Electronic Reporting of Drinking Water Quality Monitoring Results

XML Document Transfer Structure

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Revised

Washington State Department of Health
Environmental Public Health
Office of Drinking Water

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Electronic Data Transfer Implementation Policy

Purpose

To provide the specific requirements laboratories must meet to be accepted into the Office of Drinking Water's (ODW) Electronic Data Submission Program.

Getting Started

1. The lab initiates the process by submitting a written request for consideration to the ODW Information Management Section at:
   Electronic Data Submittal Program
   DOH-EHD-ODW
   243 Israel Rd. SE
   P.O. Box 47822
   Olympia, Washington, 98504-7822
2. ODW reviews the sample submission history of the lab to determine the type, quantity and quality of data previously submitted.
3. ODW helps the lab:
   - Develop record structures.
   - Determine the method of transfer.
   - Develop audit files and programming to effectively use the audit files.
   - Direct staff on upload and download procedures.
   - Develop routines to appropriately label the transfer files.
     The correct file name structure is lab name, year, month, day - no spaces: Joeslab20160202
4. The lab develops test packets of data and submits them to ODW to determine if the:
   - Data transfer procedures work correctly.
   - Record structures are correct.
   - Data entry errors are acceptable (1 percent is the standard).
   - Data files can be successfully uploaded without error.
5. ODW determines if the lab has met the testing criteria. If problems are encountered in processing the test packets, ODW notifies the lab and assists in solving them.

Additional Requirements

If coliform is detected in a drinking water sample the lab must place a phone call to the appropriate ODW regional office within 24 hours, and follow-up with a hardcopy of the lab slip by fax or mail.

A lab's participation in the program may be terminated under the following conditions:

- The error rate for data entry exceeds 1 percent.
- The record structure or media errors remain uncorrected and prohibit the successful upload of data to the ODW data system.
- The lab fails to comply with ODW directions to correct deficient procedures.

File transfer structure

Drinking Water Analytic Results

A standard format is necessary to support the electronic transfer of drinking water sample data from certified laboratories to the Office of Drinking Water's (ODW) database.

Most public water systems collect samples to comply with drinking water regulations. A sample collected correctly and analyzed properly produces valuable information. However, if that information cannot be linked to the water system and the appropriate water source(s), the value of the sample and the analysis is lost and cannot be counted toward the system's compliance requirements.

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

Defined rules that restrict the transfer of sample data are included in the following section.

General Data Structure

The data will be structured as an XML document using elements and values. There are no attributes attached to the elements.

- Data shall be submitted to the DOH ftp server. The FTP server address will be provided, along with a user id and password after the laboratory has officially contacted ODW and is ready to begin providing data for upload.
- All dates are formatted as YYYY-MM-DD. For example, 2004-06-14 represents June 14, 2004. No other method of transferring dates is supported. Dates which are not real dates or which are greater than today's date will cause data transfer errors.

Figure 1 is a template providing the complete list of elements required to completely characterize a sample.

Figures 2 – 8 show the same template populated with different test panel information.

It should be noted that the data elements "sources" and "analytes" have child elements that allow a one-to-many relationship to be described. Not all elements are required. For more detailed information, refer to the element descriptions on pages 5 to 9.

A link to the XML schema can be found at: http://www.doh.wa.gov/ehp/dw/our_main_pages/public.htm

Figure 1. XML Document Format

```
<?xml version="1.0" encoding="utf-8" ?>
<xml>
	<sample>
		<labnumber></labnumber>
		<samnumber></samnumber>
		<collectdate></collectdate>
		<composition></composition>
		<testpanel></testpanel>
		<watersystemid></watersystemid>
		<analytegroup></analytegroup>
		<type></type>
		<purpose></purpose>
		<collectionmode></collectionmode>
		<receiveddate></receiveddate>
		<reportdate></reportdate>
		<locationdescriptor></locationdescriptor>
		<repeatlabnumber></repeatlabnumber>
		<repeatsamplenumber></repeatsamplenumber>
		<repeatcollectdate></repeatcollectdate>
		<sources>
			<source>
				<sourcenumber></sourcenumber>
			</source>
			<source>
				<sourcenumber></sourcenumber>
			</source>
		</sources>
		<analytes>
			<analyte>
				<analytedohnumber></analytedohnumber>
				<suitablity></suitablity>
				<measurementresult></measurementresult>
				<analysislevel></analysislevel>
				<colidetectionflag></colidetectionflag>
				<sublabnumber></sublabnumber>
			</analyte>
			<analyte>
				<analytedohnumber></analytedohnumber>
				<suitablity></suitablity>
				<measurementresult></measurementresult>
				<analysislevel></analysislevel>
				<colidetectionflag></colidetectionflag>
				<sublabnumber></sublabnumber>
			</analyte>
		</analytes>
	</sample>
</xml>
```

Figure 2. Example of a Routine Coli AP Sample


```
<?xml version="1.0" encoding="utf-8" ?>
<xml >
	<sample>
		<labnumber>089</labnumber>
		<samnumber>12345</samnumber>
		<collectdate>2004-07-15</collectdate>
		<composition>D00</composition>
		<testpanel>COLI_AP</testpanel>
		<watersystemid>77050Y</watersystemid>
		<analytegroup>MICRO</analytegroup>
		<type>PT/F</type>
		<purpose>RC</purpose>
		<collectionmode>F</collectionmode>
		<receiveddate>2004-07-16</receiveddate>
		<reportdate>2004-07-20</reportdate>
		<locationdescriptor />kitchen tap<locationdescriptor />
		<sources />
		<analytes>
			<analyte>
				<analytedohnumber>0001<analytedohnumber>
				<suitability>Y</suitability>
				<analysislevel>EQ</analysislevel>
				<colidetectionflag>A</colidetectionflag>
			</analyte>
			<analyte>
				< analytedohnumber >0002</ analytedohnumber >
				<suitability>Y</suitability>
				<analysislevel>NA</analysislevel>
			</analyte>
			<analyte>
				< analytedohnumber >0003</ analytedohnumber >
				<suitability>Y</suitability>
				<analysislevel>EQ</analysislevel>
				<colidetectionflag>A</colidetectionflag>
			</analyte>
		</analytes>
	</sample>
</xml>
```

