CMDP

COMPLIANCE MONITORING DATA PORTAL USER MANUAL

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Current as of Release 1.23

Prepared for: U.S. EPA
OFFICE OF
WATER

Prepared by: SYSTALEX

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REVISION HISTORY

Version Number	Date of Revision	Description of Changes	Revision Entered By
0.1	04/2016	CMDP User Manual.	INDUS
0.2	08/2016	CMDP User Manual edits.	Will Bowman (EPA Product Owner)
0.3	08/2016	CMDP User Manual edits.	Will Bowman Attain, LLC
0.4	08/2016	CMDP User Manual edits.	Attain, LLC
0.5	09/2016	CMDP User Manual edits – Operational Sample Types Field Descriptions.	Will Bowman
0.6	09/2016	CMDP User Manual edits – review product owner input and changes according to comments.	Attain, LLC
0.7	09/2016	CMDP User Manual edits – formatting, edit checks, reference checks.	Attain, LLC
0.8	09/2016	Minor edits	Will Bowman
0.9	10/2016	Changed URL for CMDP Help Desk; Minor edits to data element tables.	Will Bowman
0.9.1	10/2016	"CMDP Help Desk" added to document.	Will Bowman
1.0	10/2016	Additional editorial updates and clarifications; added two data elements for residuals. For CMDP version 1.1	Will Bowman and Brianna Knoppow
1.1	12/2016	Updates to Chlorine/Chloramine Entering DS, Chlorine/Chloramine in DS, Chlorine Dioxide, and Chlorite web forms.	Will Bowman
1.2	12/2017	Updated validation tables, screen shots, added 'sample received date' where relevant, reworded coliform/E.coli validation, minor edits.	Brianna Knoppow
1.2	12/2017	Added new fields/labels to the data elements tables for Chlorine/Chloramines in Distribution System sample data entry. Updated Screenshots for "Chlorine / Chloramine in DS" CMDP web form (for DS RDC and MRDL reporting) and added new fields to the Data Elements Grid.	Attain, LLC
1.3	12/2017	Updated figures formatting. Incorporated v1.10 update in which TTHM / HAA5 and Composite Samples are now mapped to XML Sampling.	Brianna Knoppow

1.4	03/2018	Increase size for numeric fields in Chem/Rad, Micro, Crypto, and Composite screens (as applicable): Sample Result, Sample Field Result and Measure, Reporting Limit	Attain, LLC
1.5	5/2019	Updated for changes in CMDP 1.14. • Updated the screen shot for the CMDP login page to reflect the removal of the following links: Forgot Password and Forgot UserID.	Attain, LLC
1.6	8/2019	Updated for CMDP 1.15. • For 22 Time fields, When the Time is 00:00:00, the application does not populate the XML tags. The change was applied to the Collection Time, Analysis Start Time, and Analysis Completed Time for all sample types and for default values.	Attain, LLC
1.7	10/2019	Added Job History data elements. Updated for CMDP 1.16 and 1.17: • Select an Original Sample ID from a different Water System • Added validations to the Result and Result Unit of Measure fields on the Web Forms and XML Upload for Chem/Rads and Composites. • Allow Multi-Select of Sample Jobs in Submission Workflow (Send to Reviewer, Send to Certifier). • Allow Multi-Select of Sample Jobs to Reject, Remove. • Updated the Count field on the Web Forms for Microbial and Cryptosporidium Sample Results to allow decimals • Added two search criteria to the Individual Sample Search. Users may now search samples by Analytical Method and • Analysis Start Date.	Attain LLC

1.8	11/2019	Updated for CMDP 1.18: • Corrected text referring to when the Reviewed By, Reviewed On, Certified By, and Certified On columns display on the Job Maintenance View. • Updated validations for A/P = Absent. • Enabled Count, Volume, and Units when A/P = Absent. • Updated Search Individual Samples to allow users to search on Analysis Start Date Range. • Updated the CMDP-Job Submission Workflow to allow "Certify and Submit to State" for multiple jobs • On the Job Maintenance View, added columns for Total Number of Samples in XML files and Total Number of Samples with Errors in XML file	Attain, LLC
1.9	12/2019	Updated for CMDP 1.19: • Microbial Samples: Units is conditionally required if Count is valued. • Retain trailing decimal zeros in Result field for Chem/Radionuclide Sample Results Grid; and the Count fields for Microbial and Cryptosporidium. • Updated the maximum number of digits for Number of Measurements Required and Number of Measurements Taken on the Operational Data, Operational Data, Chlorine Chloramines Entering Distribution System.	Attain, LLC
1.10	2/2020	Updated for CMDP 1.20: • Added values to the Units (Count Type) dropdown in Microbial Web Form, Cryptosporidium Web Form, and Sample Results Template. • For a chem/rad result, updated the validation that the Reporting Limit and Reporting Limit UOM are federally required. • Retain trailing decimal zeros in Result field for Field Results & Measurements. • Corrected the calculation for Step 1 TOC Removal Ratio calculation (i.e., TOC-21).	Attain, LLC

1.11	2/2020	Updated for CMDP 1.21: • Updated the Search Samples section (7.1) and the Search Operational Data section (7.2) to indicate the change made to the Reset feature on these forms.	Attain, LLC
1.12	5/2020	Updated for CMDP 1.23: • Updated the "Add a … Sample to a Job (6.12.3, 6.12.4, 6.12.5) to include the Person Performing Analysis data element	Systalex

1 INTRODUCTION

1.1 ABOUT THIS DOCUMENT

The Compliance Monitoring Data Portal (CMDP) User Manual explains the different CMDP functions and provides step-by-step descriptions of the available functionality in the application.

1.1.1 Intended Audience

The intended audiences of this CMDP User Manual are:

- State and Private Laboratory Users
- Water System Users
- State Primacy Agency Users
- Information Management System (LIMS) Vendors

1.1.2 Acronyms and Definitions

Table 1 - List of Commonly Used Acronyms and Definitions Used throughout the Document

Acronym	Definition
EPA	Environmental Protection Agency
CMDP	Compliance Monitoring Data Portal
SDWIS	Safe Drinking Water Information System
CROMERR	Cross-Media Electronic Reporting Rule
LIMS	Laboratory Information Management System
NPDWRs	National Primary Drinking Water Regulations
PWS	Public Water System
R/O/CR	Federally **R**equired data field/**O**ptional data field /Federally **C**onditionally **R**equired data field *(please see Section 6.14)*
SDWA	Safe Drinking Water Act
SCS	Shared CROMERR Services
UI	User Interface

1.2 USER SUPPORT AND SPECIFICATIONS

1.2.1 Additional User Support

Training materials and a knowledge library can be found on the CMDP Help Desk: https://cmdp.zendesk.com

1.2.2 Software and Hardware Specifications

Because CMDP is a web-based application, users must have an internet connection established and web browser installed to use the application. Please reference the latest CMDP Release Notes for current list of compatible browsers.

2 CMDP OVERVIEW

2.1 CMDP SYSTEM OVERVIEW

The purpose of the CMDP system is to facilitate the electronic reporting of compliance sample results from laboratories and public water systems (PWSs) to primacy agencies under the National Primary and Secondary Drinking Water Regulations.

The primary components of the CMDP system are the web-based software application and relational database. In addition to the web application and database, there are several other software components supporting the CMDP system, as shown in Figure 1, including:

- MS Excel Templates that support reporting sample results in an XML file uploaded manually
- Web Services that support reporting sample results in an XML file using a Laboratory Information Management System (LIMS)
- The Data Synchronization Engine (DSE) that supports data exchange between CMDP and SDWIS State
- Web Services that support data exchange with primacy agency compliance databases
- A Shared CROMERR Services web application for registration and end-user management.

