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **D00** Distribution

#### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.

- The valid Test Panel Codes are listed below:
    - **COLI_AP** Absence/Presence

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - **MICRO** Microbiological

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/F** Post treatment/Finished Water Sample

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **RC** Routine Compliance
    - **I** Investigative (not used for compliance)
    - **O** Other purpose (not used for compliance)

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values:
    - **F** Flowing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.

- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- There is not a source number associated with this type of sample.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7)

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **M** Wrong or damaged container
    - **X** Unknown

### Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.

- Valid entries for this element are:
    - **EQ** Equals- Use this code when an analyte is analyzed.
    - **NA** Not Analyzed- Use this code when an analyte is not analyzed.

### Coliform Detection Flag <colidetectionflag>

- Element cannot be empty if **<analysislevel>** is "EQ".
- Alpha field one character in length.
- Valid entries for this element are:
    - **A** Absent indicating that no coliforms are detected.
    - **P** Presence indicating that coliforms are detected.

## Repeat Coli AP Sample

## Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid laboratory code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.
- The lab can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **D00** Distribution

### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
    - **COLI_AP** Absence/Presence

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - **MICRO** Microbiological

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/F** Post treatment/Finished Water Sample

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **R** Repeat Coliform

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values:
    - **F** Flowing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.

- The date the sample was logged in at the laboratory.
- This must be an actual date and be formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

### Repeat Lab Number <repeatlabnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- The lab that analyzed the unsatisfactory coliform sample that triggered this repeat sample.
- Must be a valid laboratory code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing laboratory. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Repeat Sample Number <repeatsamplenumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The sample number of the unsatisfactory coliform sample that triggered this repeat sample.
- The lab can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

### Repeat Collection Date <repeatcollectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The original date of the unsatisfactory coliform sample that triggered this repeat sample.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

## Source Information

### Source Number <sourcenumber>

- There is not a source number associated with this type of sample

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7)

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **M** Wrong or damaged container
    - **X** Unknown

### Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
    - **EQ** Equals- Use this code when an analyte is analyzed.
    - **NA** Not Analyzed" Use this code when an analyte is not analyzed.

### Coliform Detection Flag <colidetectionflag>

- Element cannot be empty if **<analysislevel>** is "EQ".
- Alpha field one character in length.
- Valid entries for this element are:
    - **A** Absent indicating that no coliforms are detected.
    - **P** Presence indicating that coliforms are detected.

## GWR Source Triggered Coli AP Sample

# Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid lab code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.
- The lab can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **S** Single

### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
    - **COLI_AP** Absence/Presence

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for this water system will

carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - **MICRO** Microbiological

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/R** Pretreatment /Raw Water Sample

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **GWR** Ground Water Rule

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values:
    - **F** Flowing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- Element cannot be empty.
- Numeric field two characters in length.
- Element represents a unique source on the public water system.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7)

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **M** Wrong or damaged container
    - **X** Unknown

### Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
    - **EQ** Equals- Use this code when an analyte is analyzed.
    - **NA** Not Analyzed- Use this code when an analyte is not analyzed.

### Coliform Detection Flag <colidetectionflag>

- Element cannot be empty if **<analysislevel>** is "EQ".
- Alpha field one character in length.

- Valid entries for this element are:
    - **A** Absent indicating that no coliforms were detected.
    - **P** Presence indicated that coliforms were detected.

## GWR Source Assessment Coli AP Sample

# Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid lab code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.
- The lab can submit sample numbers greater than five characters; however, the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and be formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **S** Single

### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
    - **COLI_AP** Absence/Presence

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - **MICRO** Microbiological

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/R** Pretreatment /Raw Water Sample

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **GWR-A** Ground Water Rule-Assessment

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values:
    - **F** Flowing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.

- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- Element cannot be empty.
- Numeric field two characters in length.
- Element represents a unique source on the public water system.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3–7)

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **M** Wrong or damaged container
    - **X** Unknown

### Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
    - **EQ** Equals- Use this code when an analyte is analyzed.
    - **NA** Not Analyzed- Use this code when an analyte is not analyzed.

### Coliform Detection Flag <colidetectionflag>

- Element cannot be empty if **<analysislevel>** is "EQ".
- Alpha field one character in length.
- Valid entries for this element are:
    - **A** Absent indicating that no coliforms were detected.
    - **P** Presence indicated that coliforms were detected.

## Coli Numeric Sample

## Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid laboratory code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The laboratory assigns this number.
- The laboratory can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **S** Single

### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
    - **COLI_NUM** Numeric Coli Count

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - **MICRO** Microbiological

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/R** Pretreatment /Raw Water Sample

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **RC** Routine / Compliance

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values:
    - **F** Flowing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.

- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- Element cannot be empty.
- Numeric field two characters in length.
- Element represents a unique source on the public water system.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **M** Wrong or damaged container
    - **T** Too numerous to count
    - **X** Unknown

### Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
    - **EQ** Equals

- **LT** Less Than
- **NA** Not Analyzed- Use this code when an analyte is not analyzed.

### Sample Measurement < measurementresult>

- Element may be empty.
- Numeric field nine characters in length.
- Enter data using the format: 99999.9999
  - Unless the field is zero, there must be no more than five numbers before the decimal point and four after. For example, the following values would be transferred as indicated:
    - 1.7 • 00001.7000
    - 0.05 • 00000.0500
    - 5.4 • 00005.4000
- Report data in the units of measure listed in WAC 246-390-075 tables 3-7.
  - Enter the numbers but not the units of measure.
  - **Do not report in improper units.**
  - Maximum values are checked at data transfer. However, exceeding the maximum is not sufficient to prevent transfer of the sample records.

## Heterotrophic Plate Count Sample

## Header Information

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid laboratory code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The laboratory assigns this number.
- The laboratory can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **D00 –** Distribution

### Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
    - **HET-**Heterotrophic Plate Count

### Water System ID Number <watersystemid>

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - **MICRO** Microbiological

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/R** Pretreatment /Raw Water Sample

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **RC** Routine / Compliance
    - **I** Investigative

### Collection Mode <collectionmode>

- Element cannot be empty.

- Alpha field one character long.
- It must contain one of the following values:
    - **F** Flowing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

## Source Information

### Source Number <sourcenumber>

- There is not a source number associated with this type of sample

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old

- **M** Wrong or damaged container
- **T** Too numerous to count
- **X** Unknown

### Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
  - **EQ** Equals
  - **LT** Less Than

### Sample Measurement < measurementresult>

- Element may be empty.
- Numeric field nine characters in length.
- Enter data using the format: 99999.9999
  - Unless the field is zero, there must be no more than five numbers before the decimal point and four after. For example, the following values would be transferred as indicated:
    - 1.7 • 00001.7000
    - 0.05 • 00000.0500
    - 5.4 • 00005.4000
- Report data in the units of measure listed in WAC 246-390-075 tables 3-7.
  - Enter the numbers but not the units of measure.
  - **Do not report in improper units.**
  - Maximum values are checked at data transfer. However, exceeding the maximum is not sufficient to prevent transfer of the sample records.

## Generic Format

The generic file structure used for new test panels is embedded below. Please note this structure is all-inclusive and will need modifications depending on any new analytes the department requires for compliance purposes:

Generic File Structure.doc

### Lab Number <labnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- Must be a valid laboratory code.

- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Sample Number <samnumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The lab assigns this number.
- The lab can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

### Sample Collect Date <collectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Composition <composition>

- Element cannot be empty.
- Alphanumeric field three characters in length.
- Element represents the composition of the sample collected by the public water system. Valid composition codes are below:
    - **D00** Coliform samples
    - **D92** Flowing distribution samples
    - **D93** Standing distribution sample
    - **C** Composite samples
    - **B** Blended samples.
    - **S** Single-source samples
    - **U** Unknown samples (can't be used by the department for compliance)

## Test Panel <testpanel>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The valid Test Panel Codes are listed below:
    - See Appendix A

### Water System ID Number <watersystemid>-

- Element cannot be blank.
- Alphanumeric field six characters in length.
- The department permanently assigns a unique water system identification code to all Washington State public water systems. All samples analyzed for a public water system

will carry the same code. If an invalid Water System ID Number is used, the sample file will fail to transfer properly.

### Analyte Group Code <analytegroup>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- Each Analyte Group refers to a different collection of analyses.
- It must contain one of the following values:
    - See Appendix A

### Sample Type Code <type>

- Element cannot be empty.
- Alpha field four characters long.
- It must contain one of the following values:
    - **PT/R** Pretreatment Raw water sample
    - **PT/F** Post-treatment Finished water sample
    - **U** Unknown if taken before or after treatment

### Sample Purpose Code <purpose>

- Element cannot be empty.
- Alpha field seven characters long.
- It must contain one of the following values:
    - **RC** Routine/Compliance Sample
    - **R** Repeat Sample for a coliform presence
    - **O** Other
    - **Confirm** Confirmation (chemical)

### Collection Mode <collectionmode>

- Element cannot be empty.
- Alpha field one character long.
- It must contain one of the following values:
    - **F** Flowing
    - **S** Standing

### Sample Lab Received Date <receiveddate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was logged in at the lab.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Lab Report Date <reportdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The date the sample was reported to us.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

### Sample Location Descriptor <locationdescriptor>

- Element can be empty.
- Text describing the location of sample collection.
- Alphanumeric field 255 characters long
- No restriction on content.