Figure 3. Example of a Repeat Coli AP Sample


```
<?xml version="1.0" encoding="utf-8" ?>
<xml >
        <sample>
                <labnumber>074</labnumber>
                <samnumber>23923</samnumber>
                <collectdate>2011-12-30</collectdate>
                <composition>D00</composition>
                <testpanel>COLI_AP</testpanel>
                <watersystemid>40800</watersystemid>
                <analytegroup>MICRO</analytegroup>
                <type>PT/F</type>
                <purpose>R</purpose>
                <collectionmode>F</collectionmode>
                <receiveddate>2011-12-30</receiveddate>
                <reportdate>2012-01-03</reportdate>
                <locationdescriptor />NE 140TH ST & 118th AVE NE<locationdescriptor />
                        <repeatlabnumber>074<repeatlabnumber>
                        <repeatsamplenumber>23855<repeatsamplenumber>
                        <repeatcollectdate>2011-12-28<repeatcollectdate>
                <sources />
                <analytes>
                        <analyte>
                                <analytedohnumber>0001<analytedohnumber>
                                <suitability>Y</suitability>
                                <analysislevel>EQ</analysislevel>
                                <colidetectionflag>A</colidetectionflag>
                        </analyte>
                        <analyte>
                                < analytedohnumber >0003</ analytedohnumber >
                                <suitability>Y</suitability>
                                <analysislevel>EQ</analysislevel>
                                <colidetectionflag>A</colidetectionflag>
                        </analyte>
                </analytes>
        </sample>
</xml>
```

Figure 4. Example of a Coli Num Sample


```xml
<?xml version="1.0" encoding="utf-8" ?>
<xml >
	<sample>
		<labnumber>**089**</labnumber>
		<samnumber>**12345**</samnumber>
		<collectdate>**2004-07-15**</collectdate>
		<composition>**S**</composition>
		<testpanel>**COLI_NUM**</testpanel>
		<watersystemid>**77050Y**</watersystemid>
		<analytegroup>**MICRO**</analytegroup>
		<type>**PT/F**</type>
		<purpose>**RC**</purpose>
		<collectionmode>**F**</collectionmode>
		<receiveddate>**2004-07-16**</receiveddate>
		<reportdate>**2004-07-20**</reportdate>
		<locationdescriptor />**ctf raw water**<locationdescriptor />
		<sources >
			<source>
				<sourcenumber>**01**<sourcenumber>
			<source>
		</sources >
		<analytes>
			<analyte>
				<analytedohnumber>**0001**<analytedohnumber>
				<suitability>**Y**</suitability>
				<analysislevel>**EQ**</analysislevel>
				<measurementresult>**1**</ measurementresult >
			</analyte>
			<analyte>
				< analytedohnumber >**0002**</ analytedohnumber >
				<suitability>**Y**</suitability>
				<analysislevel>**NA**</analysislevel>
			</analyte>
			<analyte>
				< analytedohnumber >**0002**</ analytedohnumber >
				<suitability>**Y**</suitability>
				<analysislevel>**LT**</analysislevel>
				<measurementresult>**1**</ measurementresult >
			</analyte>
		</analytes>
	</sample>
</xml>
```

Figure 5. Example of a Nitrate Sample


```
<?xml version="1.0" encoding="utf-8" ?>
<xml >
        <sample>
                <labnumber>089</labnumber>
                <samnumber>12345</samnumber>
                <collectdate>2004-07-15</collectdate>
                <composition>S</composition>
                <testpanel>NIT</testpanel>
                <watersystemid>77050Y</watersystemid>
                <analytegroup>IOC</analytegroup>
                <type>PT/R</type>
                <purpose>RC</purpose>
                <collectionmode>F</collectionmode>
                <receiveddate>2004-07-16</receiveddate>
                <reportdate>2004-07-20</reportdate>
                <locationdescriptor />ph<locationdescriptor />
                <sources >
                        <source>
                                <sourcenumber>01<sourcenumber>
                        <source>
                </sources >
                <analytes>
                        <analyte>
                                <analytedohnumber>0020<analytedohnumber>
                                <suitability>Y</suitability>
                                <analysislevel>EQ</analysislevel>
                                <measurementresult>1</ measurementresult >

                        </analyte>
                </analytes>
        </sample>
</xml>
```

Figure 6. Example of a Lead and Copper Sample


```xml
<?xml version="1.0" encoding="utf-8" ?>
<xml >
	<sample>
		<labnumber>089</labnumber>
		<samnumber>12345</samnumber>
		<collectdate>2004-07-15</collectdate>
		<composition>S</composition>
		<testpanel>LCR</testpanel>
		<watersystemid>77050Y</watersystemid>
		<analytegroup>IOC</analytegroup>
		<type>PT/F</type>
		<purpose>RC</purpose>
		<collectionmode>F</collectionmode>
		<receiveddate>2004-07-16</receiveddate>
		<reportdate>2004-07-20</reportdate>
		<locationdescriptor />unit 5<locationdescriptor />
		<sources/ >
		<analytes>
			<analyte>
				<analytedohnumber>0023<analytedohnumber>
				<suitability>Y</suitability>
				<analysislevel>EQ</analysislevel>
				<measurementresult>1.3</ measurementresult >
			</analyte>
			<analyte>
				< analytedohnumber >0009</ analytedohnumber >
				<suitability>Y</suitability>
				<analysislevel>ND</analysislevel>
			</analyte>
		</analytes>
	</sample>
</xml>
```

Figure 7. Example of a HAA_5 Sample


```xml
<?xml version="1.0" encoding="UTF-8"?>
-<xml>
    -<sample>
        <labnumber>209</labnumber>
        <samnumber>12345</samnumber>
        <collectdate>2015-10-07</collectdate>
        <composition>D92</composition>
        <testpanel>HAA5</testpanel>
        <watersystemid>83100</watersystemid>
        <analytegroup>DBP</analytegroup>
        <type>PT/F</type>
        <purpose>RC</purpose>
        <collectionmode>F</collectionmode>
        <receiveddate>2015-10-07</receiveddate>
        <reportdate>2015-10-28</reportdate>
        <locationdescriptor>(HI-1) NW 155TH ST & WILLARD DR MNTNC SHED</locationdescriptor>
        <sources/>
        -<analytes>
            -<analyte>
                <analytedohnumber>0411</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>EQ</analysislevel>
                <measurementresult>2.9</measurementresult>
            </analyte>
            -<analyte>
                <analytedohnumber>0412</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>EQ</analysislevel>
                <measurementresult>18</measurementresult>
            </analyte>
            -<analyte>
                <analytedohnumber>0413</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>EQ</analysislevel>
                <measurementresult>17</measurementresult>
            </analyte>
            -<analyte>
                <analytedohnumber>0414</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>LT</analysislevel>
                <measurementresult>1</measurementresult>
            </analyte>
            -<analyte>
                <analytedohnumber>0415</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>LT</analysislevel>
                <measurementresult>.5</measurementresult>
            </analyte>
            -<analyte>
                <analytedohnumber>0417</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>EQ</analysislevel>
                <measurementresult>1.47</measurementresult>
            </analyte>
        </analytes>
    </sample>
</xml>
```