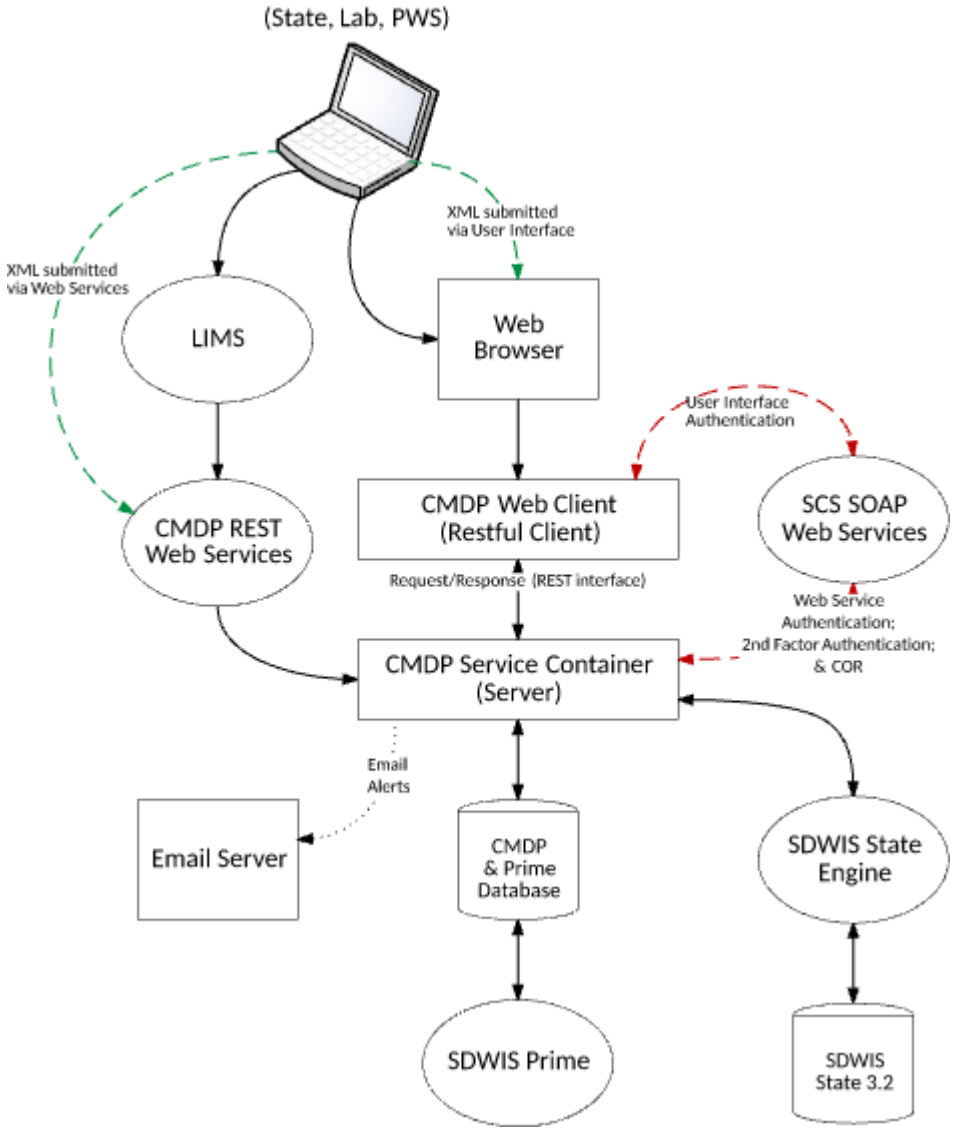


Figure 1 - CMDP Service Components

This CMDP User Manual contains instructions for use of CMDP by private and state laboratories, public water systems, and primacy agency users. It focuses on the web application user interface, including the web forms for reporting sample results, as well as the MS Excel templates.

Other system components, such as web services, the DSE, and SCS, are described in other documentation, which are available through CMDP Help Desk user support.

As described in the CMDP Role Registration User Guide (also available at the CMDP Help Desk), functionality in CMDP is based on the specific roles acquired at registration. These roles are hierarchical, as shown in Figure 2. For example, in addition to the access rights of their own role, a Public Water System CMDP Administrator has all access rights available to Certifiers,

Reviewers, and Preparers; Certifiers also have access rights as Reviewers and Preparers; and

Reviewers also have access rights as Preparers.

Figure 2 - CMDP Role Hierarchy

Note: In this document, State Laboratory Users and Private Laboratory Users are referred to as Laboratory Users. State Laboratory Users and Private Laboratory Users have the same functionality available to them in CMDP except for the Certification Ceremony: State Laboratory Users do not need to electronically sign Jobs before submission to the State using the SCS electronic signature service.

2.1.1 Web Application User Interface: Layout and Definitions

The user interface is based on a tab structure. Each tab contains a view that may contain sub- tabs. *Three levels of tabs* exist in CMDP. The following is a description of each:

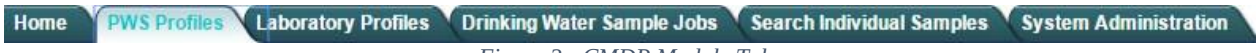


Figure 3 - CMDP Module Tabs

Level 1: Module Tabs: Module Tabs are the top menu tabs available in CMDP, each corresponding to a CMDP module.

There are six System Module Tabs in CMDP: Home, PWS Profiles, Laboratory Profiles, Drinking Water Sample Jobs, Search Individual Samples, and System Administration. (Figure 3)

- **State, Laboratory, and Water System Home Pages (Dashboards)**: These are the landing pages for each CMDP user type that allow a lab or utility to view draft and final submittals (states only see *final* submittals), links to Profiles associated with the user, and any Change Requests.

- **Laboratory and PWS Profile Modules**: The Profiles are read-only views of a subset of data for laboratories and water systems. Profile Change Requests may be made by a laboratory or Water System when one of the values of a data element in their Profile changes. States may review the Profile Change Requests in their CMDP dashboards and approve them through System Administration. CMDP does not allow changes to Profiles from within the application; states make all changes in their compliance databases and these changes appear in CMDP via the DSE, a separate CMDP system component.

- **Drinking Water Sample Jobs Module**: This module represents the core functionality of CMDP, which is to support the preparation, review, certification and submittal of electronic reporting of drinking water sample results to state primacy agencies in the form of a sample "Job." Web forms support the following categories of samples: microbiological, chemical and radiological, composite samples, cryptosporidium, and operational data.

- **Search Samples Module**: This module supports searching for samples by one or more of a broad range of criteria (including Job ID, Job Status, Water System, Facility, Collection Date Range, Sample ID, Sample Type, Sample Category, Analyte, and Laboratory).

- **System Administration Module**: Through this CMDP module, states have the ability to manage and approve Profile Change Requests and configure system email notifications.

Level 2: Tabs: Any tabs that appear on the screen in a selected module.

Figure 4 - Level 2 Tabs

For example, under the PWS Profiles Module Tab there is the Level 2 Water Systems Tab.

Level 3: Subtabs: Any tabs that appear on the screen within a selected tab.

Figure 5 - Level 3 Subtabs

For example, under Drinking Water Sample Jobs – Job Summary View, you will see multiple Subtabs. (Figure 5)

2.1.2 Navigation Pane

Some of the views from within a Tab or Subtab may contain a Navigation Pane on the left side of the screen. As shown in Figure 6, when selecting a specific Laboratory Profile from within Laboratory Profiles, the Navigation Pane appears.

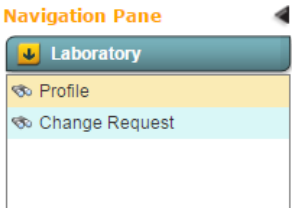


Figure 6 - Navigation Pane

Users can navigate views by selecting an item from the Navigation Pane. (Figure 6 - Navigation Pane)

2.1.3 Web Application Tables

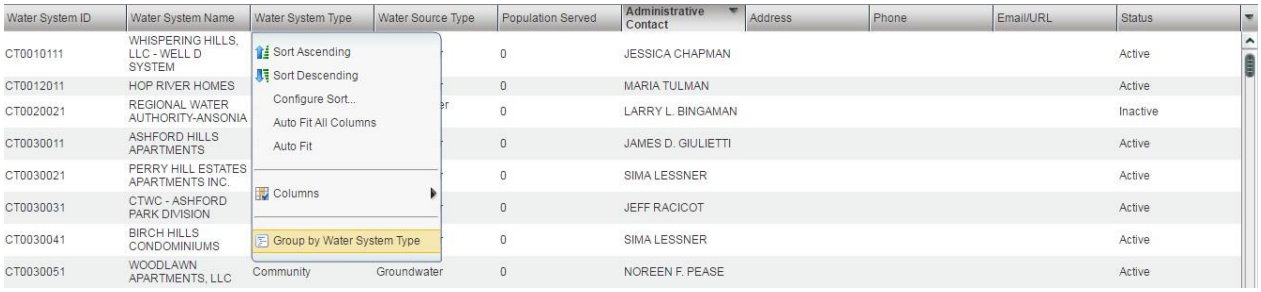


Figure 7 - Table-Built-In-Options

Most of the data will be presented in tables in CMDP (search results, list of samples, etc.).