### Repeat Lab Number <repeatlabnumber>

- Element cannot be empty.
- Numeric field three characters in length.
- The lab that analyzed the unsatisfactory coliform sample that triggered this repeat sample.
- Must be a valid lab code.
- The department permanently assigns lab codes to uniquely identifying a certified water-testing lab. All samples analyzed by a lab will carry the same code. If an invalid Lab Number is used, the sample file will fail to transfer properly.

### Repeat Sample Number <repeatsamplenumber>

- Element cannot be empty.
- Numeric field five characters in length.
- The sample number of the unsatisfactory coliform sample that triggered this repeat sample.
- The lab can submit sample numbers greater than five characters however; the department will only load the last five (right most) characters**.**

### Repeat Collection Date <repeatcollectdate>

- Element cannot be empty.
- Alphanumeric field ten characters in length.
- The original date of the unsatisfactory coliform sample that triggered this repeat sample.
- This must be an actual date and formatted YYYY-MM-DD. This date must be less than or equal to today's date.

## Source Information

### Source Number <sourcenumber>

- Element cannot be empty if <composition> is C, B, or S.
- Numeric field two characters in length.
- Element represents a unique source on the public water system.

## Result Information

### Analyte DOH Number <analytedohnumber>

- Element cannot be empty.
- Numeric field four characters in length.
- The number assigned by the department that uniquely identifies each analyte. (See WAC 246-390-075 Tables 3-7)

### Sample Suitability Code <suitability>

- Element cannot be empty.
- Alpha field three characters long.
- If the sample is suitable, enter Y.
- If the sample is not suitable, enter one of the following codes:
    - **A** Sample too old
    - **C** Turbid culture
    - **E** Excessive debris
    - **G** Confluent growth
    - **M** Wrong or damaged container
    - **S** Same tap
    - **T** Too numerous to count
    - **X** Unknown reason
    - **Y** Yes (Suitable)

### Sample Analysis Level <analysislevel>

- Element cannot be empty.
- Alpha field two characters in length.
- Element is used to indicate if an **<analytedohnumber>** was analyzed and if the result was quantifiable.
- Valid entries for this element are:
    - **EQ** Equals
    - **GT** Greater than
    - **LT** Less than
    - **NA** Not analyzed
    - **ND** Not detected

### Coliform Detection Flag <colidetectionflag>

- Element cannot be empty if **<analysislevel>** is "EQ".
- Alpha field one character in length.
- Valid entries for this element are:
    - **A** Absent indicating that no coliforms are detected.
    - **P** Presence indicating that coliforms are detected.
    - **N** Not tested

### Result Qualifier <resultqualifier>

- Element cannot be empty.
- Alpha field four characters in length.
- Valid entries for this element are:
    - **B** Also Detected in Blank
    - **J** Estimated Concentration
    - **N** None
    - **NDDS** Not Detected in Duplicate Sample

# Appendix

## Appendix A Test Panels and Analyte Groups

| Test Panel Code | Test Panel Name | Analyte Group Code | Analyte Group Name |
|---|---|---|---|
| AR | ARSENIC | IOC | INORGANIC CONTAMINANTS |
| ASB | ASBESTOS | IOC | INORGANIC CONTAMINANTS |
| BENZO | BENZO | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| BROMATE | BROMATE | DBP | DISINFECTION BY PRODUCTS |
| BROMIDE | BROMIDE | DBP | DISINFECTION BY PRODUCTS |
| CHLORITE | CHLORITE | DBP | DISINFECTION BY PRODUCTS |
| COLI_AP | ABSENCE / PRESENCE | MICRO | MICROBIOLOGICAL |
| COLI_NUM | NUMERIC COLI COUNT | MICRO | MICROBIOLOGICAL |
| DIOXIN | DIOXIN | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| ENDO | ENDOTHAL | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| FUMIGANT | SOIL FUMIGANTS | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| GLYP | GLYPHOSATE | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| HAA5 | HALO-ACETIC ACIDS | DBP | DISINFECTION BY PRODUCTS |
| HERB1 | CHLOROPHENOXY HERBICIDES | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| HET | HETEROTROPHIC PLATE COUNT | MICRO | MICROBIOLOGICAL |
| INSECT1 | CARBAMATE INSECTICIDES | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| IOC | COMPLETE INORGANIC ANALYSIS | IOC | INORGANIC CONTAMINANTS |
| IOC_SHORT | INORGANIC SHORT FORM | IOC | INORGANIC CONTAMINANTS |
| LCR | LEAD COPPER | IOC | INORGANIC CONTAMINANTS |
| NIT | NITRATE SUITE | IOC | INORGANIC CONTAMINANTS |
| PCB | PCB AS DECACHLOROBIPHENOL | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| PEST1 | GENERAL PESTICIDE SUITE | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| PHTH | PHTHALATES | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| QUAT | DIQUAT PARAQUAT | SOC | SYNTHETIC ORGANIC CONTAMINANTS |
| RAD | RADIONUCLIDES | RAD | RADIONUCLIDES |
| SEC/PHYS | SECONDARY/PHYSICAL | IOC | INORGANIC CONTAMINANTS |
| TTHM | TOTAL TRIHALOMETHANE | DBP | DISINFECTION BY PRODUCTS |
| TOC | TOTAL ORGANIC CARBON | DBP | DISINFECTION BY PRODUCTS |
| VOC1 | VOLATILE ORGANIC | VOC | VOLATILE ORGANIC CONTAMINANTS |