Figure 8. Example of a TTHM Sample


```
<?xml version="1.0" encoding="UTF-8"?>
-<xml>
    -<sample>
        <labnumber>209</labnumber>
        <samnumber>12345</samnumber>
        <collectdate>2015-10-07</collectdate>
        <composition>D92</composition>
        <testpanel>THM</testpanel>
        <watersystemid>83100</watersystemid>
        <analytegroup>DBP</analytegroup>
        <type>PT/F</type>
        <purpose>RC</purpose>
        <collectionmode>F</collectionmode>
        <receiveddate>2015-10-07</receiveddate>
        <reportdate>2015-10-28</reportdate>
        <locationdescriptor>(HI-1) NW 155TH ST & WILLARD DR MNTNC SHED</locationdescriptor>
        <sources/>
        -<analytes>
            -<analyte>
                <analytedohnumber>0027</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>EQ</analysislevel>
                <measurementresult>43.1</measurementresult>
            </analyte>
            -<analyte>
                <analytedohnumber>0028</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>EQ</analysislevel>
                <measurementresult>4.7</measurementresult>
            </analyte>
            -<analyte>
                <analytedohnumber>0029</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>EQ</analysislevel>
                <measurementresult>1.12</measurementresult>
                </analyte>
            -<analyte>
                <analytedohnumber>0030</analytedohnumber>
                <suitability>Y</suitability>
                <analysislevel>LT</analysislevel>
                <measurementresult>.5</measurementresult>
            </analyte>
        </analytes>
    </sample>
</xml>
```

Element descriptions

Individual Elements and Element Specific Information

For all analyses with a standardized parameter grouping, the combination of the following fields uniquely defines one sample: Lab Number, Sample Number, Sample Collect Date, System ID Number, and Analytic Test Method.

The field descriptors of Lab Number, Sample Number, Water System ID, Analytic Test Method, and Sample Collect Date from the original sample are used since they combine to uniquely identify the sample. If these fields are not identical to the original sample, the data will successfully transfer but the samples can't be linked or used to determine compliance. At present, these fields are used only for the MICRO analyte group.

Lab Number (3N) <labnumber>

Element cannot be empty.
Must be a valid laboratory code. Valid codes uniquely identifying a certified water testing laboratory are permanently assigned by the Office of Drinking Water (ODW) and maintained in the ODW database. All samples analyzed by a laboratory will carry the same code. If an improper Lab Number is used, the sample file will fail to transfer properly.

Sample Number (5N) <samnumber>

Element cannot be empty and is assigned by the analyzing laboratory. The laboratory can submit sample numbers greater than five (5) digits however ODW will only load the last five (right most) numbers.

Sample Collect Date (8N - Date) <collectdate>

Element cannot be empty.
This must be an actual date and be formatted YYYY-MM-DD. This date must be less than or equal to today's date. (A sample cannot be collected in the future).

Analytic Test Method (10A) <testpanel>

Element cannot be empty.
A list of analytic test methods is included in Appendix A. The values to be used are under the heading "Test Panel Code".

Drinking water sources

The combination of the System Identification Number with either the Composition or Source Number represents a specific and unique drinking water source. These elements must correctly correlate to information in the ODW database for a water system to receive proper compliance credit.

Water System ID Number (6A) <watersystemid>

Element cannot be blank.

This element identifies a specific public water system in Washington and must be a valid Public Water System identification number. Valid codes uniquely identifying water systems are permanently assigned by ODW and maintained in the ODW database. Without the proper code, a record cannot be attributed to the proper water system and will fail to transfer.

Composition (3A) <composition>

Element cannot be empty.

Element represents the composition of the sample collected by the public water system. Valid composition codes are specified below:

D00	Coliform samples
D92	Flowing distribution sample (e.g. disinfectant samples)
D93	Standing distribution sample (e.g. tap samples for Lead / Copper rule)
C	Composite samples
B	Blended samples
S	Samples from a single source
U	Unknown samples (cannot be used by DOH to determine water system compliance)

Source Number (2A) <sourcenumber>

Element cannot be empty if <composition> is C, B, or S.

Element represents a unique source on the public water system.

This element conforms to a valid source for the water system in the ODW database. If the source number is not properly entered, the sample data will successfully transfer. However, an improper source number cannot be used by ODW to determine water system compliance.

<u>Sample Characteristics</u>

The remaining elements are used to describe sample characteristics.

Analyte Group Code (10A) <analytegroup>

Element cannot be empty. Must have one of the following values:

MICRO	Coliform
IOC	Inorganic Chemical and Physical Characteristics
RAD	Radionuclides and Radon
SOC	Synthetic Organic Chemicals
VOC	Volatile Organic Chemicals
DBP	Disinfection Byproducts

Each Analyte Group refers to a different collection of analyses. The list of analytes and analyte groups is in Appendix A. For electronic data submittal, the laboratory should use the values under the heading "**Analyte Group Code"**. The <analytegroup>, the <testmethod>, and the <analytedohnumber> must be in agreement. If these elements are not in agreement, the sample records cannot be used to determine compliance.

Sample Type Code (1A) <type>

Element cannot be empty.

PT/R Pretreatment /Raw Water Sample (Coliform)
PT/F Post treatment/Finished Water Sample (IOC, VOC, SOC, RAD)
U Unknown (IOC, VOC, SOC, RAD)

Sample Purpose Code <purpose> (1A)

Element cannot be empty.

RC Routine Compliance
R Repeat (Coliform only)
O Other purpose (not used for compliance)
Confirm Confirmation sample (chemical)

Collection Mode <collectionmode> (1A)

Element cannot be empty.

F Flowing
S Standing

Sample Suitability Code <suitability> (1A)

Element cannot be empty. If the sample is suitable enter Y.
If the sample is not suitable, enter a code to indicate why.

A Sample too old
C Turbid culture
E Excess debris
G Confluent growth
M Wrong or damaged container
S Same tap
T Too numerous to count
X Unknown
Y Yes (suitable)

Sample Lab Received Date <receiveddate> (8N – Date)

Element cannot be empty.
This is the date the sample was logged in at the laboratory. It must be formatted as YYYY-MM-DD.

Sample Lab Report Date <reportdate> (8N – Date)

Element cannot be empty.
This is the date the sample analysis is complete. It must be formatted as YYYY-MM-DD.

Sample Location Descriptor <locationdescriptor> (255A)

Text describing the location of sample collection is optional. No restriction on content.

Original Lab Number <repeatlabnumber> (3N)

Element cannot be empty if Sample Purpose is R and Parameter Group is MICRO. Otherwise, the element should be empty or not provided.

Original Sample Number <repeatsamplenumber> (5N)

Element cannot be empty if Sample Purpose is R and Parameter Group is MICRO. Otherwise, the element should be empty or not provided.

When a repeat sample is required of a water system, the original sample that prompted the repeat must be referenced.

The laboratory can use sample numbers with more than five digits. However, ODW will only load the last five (right most) digits and will reference only the last (right most) five digits of the original sample number.

Original Collect Date <repeatcollectdate> (8N – DATE)

Element cannot be empty if Sample Purpose is R and Parameter Group is MICRO. Otherwise the element should be empty or not provided.