Each table in CMDP has built-in sort/grouping features (Sort Ascending, Sort Descending, etc.). See Figure 7.

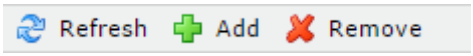


Figure 8 - Table Toolbar with Action Buttons

Some tables may have an associated toolbar featuring action buttons (Add, Remove, etc.). See Figure 8 for an example.

Note: In tables that allow the user to enter and edit data, the user can double-click on a row to maintain the data.

2.1.4 Login Page

Once you are ready to log in to the CMDP application with your SCS credentials, you are presented with a login screen requesting a username and a password. (Please consult the SCS User Guide at https: //cmdp.zendesk.com to learn the steps to register in SCS.)

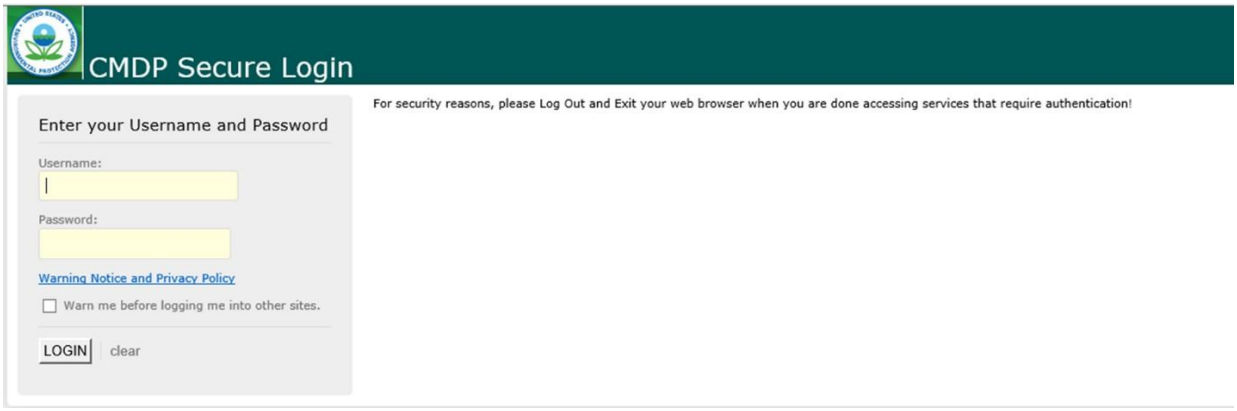


Figure 9 - Login Page

3 HOME MODULE (HOME PAGE)

The Home Module or Home Page is the first page that the user will see by default once successfully logged in to the application. This system module allows Laboratory and Water System Users to have an overall view of four tables in a Dashboard: Organizations (laboratories or water systems) associated with the user's account, Profile Change Requests submitted by the user's working organizations, Sample Jobs that need to be processed by the user, and Sample Jobs submitted to the state by the working organization. For Primacy Agency Users, the Dashboard includes two tables: Submissions Received and Profile Change Requests.

3.1 ACCESS TO HOME PAGE/SELECT A WORKING ORGANIZATION

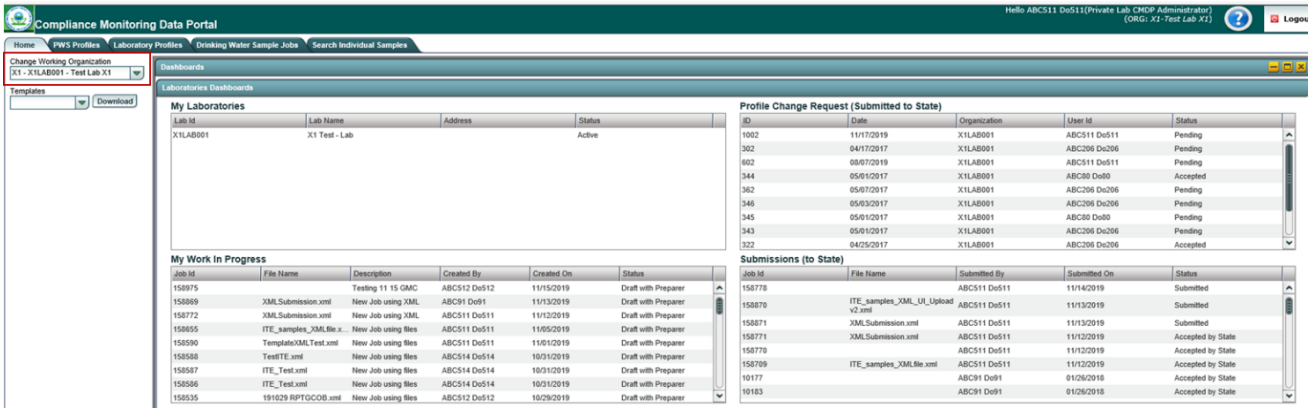


Figure 10 - View of the Home Page: Laboratory Users

The Home Page will be displayed when users log in or when they click the "Home" Module Tab while working in another module.

Users who are associated with multiple organizations (e.g., a multi-state lab) are able to change their working organization by taking the following steps:

1) Click the "**Home**" Tab.
2) Under the "**Change Working Organization**" dropdown, select the desired organization.
3) The Dashboard will be updated based on the organization selected.

Notes:

- *By clicking on a row in any table in the dashboard (Figure 10, Figure 12, Figure 13), users can access the corresponding detail screen. Example: If a Laboratory User clicks a row in the My Laboratories table, the corresponding Laboratory Profile will be displayed in the Laboratory Profiles Module.*
- *All users can locate their login ID, role, and the working organization associated with their account. This information is displayed on the top right corner of the Home Page and will be*

available throughout the web session. (Figure 11 - Login Information).

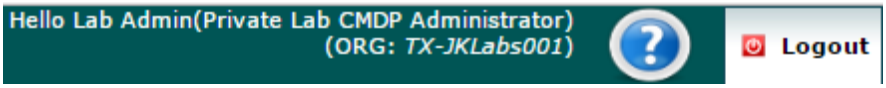


Figure 11 - Login Information

- *In the example below, the login is Lab Admin, with a Private Lab CMDP Administrator role. The working organization is TX-JKLabs001.*

- *The Help Button, represented by a blue circle with a white question mark in the center, direct the user to the CMDP Help Desk website to browse the help guide for CMDP.*