## Appendix B Table of Elements

### Sample Elements

| Element | Domain | Length/Precision | Required | Comments |
|---|---|---|---|---|
| labnumber | Numeric | 3/0 | Y | Lab number assigned by the department. |
| samnumber | Numeric | 5/0 | Y | Lab sequence number assigned for sample tracking |
| collectdate | Date(YYYY-MM-DD) | 10/0 | Y | Date the purveyor collected the sample |
| composition | Alphanumeric | 3/0 | Y | D00 Coliform samples<br>D92 Flowing distribution samples<br>D93 Standing distribution sample<br>C Composite samples<br>B Blended samples.<br>S Single-source samples<br>U Unknown samples (can't be used by the department for compliance) |
| testpanel | Alphanumeric | 10/0 | Y | See Appendix A for complete list. Must be a value in the list. |
| watersystemid | Alphanumeric | 6/0 | Y | Public water System ID and suffix assigned by the department. |
| analytegroup | Alphanumeric | 10/0 | Y | See Appendix A for complete list. Must be a value in the list. |
| type | Alpha | 4/0 | Y | PT/R Pretreatment Raw water sample<br>PT/F Post-treatment Finished water sample<br>U Unknown if taken before or after treatment |
| purpose | Alpha | 7/0 | Y | RC Routine/Compliance Sample<br>R Repeat Sample for a coliform presence<br>O Other<br>Confirm Confirmation (chemical) |
| collectionmode | Alpha | 1/0 | Y | F Flowing<br>S Standing |
| receiveddate | Date(YYYY-MM-DD) | 10/0 | Y | Date the lab received the sample. |
| reportdate | Date(YYYY-MM-DD) | 10/0 | Y | Date the lab completed the sample analysis. |
| locationdescriptor | Alphanumeric | 255/0 | N | Sample location description or other related comment. |
| repeatlabnumber | Numeric | 3/0 | Conditional | For repeat samples only and required if <purpose> = 'R'. Use this field to identify the lab conducting the original sample analysis. |
| repeatsamplenumber | Numeric | 5/0 | Conditional | For repeat samples only and required if <purpose> = 'R'. Use this field to identify the lab sequence number of the original sample analysis. |
| repeatcollectdate | Date(YYYY-MM-DD) | 10/0 | Conditional | Date purveyor collected the original sample. |

### Source Elements

| Element | Domain | Length/Precision | Required | Comments |
|---|---|---|---|---|
| sourcenumber | Numeric | 2/0 | Y | Source number assigned by the department.<br>01 – 89 for specific sources |

### Analyte Elements

| Element | Domain | Length/Precision | Required | Comments |
|---|---|---|---|---|
| analytedohnumber | Numeric | 4/0 | Y | The number assigned by the department that uniquely identifies each analyte. See WAC 246-390-075 tables 3-7. |
| suitability | Alpha | 1/0 | Y | If lab determined that the sample is unsuitable for analysis one of the following codes must be entered:<br>A Sample too old<br>C Turbid culture<br>E Excessive debris<br>G Confluent growth<br>M Wrong or damaged container<br>S Same tap<br>T Too numerous to count<br>X Unknown reason<br>Y Yes (Suitable) |
| analysislevel | Alpha | 2/0 | Conditional | Indicates the level of analysis at which a sample has been tested. This field is blank if a sample measurement or a sample present/absent flag is entered. Otherwise:<br>EQ Equals<br>GT Greater than<br>LT Less than<br>NA Not analyzed<br>ND Not detected |
| measurementresult | Numeric | 9/4 | Y | The actual amount of analyte measured in a given sample. This must be reported in the units of measure for each analyte listed in Appendix A. |
| colidetectionflag | Alpha | 1/0 | Conditional | Code indicating the presence or absence of COLI group analyte.<br>A Absent<br>P Present<br>N Not tested |
| resultqualifier | Alpha | 4/0 | Y | Indicates if the sample result needs to be qualified<br>B – Also Detected in Blank<br>J – Estimated Concentration<br>N - None<br>NDDS – Not Detected in Duplicate Sample |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