<u>Analytic Results</u>

A discrete detail record combines Analyte DOH Number, Sample Measurement, Sample Analysis Level, and Sample Presence/Absence Flag (if required) to represent the analytic result and one of the analytes for which a sample is tested.

Analyte DOH Number <analytedohnumber> (4N)

Element cannot be empty.
The number assigned by DOH that uniquely identifies each analyte. See appendix B

Sample Measurement < measurementresult> (9N)

Element may be empty. 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

Value must be reported in the units of measure listed in Appendix B (Page 14). 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.

Note: Not for use with samples where Analyte Group is MICRO and Sample Purpose is RC.

Sample Analysis Level <analysislevel> (2A)

Element cannot be empty. Element is used to indicate the sample was analyzed for the ***Analyte DOH Number*** (listed in Appendix B, page 14) and whether the analyte was detected and quantifiable. Valid entries for this element are:

ND – No detection GT – Greater than EQ - Equals
NA – Not analyzed LT – Less than

Must be GT, LT or EQ if Sample Measurement is entered.
LT or GT should be used if the analyte was detected but could not be quantified.

For routine MICRO compliance samples, the value should be NA or EQ. NA is also expected when a MICRO sample is unsuitable for analysis.

If EQ is entered, one of the Sample Presence/Absence codes below should be used. An analysis level is required for all three Analyte DOH Numbers that comprise the MICRO test panel.

Sample Presence/Absence Code <colidetectionflag> (1A)

This element should not be provided unless the **Analyte Group Code** is MICRO and the **Sample Purpose Code** is RC, then one of the following codes must be entered:

A Absence
P Presence
N Not Tested

Subcontract Lab Number (3N) - <sublabnumber>

This element should only be provided when a lab has subcontracted the analysis of an analyte to another lab. This is a child element of <analyte> and should be provided for each subcontracted analyte. Therefore, a <sample> will have several <analyte> elements, any of which could have a <sublabnumber> element.

Must be a valid laboratory code. Valid codes uniquely identifying water systems are permanently assigned by the Office of Drinking Water (ODW) and maintained in the ODW database. All samples analyzed by a laboratory will carry the same code. If an improper Lab Number is used, the sample file will fail to transfer properly.

Note: Optionally, the results from a subcontracted analysis may be reported as a separate sample. In that case, the <sublabnumber> element would either not be provided or left empty.

Sample Elements

Element	Domain	Length/Precision	Required	Comments
labnumber	Numeric	3/0	Y	Lab number assigned by DOH.
samnumber	Numeric	5/0	Y	Lab sequence number assigned for sample tracking
collectdate	Date(YYYY-MM-DD)	8/0	Y	Date the purveyor collected the sample
composition	Alphanumeric	3/0	Y	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 DOH 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 DOH.
analytegroup	Alphanumeric	10/0	Y	See Appendix A for complete list. Must be a value in the list.
type	Alpha	1/0	Y	Acceptable entries: PT/R Pretreatment Raw water sample PT/F Post-treatment Finished water sample U Unknown if taken before or after treatment
purpose	Alpha	7/0	Y	Acceptable entries: RC Routine/Compliance Sample R Repeat Sample for a coliform presence O Other Confirm Confirmation (chemical)
collectionmode	Alpha	1/0	Y	Acceptable entries: F Flowing S Standing

Element	Domain	Length/Precision	Required	Comments
suitability	Alpha	1/0	Y	If lab determined that the sample is unsuitable for analysis one of the following codes must be entered: 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)
reportdate	Date(YYYY-MM-DD)	8/0	Y	Date the lab completed the sample analysis.
receiveddate	Date(YYYY-MM-DD)	8/0	Y	Date the lab received the sample.
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)	8/0	Conditional	Date purveyor collected the original sample.
sources				Must contain child source elements only.
analytes				Must contain child analyte elements only.

Source Elements

Element	Domain	Length/Precision	Required	Comments
sourcenumber	Numeric	2/0	Y	Source number assigned by DOH. 01 – 89 for specific sources

Analyte Elements

Element	Domain	Length/Precision	Required	Comments
analytedohnumber	Numeric	4/0	Y	The number assigned by DOH that uniquely identifies each analyte. See appendix B.
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.
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: EQ Equals GT Greater than LT Less than NA Not analyzed ND Not detected
colidetectionflag	Alpha	1/0	Conditional	Code indicating the presence or absence of COLI group analyte. A Absent P Present N Not tested
sublabnumber	Alpha	3/0	Conditional	Only provided when the analyte was analyzed by a laboratory other than the laboratory providing the sample file. Must be a valid lab number assigned by DOH.

Appendix ATest 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
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 Analyte, AnalyteGroup, and Units of Measure

Analyte DOHNumber	*AnalyteName*	*Analyte GroupCode*	*UOMCode*	*UOMName*
0001	TOTAL COLIFORM	MICRO	/100ml	per 100 milliliters
0002	FECAL COLIFORM	MICRO	/100ml	per 100 milliliters
0003	E. COLI	MICRO	/100ml	per 100 milliliters
0004	ARSENIC	IOC	mg/L	Milligrams per Liter
0005	BARIUM	IOC	mg/L	Milligrams per Liter
0006	CADMIUM	IOC	mg/L	Milligrams per Liter
0007	CHROMIUM	IOC	mg/L	Milligrams per Liter
0008	IRON	IOC	mg/L	Milligrams per Liter
0009	LEAD	IOC	mg/L	Milligrams per Liter
0010	MANGANESE	IOC	mg/L	Milligrams per Liter
0011	MERCURY	IOC	mg/L	Milligrams per Liter
0012	SELENIUM	IOC	mg/L	Milligrams per Liter
0013	SILVER	IOC	mg/L	Milligrams per Liter
0014	SODIUM	IOC	mg/L	Milligrams per Liter
0015	HARDNESS	IOC	mg/L	Milligrams per Liter
0015	HARDNESS	PHYS	mg/L	Milligrams per Liter
0016	CONDUCTIVITY	PHYS	Umhos/cm	Micromhos per centimeter
0016	CONDUCTIVITY	IOC	Umhos/cm	Micromhos per centimeter
0017	TURBIDITY	IOC	NTU	Nephelometric Turbidity Units
0017	TURBIDITY	PHYS	NTU	Nephelometric Turbidity Units
0018	COLOR	PHYS	CU	Color Units
0018	COLOR	IOC	CU	Color Units
0019	FLUORIDE	IOC	mg/L	Milligrams per Liter
0020	NITRATE-N	IOC	mg/L	Milligrams per Liter
0021	CHLORIDE	IOC	mg/L	Milligrams per Liter
0022	SULFATE	IOC	mg/L	Milligrams per Liter
0023	COPPER	IOC	mg/L	Milligrams per Liter
0024	ZINC	IOC	mg/L	Milligrams per Liter
0026	TDS-TOTAL DISSOLVED SOLIDS	IOC	mg/L	Milligrams per Liter
0026	TDS-TOTAL DISSOLVED SOLIDS	PHYS	mg/L	Milligrams per Liter