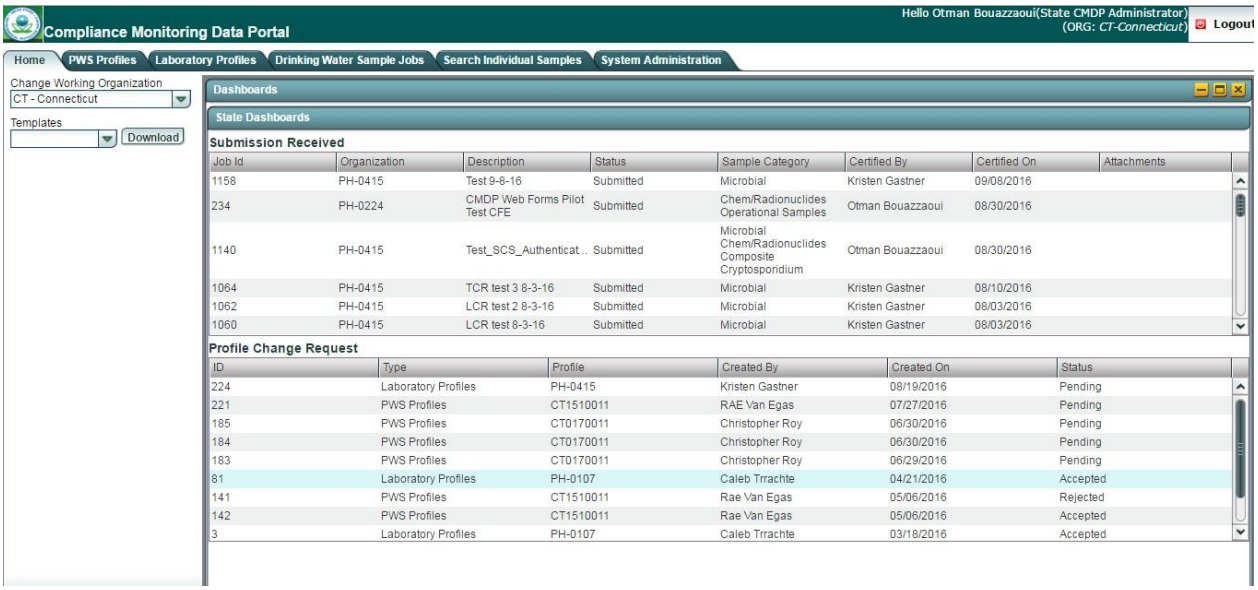


Figure 12 - View of the Home Page: Water System Users

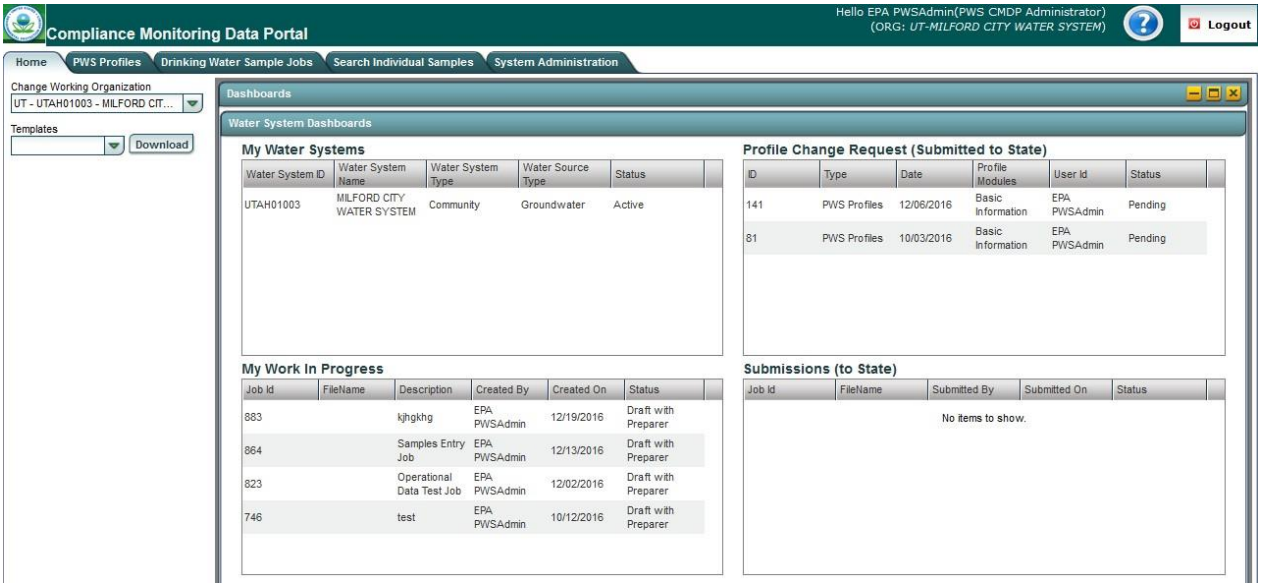


Figure 13 - View of the Home Page: State Users

CMDP users can download the CMDP Templates (MS Excel format) from the Home Page. Two main files are available for download (Sample Results or Operational Data). To download either file:

1) Click a file on the template pick-list
2) Click "**Download**."
3) The file will be stored locally on your machine in the Downloads folder.

The following (3.2-3.8) is a description of all the tables available on the Water System Dashboard, Laboratory Dashboard and State Dashboard.

3.2 MY WORK IN PROGRESS

This table allows Laboratory and Water System Users to quickly view the Jobs that need their attention.

3.2.1 Authorizations

This table will only be available to Laboratory and Water System Users (all roles).

3.2.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
My Work in Progress	List of Jobs assigned to the user	-	None	-

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
DSH-1	Job ID	ID assigned to the Job	-	Read-only	System generated	-
DSH-2	File Name	Displays the file name if the Job was created through file upload for example	-	Read-only	None	-
DSH-3	Description	Brief description of the Job	-	Read-only	None	-
DSH-4	Created By	User who created the Job	-	Read-only	None	-
DSH-5	Created On	Date when the Job was created	-	Read-only	None	-
DSH-6	Status	Job status (e.g., Draft with Reviewer)	-	Read- only	None	-

3.3 SUBMISSIONS (TO STATE)

This table allows users to quickly view a list of all Sample Jobs submitted to the state sorted by the most recent ones at the top by default. Users can always use the search feature in the Job Maintenance View in the Drinking Water Sample Jobs Module to locate a specific Job.

3.3.1 Authorizations

This table are only be available to Laboratory and Water System Users (all roles).

3.3.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Submissions (to State)	List of all Jobs that were submitted to the state	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DSH-7	Job ID	ID assigned to the Job	-	-	System generated	-
DSH-8	File Name	File name that was used to create the Job (if applicable)	-	-	User generated at the time of Sample Job creation when using Templates	-
DSH-9	Submitted By	ID of the user who submitted the Job	-	-	System generated	-
DSH-10	Submitted On	Date when the Job was submitted	-	-	System generated	-
DSH-11	Status	Indicates that the Job was submitted	-	-	System generated	-

3.4 MY WATER SYSTEMS

This table allows users to quickly view the water systems with which they are associated.

3.4.1 Authorizations

This table is only be available to Water System Users (all roles).

3.4.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
My Water Systems	List of all water systems associated with the user	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
DSH-12	Water System ID	Federal ID of the water system	-	-	-	-
DSH-13	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	-	-	-	-
DSH-14	Water System Type	Federal water system type	-	-	-	-
DSH-15	Water Source Type	Primary water source type of the water system	-	-	-	-
DSH-16	Status	Current activity status of the water system	-	-	-	-

3.5 MY LABORATORIES

This table allows users to view a list of all laboratories that users have access to.

3.5.1 Authorizations

This table is only be available to Laboratory Users (all roles).

3.5.2 Data elements

Group	Description	R/O/CR	Validations	Additional Designations
My Laboratories	List of all laboratories associated with the user	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
DSH-17	Laboratory ID	ID Number assigned by certifying or approving agency	-	-	-	-
DSH-18	Laboratory Name	Legal name of the laboratory	-	-	-	-
DSH-19	Address	Primary physical address of the laboratory	-	-	-	-
DSH-20	Status	Current activity status of the laboratory	-	-	-	-

3.6 PROFILE CHANGE REQUESTS (SUBMITTED)

This table lists all Change Requests submitted by the organization (laboratory or PWS) to the state.

3.6.1 Authorizations

This table is only be available to State Users (all roles).

3.6.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Profile Change Requests	List of all Change Requests in read-only mode	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DSH-21	Request ID	ID assigned to the Change Request	-	-	System generated	-
DSH-22	Date	Date when the Change Request was created	-	-	-	-
DSH-23	Organization	Profile subject of the Change Request	-	-	-	-
DSH-24	User ID	ID of the user who created the Change Request	-	-	-	-
DSH-25	Status	Current status of the Change Request (e.g., pending)	-	-	-	-

3.7 SUBMISSIONS

This table lists all Jobs received by the state from water systems or laboratories. Each row represents one Job.

3.7.1 Authorizations

This table is only be available to State Users (all roles).

3.7.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Submissions Received	List of submitted Jobs in read-only mode	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DSH-26	Job ID	ID assigned to the Job	-	-	System generated	-
DSH-27	Organizatio n	Organization that submitted the Job (e.g., reporting laboratory)	-	-	-	-
DSH-28	Sample Category	Samples included in the Job (e.g., Microbiological)	-	-	List of Values: Microbiological Chemicals/ Radionuclides Cryptosporidium Operational Sample Types Composite	-
DSH-29	Status	Status of the Job	-	-	List of values: Submitted Accepted by State	-
DSH-30	Certified By	User who submitted the Job	-	-	-	-
DSH-31	Certified On	Date when Job was submitted	-	-	-	-
DSH-32	Attachments	List of files attached to the Job	-	-	-	-

3.8 PROFILE CHANGE REQUESTS (RECEIVED)

This table lists all Change Requests received by the state from water systems or laboratories. Each row represents one Change Request.

3.8.1 Authorizations

This table is only be available to State Users (all roles).

3.8.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Profile Change Requests	List of Change Requests received in read-only mode	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DSH-33	Request ID	ID assigned to the Change Request	-	-	-	-
DSH-34	Date	Date when Change Request was created	-	-	-	-
DSH-35	Profile	Profile name/ID of the organization related to the Change Request	-	-	-	-
DSH-36	User ID	ID of the user who created the Change Request	-	-	-	-
DSH-37	Status	Status of the Change Request (e.g., pending)	-	-	-	-

3.9 DOWNLOAD TEMPLATES

All CMDP users can download Templates from the Home Page. Two MS Excel files are available for download:

- **Sample Results Template**: Contains templates for the following sample categories: Microbiological, Chemicals/Radionuclides, and Cryptosporidium.

- **Operational Data Template**: Contains templates for the following sample categories: CFE Turbidity, IFE Turbidity, Chlorine Dioxide Chlorite, Chlorine/Chloramines Entering the Distribution System, Chlorine/Chloramines in the Distribution System, LCR Water Quality Parameters, Total Organic Carbon, TTHM and HAA5, Ozone Treatment (Bromate).

More information about CMDP templates is available in Chapter 6 of this document.

4 PWS PROFILES

This system module contains detailed information about public water systems, public water system facilities, sampling points and contacts. All information in the Profile is read-only and is a read-only copy of the data that the primacy agency maintains in its compliance system (e.g., SDWIS State). This module will be accessible by Primacy Agency Users, Laboratory Users, and Water System Users.

Notes:

- *Primacy Agency Users will only be able to see public water systems that they regulate.*
- *Laboratory Users will be able to see Water System Profiles of all water systems regulated by the primacy agency with which Lab Users associated themselves during registration.*
- *Water System Users will only be able to see their own Water System Profiles, not those of other water systems.*

4.1 SEARCH A WATER SYSTEM

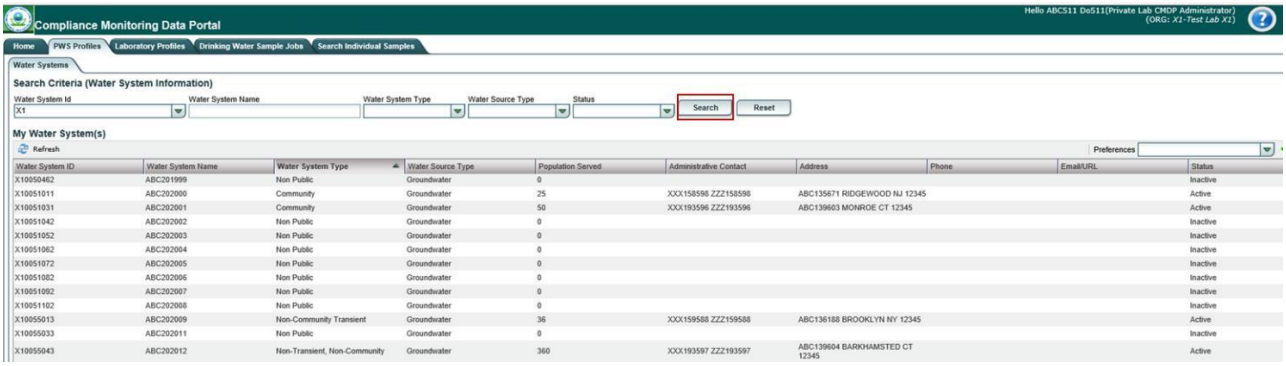


Figure 14 - Water System Search View

Users can search water systems they have access to by using the search feature provided in the PWS Profiles Module.

To search for a public water system, please follow the steps below:

1) Click on the **"PWS Profiles"** Module Tab. (Figure 14)
2) Enter one or more of the search criteria and click the **"Search"** button to narrow down the search results. You can also execute the search by pressing the Enter key.
3) Results will be displayed in the table below the search criteria.
4) To reset water system search parameters/filters, click the "**Reset**" button.

Notes:

- *Data available in CMDP for PWS Profiles reflect the data maintained by the primacy agency in their compliance system (e.g., SDWIS State).*
- *Water System Users will only have access to entities associated with their account.*
- *Users will only have access to Water System Profiles within one primacy agency at a time.*

4.1.1 Authorizations

This functionality will be available to all users.

4.1.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Search Criteria	Input fields to search water systems	N/A	None	None

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
PWS-1	Water System ID	Federal ID assigned to the water system	O	Freeform	None	None
PWS-2	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	O	Freeform	None	None
PWS-3	Water System Type	Federal water system type	O	List	List of Values: Community Non-public Non-Transient, Non-Community Transient Non-Community	None
PWS-4	Water Source Type	Primary water source type of the water system	O	List	List of Values: Groundwater UDI Surface Water Purchased Surface Water Purchased Groundwater Purchased Groundwater Groundwater UDI Surface Water	None
PWS-5	Status	Current activity status of the water system	O	List	List of Values: Active Inactive	None

Group	Description	R/O/CR	Validations	Additional Designations
My Water Systems (Results Table)	Table to display search results	N/A	None	None

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
PWS-6	Water System ID	Federal ID assigned to the water system	-	-	None	None
PWS-7	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	-	-	None	None
PWS-8	Water System Type	Federal water system type	-	-	None	None
PWS-9	Water Source Type	Primary water source type of the water system	-	-	None	None
PWS-10	Population Served	Total population served by the water system	-	-	None	None
PWS-11	Administrative Contact	Primary Administrative Contact assigned to the water system	-	-	None	None
PWS-12	Address	Primary address of the primary Administrative Contact assigned to the water system	-	-	None	None
PWS-13	Phone	Primary phone number of the primary Admin-istrative Contact assigned to the water system	-	-	None	None
PWS-14	Email/URL	Primary email of the primary Administrative Contact of the water system	-	-	None	None
PWS-15	Status	Current activity status of the water system	-	-	None	None

4.2 ACCESS A WATER SYSTEM PROFILE

Users can access a Water System Profile, which includes information about contacts associated with a water system, facilities within the water system (treatment plants, distribution systems, etc.), and sampling points within the facilities.

1) Click on the "**PWS Profiles**" Module Tab. (Figure 14)
2) Click a water system from the results table below the search criteria. (Figure 14)
3) A new tab will be opened and will display the Water System Profile. (Figure 15, next page)

4) To close a Water System Profile, click "**X**" on the selected tab.
5) To return to the Search Water System view (Figure 14), click the "**Water Systems**" tab.

Notes:

- *By default, "Profile" is selected on the left Navigation Pane when the page loads. A Water System Profile is displayed in read-only view.*
- *Users can open multiple Water System Profiles as needed. Any new Profile opened will be displayed in a new tab.*

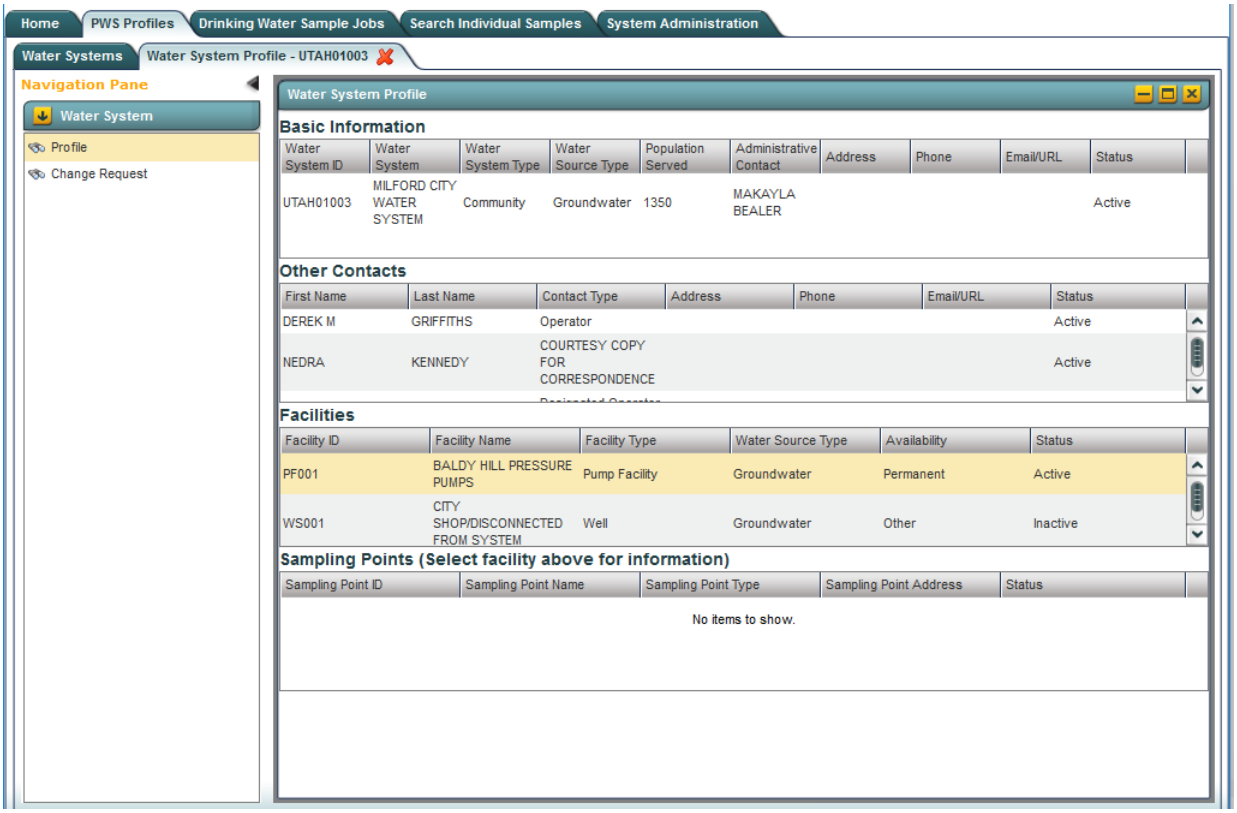


Figure 15 - Water System Profile View

4.2.1 Authorizations

This functionality will be available to all users.