Analyte DOHNumber	*AnalyteName*	*Analyte GroupCode*	*UOMCode*	*UOMName*
0027	CHLOROFORM	DBP	ug/L	Micrograms per Liter
0027	CHLOROFORM	VOC	ug/L	Micrograms per Liter
0028	BROMODICHLOROMETHANE	VOC	ug/L	Micrograms per Liter
0028	BROMODICHLOROMETHANE	DBP	ug/L	Micrograms per Liter
0029	DIBROMOCHLOROMETHANE	DBP	ug/L	Micrograms per Liter
0029	DIBROMOCHLOROMETHANE	VOC	ug/L	Micrograms per Liter
0030	BROMOFORM	VOC	ug/L	Micrograms per Liter
0030	BROMOFORM	DBP	ug/L	Micrograms per Liter
0031	TOTAL TRIHALOMETHANE	DBP	ug/L	Micrograms per Liter
0031	TOTAL TRIHALOMETHANE	VOC	ug/L	Micrograms per Liter
0032	MAXIMUM TTHM POTENTIAL	VOC	ug/L	Micrograms per Liter
0032	MAXIMUM TTHM POTENTIAL	DBP	ug/L	Micrograms per Liter
0033	ENDRIN	SOC	ug/L	Micrograms per Liter
0034	LINDANE (BHC - GAMMA)	SOC	ug/L	Micrograms per Liter
0035	METHOXYCHLOR	SOC	ug/L	Micrograms per Liter
0036	TOXAPHENE	SOC	ug/L	Micrograms per Liter
0037	2,4 D	SOC	ug/L	Micrograms per Liter
0038	2,4,5 TP (SILVEX)	SOC	ug/L	Micrograms per Liter
0039	RADIUM 226	RAD	pCi/L	Picocuries per Liter
0040	RADIUM 226 + 228	RAD	pCi/L	Picocuries per Liter
0041	GROSS ALPHA (MINUS URANIUM)	RAD	pCi/L	Picocuries per Liter
0042	GROSS BETA	RAD	pCi/L	Picocuries per Liter
0043	TRITIUM	RAD	pCi/L	Picocuries per Liter
0044	STRONTIUM 90	RAD	pCi/L	Picocuries per Liter
0045	VINYL CHLORIDE	VOC	ug/L	Micrograms per Liter
0046	1,1 DICHLOROETHYLENE	VOC	ug/L	Micrograms per Liter
0047	1,1,1 TRICHLOROETHANE	VOC	ug/L	Micrograms per Liter
0048	CARBON TETRACHLORIDE	VOC	ug/L	Micrograms per Liter
0049	BENZENE	VOC	ug/L	Micrograms per Liter
0050	1,2 DICHLOROETHANE	VOC	ug/L	Micrograms per Liter
0051	TRICHLOROETHYLENE	VOC	ug/L	Micrograms per Liter
0052	1,4 DICHLOROBENZENE	VOC	ug/L	Micrograms per Liter
0053	CHLOROMETHANE	VOC	ug/L	Micrograms per Liter
0054	BROMOMETHANE	VOC	ug/L	Micrograms per Liter

Analyte DOHNumber	AnalyteName	Analyte GroupCode	UOMCode	UOMName
0055	CHLOROETHANE	VOC	ug/L	Micrograms per Liter
0056	METHYLENE CHLORIDE(DICHLOROMETH	VOC	ug/L	Micrograms per Liter
0057	TRANS- 1,2 DICHLOROETHYLENE	VOC	ug/L	Micrograms per Liter
0058	1,1 DICHLOROETHANE	VOC	ug/L	Micrograms per Liter
0059	2,2 DICHLOROPROPANE	VOC	ug/L	Micrograms per Liter
0060	CIS- 1,2 DICHLOROETHYLENE	VOC	ug/L	Micrograms per Liter
0062	1,1 DICHLOROPROPENE	VOC	ug/L	Micrograms per Liter
0063	1,2 DICHLOROPROPANE	VOC	ug/L	Micrograms per Liter
0063	1,2 DICHLOROPROPANE	SOC	ug/L	Micrograms per Liter
0064	DIBROMOMETHANE	VOC	ug/L	Micrograms per Liter
0065	CIS- 1,3 DICHLOROPROPENE	VOC	ug/L	Micrograms per Liter
0066	TOLUENE	VOC	ug/L	Micrograms per Liter
0067	1,1,2 TRICHLOROETHANE	VOC	ug/L	Micrograms per Liter
0068	TETRACHLOROETHYLENE	VOC	ug/L	Micrograms per Liter
0069	TRANS- 1,3 DICHLOROPROPENE	VOC	ug/L	Micrograms per Liter
0070	1,3 DICHLOROPROPANE	VOC	ug/L	Micrograms per Liter
0071	CHLOROBENZENE	VOC	ug/L	Micrograms per Liter
0072	1,1,1,2 TETRACHLOROETHANE	VOC	ug/L	Micrograms per Liter
0073	ETHYLBENZENE	VOC	ug/L	Micrograms per Liter
0074	M/P XYLENES (MCL FOR TOTAL)	VOC	ug/L	Micrograms per Liter
0075	O- XYLENE (MCL FOR TOTAL)	VOC	ug/L	Micrograms per Liter
0076	STYRENE	VOC	ug/L	Micrograms per Liter
0078	BROMOBENZENE	VOC	ug/L	Micrograms per Liter
0079	1,2,3 TRICHLOROPROPANE	VOC	ug/L	Micrograms per Liter
0079	1,2,3 TRICHLOROPROPANE	SOC	ug/L	Micrograms per Liter
0080	1,1,2,2 TETRACHLOROETHANE	VOC	ug/L	Micrograms per Liter
0081	O- CHLOROTOLUENE	VOC	ug/L	Micrograms per Liter
0082	P- CHLOROTOLUENE	VOC	ug/L	Micrograms per Liter
0083	M- DICHLOROBENZENE	VOC	ug/L	Micrograms per Liter