4.2.2 Data Elements

Group	Description	Validations	Additional Designations
Basic Information	Provides minimal information to identify a water system	-	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
PWS-17	Water System ID	Federal ID assigned to the water system	-	Read-only	-	-
PWS-18	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	-	Read-only	-	-
PWS-19	Water System Type	Federal water system type	-	Read-only	-	-
PWS-20	Water Source Type	Primary water source type of the water system	-	Read-only	-	-
PWS-21	Population Served	Total population served by the water system	-	Read-only	-	-
PWS-22	Administrative Contact	Primary Administrative Contact assigned to the water system	-	Read-only	-	-
PWS-23	Address	Primary address of the primary Administrative Contact assigned to the water system	-	Read-only	-	-
PWS-24	Phone	Primary phone number of the primary Administrative Contact assigned to the water system	-	Read-only	-	-
PWS-25	Email/URL	Primary email of the primary Administrative Contact of the water system	-	Read-only	-	-
PWS-26	Status	Current activity status of the water system	-	Read-only	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Other Contacts	Provides information about contacts associated with the water system	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
PWS-27	First Name	First name of the contact	-	Read-only	-	-
PWS-28	Last Name	Last name of the contact	-	Read-only	-	-
PWS-29	Contact Type	Contact type of the individual associated with the water system	-	Read-only	-	-
PWS-30	Address	Primary address of the contact	-	Read-only	-	-
PWS-31	Phone	Primary phone number of the contact	-	Read-only	-	-
PWS-32	Email/URL	Primary email/URL of the contact	-	Read-only	-	-
PWS-33	Status	Contact status (e.g., Active, Inactive)	-	Read-only	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Facilities	Provides list of water system facilities within the water system	-	-	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
PWS-34	Facility ID	A state-assigned value that identifies the water system facility.	-	Read-only	-	-
PWS-35	Facility Name	Name given to the water system facility	-	Read-only	-	-
PWS-36	Facility Type	Type that categorizes the water system facility	-	Read-only	-	-
PWS-37	Water Source Type	Value that categorizes the source water that is utilized by a water system	-	Read-only	-	-
PWS-38	Availability	Value that categorizes the circumstances under which a source of water is utilized by a water system	-	Read-only	-	-
PWS-39	Status	Value that categorizes the most recent activity status of the water system facility	-	Read-only	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Sampling Points	Provides list of sampling points within the water system facility; water systems typically collect samples of water system facilities at a specific location within the facility	-	Display data corresponding to selected facility	-

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
PWS-40	Sampling Point ID	The unique code for identifying a sampling point within the facility	-	Read-only	-	-
PWS-41	Sampling Point Name	Description given to the sampling point within the facility	-	Read-only	-	-
PWS-42	Sampling Point Type	Value that represents the location type of the sampling point	-	Read-only	-	-
PWS-43	Sampling Point Address	Physical address of the sampling point	-	Read-only	-	-
PWS-44	Status	Value that categorizes the sampling point activity status	-	Read-only	-	-

4.3 SUBMIT A PROFILE CHANGE REQUEST FOR A WATER SYSTEM

Only PWS System Administrators can submit Change Requests to the State CMDP Administrators if any of the Profile information is incorrect or needs to be updated. For example, the PWS may have a new Administrative Contact that the primacy agency should be aware of.

Once the request is received by the State CMDP Administrator, he or she will modify the appropriate information in the compliance database (e.g., SDWIS State). (See Manage Received Profile Change Requests for CMDP State Admin Profile Change Requests Management.)

To submit a Water System Profile Change Request:

1) Click on the **"PWS Profiles"** tab.
2) Select a water system from the list of systems in the results table below the search criteria. (Figure 14)
3) A detailed Profile of each water system selected will be opened in a separate tab. (Figure 15)
4) Click **"Change Request"** on the left Navigation Pane to view the Change Request list page. (Figure 15)
5) Click the **"Add"** button to add a new Change Request. (Figure 16)
6) A new row will be added to the grid for the user to enter a Change Request. Populate the editable fields with the Change Request details. CMDP will automatically save changes made in these fields, after the user clicks outside the web form. Some of the fields will be pre-populated (Figure 17). To remove an invalid Change Request or a Change Request added by error:
    a. Select a record by clicking on the check box.
    b. Click "**Remove**" to remove the selected Change Request.
7) Click "**Refresh**" to fetch data from the server.

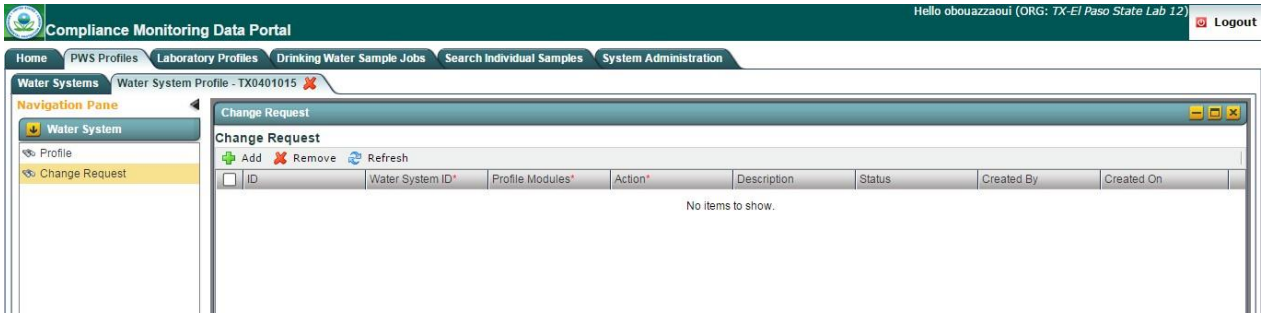


Figure 16 - Water System Profile Change Requests View

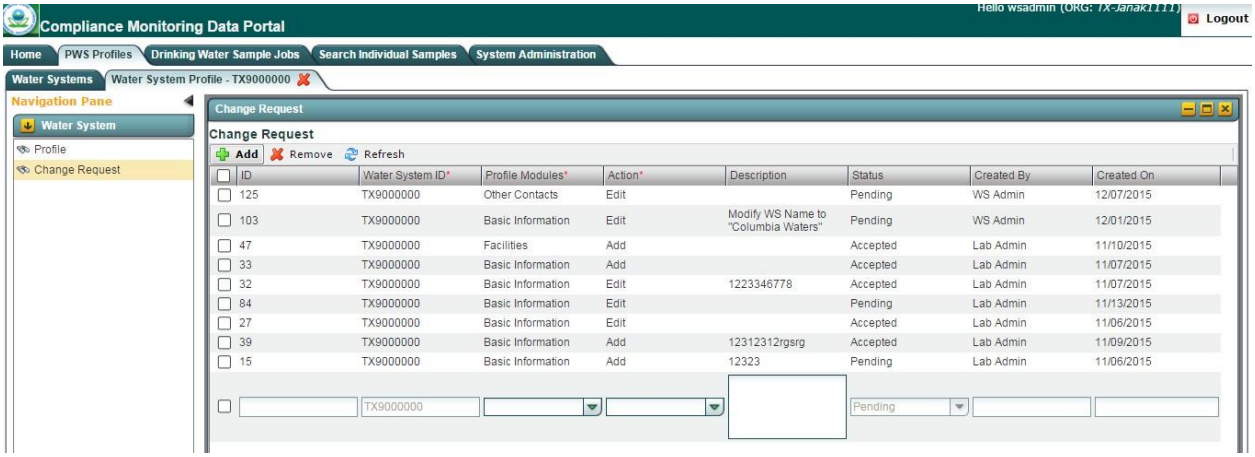


Figure 17 - New Water System Profile Change Request

A Change Request is a way to notify the State CMDP System Administrator of any errors discovered in the PWS Profile. Use the description field (see description below in the data elements) as a way to add comments and details about updates/modifications requested for a PWS Profile.
Once a Change Request is saved, its status will be "Pending" until a State CMDP System Administrator processes it.

4.3.1 Authorization

Only Water System users with an "Administrator" role will be able to submit Change Requests for Water System Profiles

4.3.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
WS Change Request	Water system elements of a Change Request	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
PWS-45	ID	Unique ID assigned to the Change Request	R	-	System generated	-
PWS-46	Water System ID	Water System ID related to the Change Request	R	-	Automatically added	-
PWS-47	Profile Modules	Section/module of the Profile related to the Change Request	R	List	List of Values: Basic Information, Other Contacts, Facilities, Sampling Points	-
PWS-48	Action	Action related to the Change Request	R	List	List of values: Add, Edit, Remove	-
PWS-49	Description	Comment field related to the Change Request	-	-	-	-
PWS-50	Status	Status of the Change Request	R	List	List of values: Pending (set to Pending when request is created)	-

5 LABORATORY PROFILES

This system module contains detailed information about Laboratory Profiles, contacts and certifications. All information in the Profile is read-only and should reflect the data that the primacy agency maintains in its compliance system (e.g., SDWIS State).

Notes:

- *Only State Users and Laboratory Users will have access to this Module. State Users will be able to see all laboratories within the primacy agency.*
- *Laboratory Users will only be able to see information about the laboratories associated with their user account.*

5.1 SEARCH A LABORATORY

Figure 18 - Laboratory Search View

Users can search laboratories they have access to by using the search feature provided in the "Laboratory Profiles" Module.

1) Click on the **"Laboratory Profiles"** Module Tab. (Figure 18)
2) Enter one or more of the search criteria and click **"Search"** to narrow down the search results.
3) Results will be displayed in the table below the search criteria.
4) To reset search parameters/filters, click the "**Reset**" button.

Notes:

- *Data available in CMDP for Laboratories reflect the data maintained by the primacy agency in its compliance system (e.g., SDWIS State).*
- *Laboratory Users will only have access to Laboratories associated with their account.*
- *Laboratory Users will only have access to Water System Profiles within one primacy agency at a time.*

5.1.1 Authorizations

This functionality will be available to State and Laboratory Users (all roles).

5.1.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Search Criteria	Input fields to search a laboratory	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
LAB-1	Laboratory ID	ID Number assigned by certification or approving agency	O	-	-	-
LAB-2	Laboratory Name	Legal name of the laboratory	O	-	-	-
LAB-3	Status	Current activity status of the laboratory	O	List	List of values: Active Inactive	-

Group	Description	R/O/ CR	Validations	Additional Designations
My Laboratories (Results Table)	Table to display search results	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
LAB-4	Primacy Agency	Primacy Agency (State Code or Primacy Agency Code)	-	Read-only	-	-
LAB-5	Laboratory ID	ID Number assigned by certi-fication or approving agency	-	Read-only	-	-
LAB-6	Laboratory Name	Legal name of the laboratory	-	Read-only	-	-
LAB-7	Status	Current activity status of the laboratory	-	Read-only	-	-
LAB-8	Address	Physical address of the laboratory	-	Read-only	-	-
LAB-9	Phone	Primary phone number of the laboratory	-	Read-only	-	-
LAB-10	Email/URL	Primary email/URL of the laboratory	-	Read-only	-	-

5.2 ACCESS A LABORATORY PROFILE

1) Click on the **"Laboratory Profiles"** tab. (Figure 19)
2) Select a laboratory from the results table below the search criteria.
3) A new tab will be opened and will display the Laboratory Profile.
4) To close a Laboratory Profile, click "**X**" on the selected tab.
5) To return to the Search Laboratory View, click the "**Laboratories**" tab.

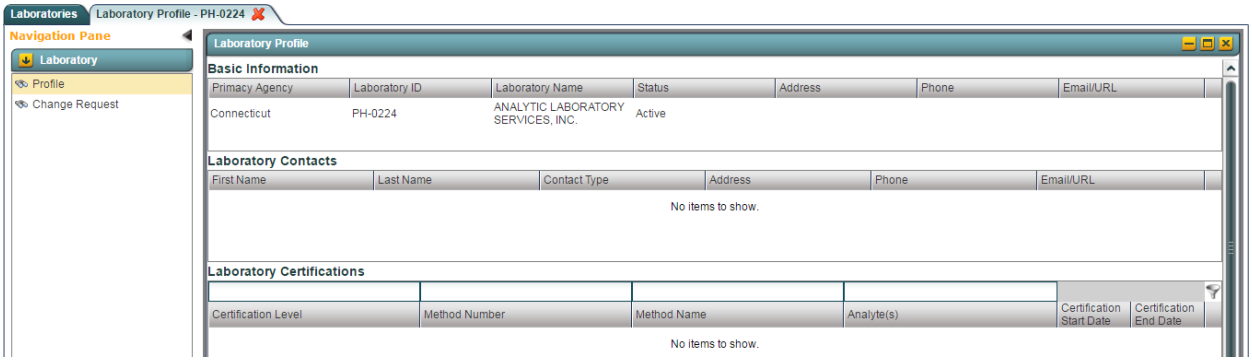


Figure 19 - Laboratory Profile View

Notes:

- *By default, "Profile" is selected on the left Navigation Pane when the page loads. Laboratory Profile is displayed in read only view.*
- *Users can open multiple Laboratory Profiles as needed. Any new Profile opened will be displayed in a new tab.*

5.2.1 Authorizations

This functionality will be available to State and Laboratory Users (all roles).

5.2.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Basic Information	Provides minimal information to identify a laboratory	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
LAB-11	Primacy Agency	Primacy Agency (State Code or Primacy Agency Code)	-	Read-only	-	-

LAB-12	Laboratory ID	ID Number assigned by certification or approving agency	-	Read-only	-	-
LAB-13	Laboratory Name	Legal name of the laboratory	-	Read-only	-	-
LAB-14	Status	Current activity status of the laboratory	-	Read-only	-	-
LAB-15	Address	Physical address of the laboratory	-	Read-only	-	-
LAB-16	Phone	Primary phone number of the laboratory	-	Read-only	-	-
LAB-17	Email/URL	Primary email/URL of the laboratory	-	Read-only	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Laboratory Contacts	Provides information about contacts associated with the laboratory	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
LAB-18	First Name	First name of the contact	-	Read-only	-	-
LAB-19	Last Name	Last name of the contact	-	Read-only	-	-
LAB-20	Contact Type	Contact type of the individual associated with the water system	-	Read-only	-	-
LAB-21	Address	Primary address of the contact	-	Read-only	-	-
LAB-22	Phone	Primary phone number of the contact	-	Read-only	-	-
LAB-23	Email/URL	Primary email/URL of the contact	-	Read-only	-	-

Group	Description	R/O/ CR	Validations	Additional Designations
Laboratory Certifications	Provides list of laboratory certifications	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
LAB-19	Certification Level	Provides level of certification of a laboratory (Certified, Interim certification, not certified or provisional certification)	-	Read-only	-	-
LAB-20	Method Number	Analytical method number	-	Read-only	-	-
LAB-21	Method Name	Analytical method name	-	Read-only	-	-
LAB-22	Analyte(s)	Contaminant code and name	-	Read-only	-	-
LAB-23	Certification Start Date	Begin date of the certification	-	Read-only	-	-
LAB-24	Certification End Date	End date of the certification	-	Read-only	-	-

5.3 SUBMIT A LABORATORY PROFILE CHANGE REQUEST

Only Laboratory System Administrators can submit Change Requests to the State CMDP Administrators if any of the Laboratory Profile information is incorrect or needs to be updated. Once the Change Request is received by the State CMDP Administrator, he or she will modify the appropriate information in the state database (e.g., SDWIS State). (See *Manage Received Profile Change Requests* for CMDP State Admin Profile Change Requests management).
Click on the "**Laboratory Profiles**" tab. (Figure 18)

1) Select a laboratory from the search page.
2) Detailed Profiles of each laboratory selected will be opened in a separate tab. (Figure 19)
3) Click "**Change Request**" on the left Navigation Pane to view the Change Request list page.