Analyte DOHNumber	AnalyteName	Analyte GroupCode	UOMCode	UOMName
0084	1,2 DICHLOROBENZENE	VOC	ug/L	Micrograms per Liter
0085	TRICHLOROFLUOROMETHANE	VOC	ug/L	Micrograms per Liter
0086	BROMOCHLOROMETHANE	VOC	ug/L	Micrograms per Liter
0087	ISOPROPYLBENZENE	VOC	ug/L	Micrograms per Liter
0088	N-PROPYLBENZENE	VOC	ug/L	Micrograms per Liter
0089	1,3,5 TRIMETHYLBENZENE	VOC	ug/L	Micrograms per Liter
0090	TERT- BUTYLBENZENE	VOC	ug/L	Micrograms per Liter
0091	1,2,4 TRIMETHYLBENZENE	VOC	ug/L	Micrograms per Liter
0092	SEC- BUTYLBENZENE	VOC	ug/L	Micrograms per Liter
0093	P-ISOPROPYLTOLUENE	VOC	ug/L	Micrograms per Liter
0094	N-BUTYLBENZENE	VOC	ug/L	Micrograms per Liter
0095	1,2,4 TRICHLOROBENZENE	VOC	ug/L	Micrograms per Liter
0096	NAPHTHALENE	VOC	ug/L	Micrograms per Liter
0097	HEXACHLOROBUTADIENE	VOC	ug/L	Micrograms per Liter
0098	1,2,3 TRICHLOROBENZENE	VOC	ug/L	Micrograms per Liter
0099	INACTIVATION RATIO	IOC	None	No Unit-of-Measure specified
0099	INACTIVATION RATIO	DBP	None	No Unit-of-Measure specified
0100	RESIDUAL CHLORINE	DBP	mg/L	Milligrams per Liter
0100	RESIDUAL CHLORINE	IOC	mg/L	Milligrams per Liter
0101	HETEROTROPHIC PLATE COUNT (HPC)	MICRO	CFU/ml	Colony Forming Units per milliliter
0102	EDB (ETHYLENE DIBROMIDE)	VOC	ug/L	Micrograms per Liter
0102	EDB (ETHYLENE DIBROMIDE)	SOC	ug/L	Micrograms per Liter
0103	DBCP	SOC	ug/L	Micrograms per Liter
0103	DBCP	VOC	ug/L	Micrograms per Liter
0104	DICHLORODIFLUOROMETHANE	VOC	ug/L	Micrograms per Liter
0105	URANIUM	RAD	ug/L	Micrograms per Liter
0106	STRONTIUM 89	RAD	pCi/L	Picocuries per Liter
0107	CESIUM 134	RAD	pCi/L	Picocuries per Liter
0108	IODINE 131	RAD	pCi/L	Picocuries per Liter
0109	RADON	RAD	pCi/L	Picocuries per Liter
0110	BERYLLIUM	IOC	mg/L	Milligrams per Liter

Analyte DOHNumber	AnalyteName	Analyte GroupCode	UOMCode	UOMName
0111	NICKEL	IOC	mg/L	Milligrams per Liter
0112	ANTIMONY	IOC	mg/L	Milligrams per Liter
0113	THALLIUM	IOC	mg/L	Milligrams per Liter
0114	NITRITE-N	IOC	mg/L	Milligrams per Liter
0115	ASBESTOS	IOC	MFL	Million Fibers per Liter
0116	CYANIDE	IOC	mg/L	Milligrams per Liter
0117	ALACHLOR	SOC	ug/L	Micrograms per Liter
0118	ALDRIN	SOC	ug/L	Micrograms per Liter
0119	ATRAZINE	SOC	ug/L	Micrograms per Liter
0120	BENZO (A) PYRENE	SOC	ug/L	Micrograms per Liter
0121	BUTACHLOR	SOC	ug/L	Micrograms per Liter
0122	CHLORDANE (TOTAL)	SOC	ug/L	Micrograms per Liter
0123	DIELDRIN	SOC	ug/L	Micrograms per Liter
0124	DI (ETHYLHEXYL) ADIPATE	SOC	ug/L	Micrograms per Liter
0125	DI (EXTHYHEXYL) PHTHALATE	SOC	ug/L	Micrograms per Liter
0126	HEPTACHLOR	SOC	ug/L	Micrograms per Liter
0127	HEPTACHLOR EPOXIDE	SOC	ug/L	Micrograms per Liter
0128	HEXACHLOROBENZENE	SOC	ug/L	Micrograms per Liter
0129	HEXACHLOROCYCLO PENTADIENE	SOC	ug/L	Micrograms per Liter
0130	METOLACHLOR	SOC	ug/L	Micrograms per Liter
0131	METRIBUZIN	SOC	ug/L	Micrograms per Liter
0132	PROPACHLOR	SOC	ug/L	Micrograms per Liter
0133	SIMAZINE	SOC	ug/L	Micrograms per Liter
0134	PENTACHLOROPHENOL	SOC	ug/L	Micrograms per Liter
0135	2,4 DB	SOC	ug/L	Micrograms per Liter
0136	2,4,5 T	SOC	ug/L	Micrograms per Liter
0137	DALAPON	SOC	ug/L	Micrograms per Liter
0137	DALAPON	VOC	ug/L	Micrograms per Liter
0137	DALAPON	DBP	ug/L	Micrograms per Liter
0138	DICAMBA	SOC	ug/L	Micrograms per Liter
0139	DINOSEB	SOC	ug/L	Micrograms per Liter
0140	PICLORAM	SOC	ug/L	Micrograms per Liter

Analyte DOHNumber	AnalyteName	Analyte GroupCode	UOMCode	UOMName
0141	3- HYDROXYCARBOFURAN	SOC	ug/L	Micrograms per Liter
0142	ALDICARB	SOC	ug/L	Micrograms per Liter
0143	ALDICARB SULFONE	SOC	ug/L	Micrograms per Liter
0144	ALDICARB SULFOXIDE	SOC	ug/L	Micrograms per Liter
0145	CARBARYL	SOC	ug/L	Micrograms per Liter
0146	CARBOFURAN	SOC	ug/L	Micrograms per Liter
0147	METHOMYL	SOC	ug/L	Micrograms per Liter
0148	OXAMYL	SOC	ug/L	Micrograms per Liter
0149	2,3,7,8 TCDD (DIOXIN)	SOC	ng/L	Nanograms per Liter
0150	DIQUAT	SOC	ug/L	Micrograms per Liter
0151	ENDOTHAL	SOC	ug/L	Micrograms per Liter
0152	GLYPHOSATE	SOC	ug/L	Micrograms per Liter
0153	PCB (AS TOTAL AROCHLORS)	SOC	ug/L	Micrograms per Liter
0154	1,3 DICHLOROPROPENE	VOC	ug/L	Micrograms per Liter
0158	DICHLOROBENZENE	VOC	ug/L	Micrograms per Liter
0160	TOTAL XYLENES	VOC	ug/L	Micrograms per Liter
0161	TOTAL NITRATE/NITRITE	IOC	mg/L	Milligrams per Liter
0165	GROSS ALPHA	RAD	pCi/L	Picocuries per Liter
0166	RADIUM 228	RAD	pCi/L	Picocuries per Liter
0167	CHLORDANE (ALPHA)	SOC	ug/L	Micrograms per Liter
0168	CHLORDANE (GAMMA)	SOC	ug/L	Micrograms per Liter
0169	CIS- NORACHLOR	SOC	ug/L	Micrograms per Liter
0170	TRANS- NORACHLOR	SOC	ug/L	Micrograms per Liter
0171	ORTHOPHOSPHATE	IOC	mg/L	Milligrams per Liter
0171	ORTHOPHOSPHATE	PHYS	mg/L	Milligrams per Liter
0172	SILICA	PHYS	mg/L	Milligrams per Liter
0172	SILICA	IOC	mg/L	Milligrams per Liter
0173	AROCHLOR 1221	SOC	ug/L	Micrograms per Liter
0174	AROCHLOR 1232	SOC	ug/L	Micrograms per Liter
0175	AROCHLOR 1242	SOC	ug/L	Micrograms per Liter
0176	AROCHLOR 1248	SOC	ug/L	Micrograms per Liter
0177	AROCHLOR 1254	SOC	ug/L	Micrograms per Liter
0178	AROCHLOR 1260	SOC	ug/L	Micrograms per Liter

Analyte DOHNumber	AnalyteName	Analyte GroupCode	UOMCode	UOMName
0179	BROMACIL	SOC	ug/L	Micrograms per Liter
0180	AROCHLOR 1016	SOC	ug/L	Micrograms per Liter
0181	NAORFLURAZON	SOC	ug/L	Micrograms per Liter
0182	PEBULATE	SOC	ug/L	Micrograms per Liter
0183	PROMETON	SOC	ug/L	Micrograms per Liter
0184	PROMETRYN	SOC	ug/L	Micrograms per Liter
0185	PRONAMIDE	SOC	ug/L	Micrograms per Liter
0186	PROPAZINE	SOC	ug/L	Micrograms per Liter
0187	SIMETRYN	SOC	ug/L	Micrograms per Liter
0188	STIROFOS	SOC	ug/L	Micrograms per Liter
0189	TEBUTHIURON	SOC	ug/L	Micrograms per Liter
0190	TERBACIL	SOC	ug/L	Micrograms per Liter
0191	TERBUFOSA (A)	SOC	ug/L	Micrograms per Liter
0192	TERBTRYN	SOC	ug/L	Micrograms per Liter
0193	TRIADEMEFON	SOC	ug/L	Micrograms per Liter
0194	TRICYCLAZOLE	SOC	ug/L	Micrograms per Liter
0195	VEMOLATE	SOC	ug/L	Micrograms per Liter
0196	AMETRYN	SOC	ug/L	Micrograms per Liter
0197	ATRATON	SOC	ug/L	Micrograms per Liter
0198	BUTYLATE	SOC	ug/L	Micrograms per Liter
0199	CARBOXIN	SOC	ug/L	Micrograms per Liter
0200	CHLORPROPHAM	SOC	ug/L	Micrograms per Liter
0201	CYCLOATE	SOC	ug/L	Micrograms per Liter
0202	DIAZINON	SOC	ug/L	Micrograms per Liter
0203	DICHLORVOS	SOC	ug/L	Micrograms per Liter
0204	DIPHENAMID	SOC	ug/L	Micrograms per Liter
0205	DISULFOTON	SOC	ug/L	Micrograms per Liter
0206	DISULFOTON SULFONE	SOC	ug/L	Micrograms per Liter
0207	DISULFOTON SULFOXIDE (A)	SOC	ug/L	Micrograms per Liter
0208	EPTC	SOC	ug/L	Micrograms per Liter
0209	ETHOPROP	SOC	ug/L	Micrograms per Liter
0210	FENAMIPHOS	SOC	ug/L	Micrograms per Liter
0211	FENARIMOL	SOC	ug/L	Micrograms per Liter
0212	FLURIDONE	SOC	ug/L	Micrograms per Liter

Analyte DOHNumber	AnalyteName	Analyte GroupCode	UOMCode	UOMName
0213	HEXAZINON	SO	ug/L	Micrograms per Liter
0214	MERPHOS	SOC	ug/L	Micrograms per Liter
0215	METHYL PARAOXON	SOC	ug/L	Micrograms per Liter
0216	MEVINPHOS	SOC	ug/L	Micrograms per Liter
0217	MGK-264	SOC	ug/L	Micrograms per Liter
0218	MOLINATE	SOC	ug/L	Micrograms per Liter
0219	NAPROPAMIDE	SOC	ug/L	Micrograms per Liter
0220	BENTAZON	SOC	ug/L	Micrograms per Liter
0221	DICHLORPROP	SOC	ug/L	Micrograms per Liter
0222	TOTAL DCPA	SOC	ug/L	Micrograms per Liter
0223	ACIFLUORFEN	SOC	ug/L	Micrograms per Liter
0224	CHLORAMBEN	SOC	ug/L	Micrograms per Liter
0225	DCPA ACID METABOLITES	SOC	ug/L	Micrograms per Liter
0226	3,5 DICHLORBENZOIC ACID	SOC	ug/L	Micrograms per Liter
0227	5- HYDROXYDICAMBA	SOC	ug/L	Micrograms per Liter
0228	4- NITROPHENOL	SOC	ug/L	Micrograms per Liter
0229	CARBOFURAN(SCREENING)	SOC	ug/L	Micrograms per Liter
0230	HEPTACHLOR EPOXIDE (B)	SOC	ug/L	Micrograms per Liter
0232	4,4 DDD	SOC	ug/L	Micrograms per Liter
0233	4,4 DDE	SOC	ug/L	Micrograms per Liter
0234	4,4 DDT	SOC	ug/L	Micrograms per Liter
0236	CYANAZINE	SOC	ug/L	Micrograms per Liter
0238	ENDOSULFAN I	SOC	ug/L	Micrograms per Liter
0239	MALATHION	SOC	ug/L	Micrograms per Liter
0240	PARATHION	SOC	ug/L	Micrograms per Liter
0243	TRIFLURALIN	SOC	ug/L	Micrograms per Liter
0244	ACENAPHTHYLENE	SOC	ug/L	Micrograms per Liter
0245	ACENAPHTHENE	SOC	ug/L	Micrograms per Liter
0246	ANTHRACENE	SOC	ug/L	Micrograms per Liter
0247	BENZO (A) ANTHRACENE	SOC	ug/L	Micrograms per Liter
0248	BENZO (B) FLUOROANTHENE	SOC	ug/L	Micrograms per Liter
0249	BENZO (G,H,I) PERYLENE	SOC	ug/L	Micrograms per Liter
0250	BENZO (K) FLUORANTHENE	SOC	ug/L	Micrograms per Liter

Analyte DOHNumber	AnalyteName	Analyte GroupCode	UOMCode	UOMName
0251	CHRYSENE	SOC	ug/L	Micrograms per Liter
0252	DIBENZO (A,H) ANTHRACENE	SOC	ug/L	Micrograms per Liter
0253	FLUORANTHENE	SOC	ug/L	Micrograms per Liter
0254	FLUORENE	SOC	ug/L	Micrograms per Liter
0255	INDENO(1,2,3-CD)PYRENE	SOC	ug/L	Micrograms per Liter
0256	PHENANTHRENE	SOC	ug/L	Micrograms per Liter
0257	PYRENE	SOC	ug/L	Micrograms per Liter
0258	BENZYL BUTYL PHTHALATE	SOC	ug/L	Micrograms per Liter
0259	DI-N-BUTYL PHTHALATE	SOC	ug/L	Micrograms per Liter
0260	DIETHYL PHTHALATE	SOC	ug/L	Micrograms per Liter
0261	DIMETHYL PHTHALATE	SOC	ug/L	Micrograms per Liter
0268	OXADIAZON	SOC	ug/L	Micrograms per Liter
0269	OXYFLUROFEN	SOC	ug/L	Micrograms per Liter
0270	PENTACHLORONITROBENZ ENE	SOC	ug/L	Micrograms per Liter
0271	METHYLPARATHION	SOC	ug/L	Micrograms per Liter
0273	NORFLURAZON	SOC	ug/L	Micrograms per Liter
0274	PENDAMETHALIN	SOC	ug/L	Micrograms per Liter
0275	2,4,6 TRICHLOROPHENOL	SOC	ug/L	Micrograms per Liter
0276	2,4 DICHLOROPHENOL	SOC	ug/L	Micrograms per Liter
0277	4- CHLORO 3-METHYLPHENOL	SOC	ug/L	Micrograms per Liter
0278	PROFLURALIN	SOC	ug/L	Micrograms per Liter
0279	PROPYZAMIDE	SOC	ug/L	Micrograms per Liter
0280	SAFROLE	SOC	ug/L	Micrograms per Liter
0282	SULFOTEPP	SOC	ug/L	Micrograms per Liter
0283	TERBUPHOS	SOC	ug/L	Micrograms per Liter
0284	VERNOLATE	SOC	ug/L	Micrograms per Liter
0286	DIMETHOATE	SOC	ug/L	Micrograms per Liter
0290	ISOPHORONE	SOC	ug/L	Micrograms per Liter
0292	PENTACHLOROBIPHENYL	SOC	ug/L	Micrograms per Liter
0294	THIOBENCARB	SOC	ug/L	Micrograms per Liter
0295	2- CHLORONAPHTHALENE	SOC	ug/L	Micrograms per Liter

Analyte DOHNumber	AnalyteName	Analyte GroupCode	UOMCode	UOMName
0296	3-METHYLCHLORANTHRENE	SOC	ug/L	Micrograms per Liter
0297	4- BROMOPHENYL PHENYL ETHER	SOC	ug/L	Micrograms per Liter
0298	4- CHLOROPHENYL PHENYL ETHER	SOC	ug/L	Micrograms per Liter
0299	BHC (ALPHA)	SOC	ug/L	Micrograms per Liter
0300	BHC (BETA)	SOC	ug/L	Micrograms per Liter
0301	BHC (DELTA)	SOC	ug/L	Micrograms per Liter
0303	AMTRYNE	SOC	ug/L	Micrograms per Liter
0304	BENEFIN	SOC	ug/L	Micrograms per Liter
0310	DIBENZOFURAN	SOC	ug/L	Micrograms per Liter
0311	DIESEL (AS STRAIGHT ALKA CHAIN)	SOC	ug/L	Micrograms per Liter
0312	DIPHENYLAMINE	SOC	ug/L	Micrograms per Liter
0313	EPN	SOC	ug/L	Micrograms per Liter
0314	ENDOSULFAN SULFATE	SOC	ug/L	Micrograms per Liter
0315	ENDRIN ALDEHYDE	SOC	ug/L	Micrograms per Liter
0316	ENDOSULFAN II	SOC	ug/L	Micrograms per Liter
0318	HEXACHLOROETHANE	SOC	ug/L	Micrograms per Liter
0319	HEPTACHLOR EPOXIDE (A)	SOC	ug/L	Micrograms per Liter
0321	ISODRIN	SOC	ug/L	Micrograms per Liter
0322	ISOPROPALIN	SOC	ug/L	Micrograms per Liter
0323	ISOSAFROLE	SOC	ug/L	Micrograms per Liter
0324	N-NITROSODI-N-PROPYLAMINE	SOC	ug/L	Micrograms per Liter
0325	2- METHYLNAPHTHALENE	SOC	ug/L	Micrograms per Liter
0326	BAYGON	SOC	ug/L	Micrograms per Liter
0327	METHIOCARB	SOC	ug/L	Micrograms per Liter
0400	PARAQUAT	SOC	ug/L	Micrograms per Liter
0401	PCB (AS DECACHLOROBIPHERNYL)	SOC	ug/L	Micrograms per Liter
0402	ALUMINUM	IOC	mg/L	Milligrams per Liter
0403	ALKALINITY-LAB	IOC	mg/L	Milligrams per Liter
0403	ALKALINITY-LAB	PHYS	mg/L	Milligrams per Liter
0403	ALKALINITY-LAB	DBP	mg/L	Milligrams per Liter
0404	MAGNESIUM	IOC	mg/L	Milligrams per Liter

Analyte DOHNumber	*AnalyteName*	*Analyte GroupCode*	*UOMCode*	*UOMName*
0405	CALCIUM	IOC	mg/L	Milligrams per Liter
0406	AMMONIA	IOC	mg/L	Milligrams per Liter
0407	CHLORINE DIOXIDE	IOC	mg/L	Milligrams per Liter
0407	CHLORINE DIOXIDE	DBP	mg/L	Milligrams per Liter
0408	OZONE	DBP	mg/L	Milligrams per Liter
0408	OZONE	IOC	mg/L	Milligrams per Liter
0409	PH	IOC	PH	PH units
0409	PH	PHYS	PH	PH units
0410	CHLORAMINES	DBP	mg/L	Milligrams per Liter
0410	CHLORAMINES	IOC	mg/L	Milligrams per Liter
0411	MONOCHLOROACETIC ACID	DBP	ug/L	Micrograms per Liter
0412	DICHLOROACETIC ACID	DBP	ug/L	Micrograms per Liter
0413	TRICHLOROACETIC ACID	DBP	ug/L	Micrograms per Liter
0414	MONOBROMOACETIC ACID	DBP	ug/L	Micrograms per Liter
0415	DIBROMOACETIC ACID	DBP	ug/L	Micrograms per Liter
0416	HAA(5)	DBP	ug/L	Micrograms per Liter
0417	BROMOCHLOROACETIC ACID	DBP	ug/L	Micrograms per Liter
0418	CHLORITE	IOC	mg/L	Milligrams per Liter
0418	CHLORITE	DBP	mg/L	Milligrams per Liter
0419	BROMATE	IOC	mg/L	Milligrams per Liter
0419	BROMATE	DBP	mg/L	Milligrams per Liter
0420	BROMIDE	IOC	mg/L	Milligrams per Liter
0420	BROMIDE	DBP	mg/L	Milligrams per Liter
0421	TOTAL ORGANIC CARBON	DBP	mg/L	Milligrams per Liter
0421	TOTAL ORGANIC CARBON	IOC	mg/L	Milligrams per Liter
0422	ALKALINITY-FIELD	DBP	mg/L	Milligrams per Liter