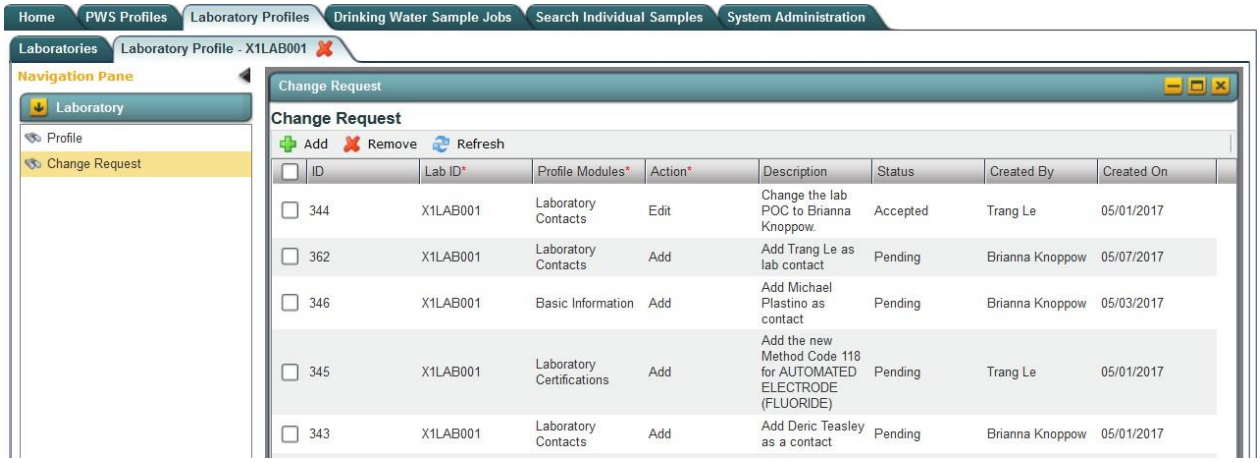


Figure 20 - Laboratory Change Requests View

4) Click the "Add" button to add a new Change Request. (Figure 20)
5) A new row will be added to the grid for the user to enter a Change Request.
6) Select a record by clicking on the check box.

7) Click “Remove” to remove the selected Change Request.
8) Click “**Refresh**” to fetch data from the server.

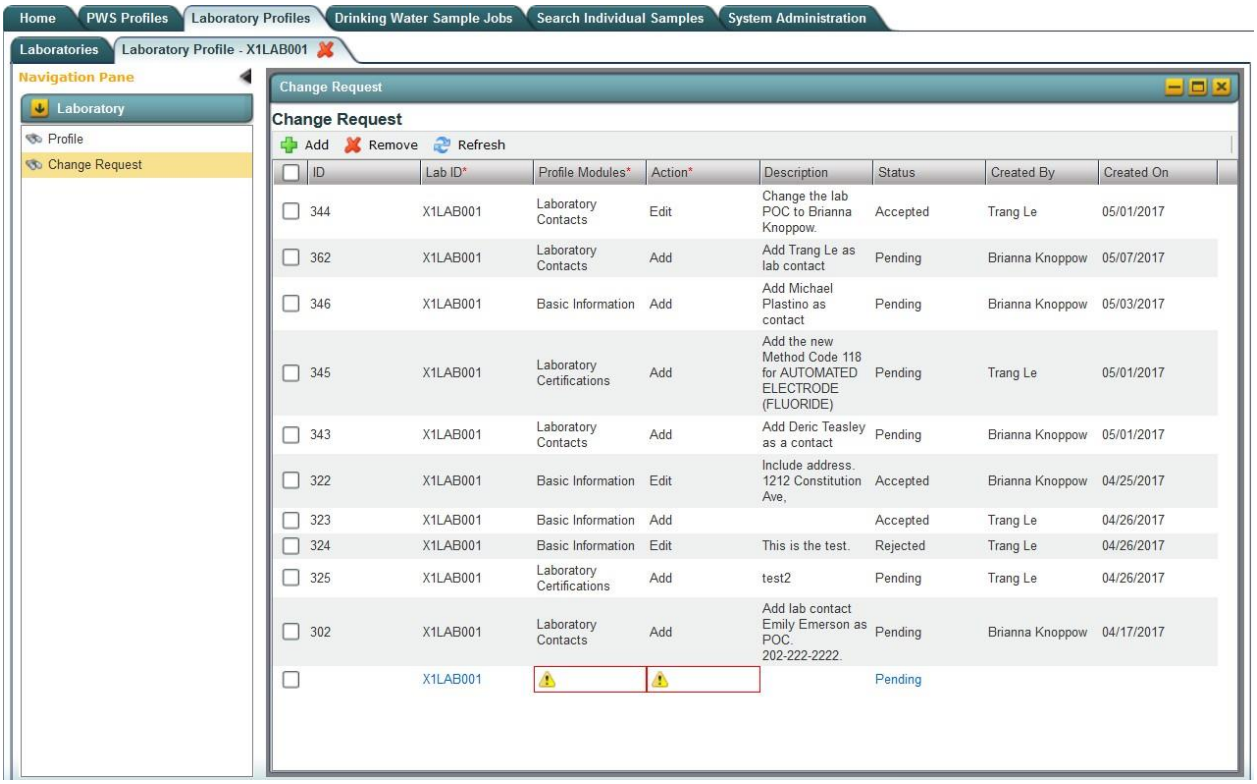


Figure 21 - New Laboratory Change Request

Notes:

- *A Change Request allows a Laboratory CMDP Administrator to notify the State CMDP System Administrator of any errors discovered in the Laboratory Profile, or if there is an update about which the state primacy agency should be informed. Use the description field (see description below in Data Elements) as a way to add comments and details about updates/modifications requested for a Laboratory Profile.*
- *Once a Change Request is saved, its status will be “Pending” until a State CMDP System Administrator processes it.*

5.3.1 Authorizations

Only Laboratory Users with an “Administrator” role are able to submit Change Requests for Laboratory Profiles

5.3.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Laboratory Change Request	Laboratory elements of a Change Request		None	

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
LAB-25	ID	Unique ID assigned to the Change Request	R	-	System generated	-
LAB-26	Laboratory ID	Laboratory ID related to the Change Request	R	-	Automatically added	-
LAB-27	Profile Modules	Section/module of the Profile related to the Change Request	R	List of Values: Basic Information, Other Contacts, Certifications	-	-
LAB-28	Action	Action related to the Change Request	R	List of values: Add, Edit, Remove	-	-
LAB-29	Description	Comment field related to the Change Request	-	-	-	-
LAB-30	Status	Status of the Change Request	R	List of values: Pending, Accepted, Rejected	Set status to Pending when request is created	-

6 DRINKING WATER SAMPLE JOBS

This system module contains information about Jobs, sample types (Microbiological, Chemicals/Radionuclides, Cryptosporidium, Composite, and Operational) within a Job, sample details, Validation Reports, Job history details and attachments to Jobs. A Sample Job comprises one or more samples containing one or more sample results for one or more analytes.

Users reporting sample results to CMDP have three options: web forms, manual XML upload (using an Excel Template or other XML generator), or web services-based XML transmittal from a Laboratory Information Management System (LIMS).[1] For any reporting method used, all sample results reported to CMDP are displayed in CMDP Job Summary tab as the following sub- tabs: Sample Result, Operational Data, and Composites.

1 A LIMS Interface Control Document (ICD) is provided separately and serves as the user manual for reporting to CMDP using a LIMS. The LIMS ICD is available on the CMDP Help Desk at https://cmdp.zendesk.com/

Sample Result Tab

The Sample Categories included in the Sample Result tab are:

1. Microbiological
2. Chemicals/Radionuclides
3. Cryptosporidium

Composite Tab

Sample with the Sample Category ‘Composites’ are included in the Composites tab.

Operational Data Tab

The Sample Categories included in this Operational Data tab are:

1. CFE Turbidity
2. IFE Turbidity
3. Chlorine Chloramine Entering DS (Distribution System)
4. Chlorine Chloramine in DS (Distribution System)
5. *Chlorine Dioxide and Chlorite*
6. *LCR WQP (Water Quality Parameters)*
7. *TOC (Total Organic Carbon)*
8. *Ozone Treatment (Bromate)*
9. TTHM and HAA5

Important Notes:

- Although the application accepts data and stores, as a web form, a searchable Sample Job for the above italicized sample types (items 5–8 in the Operational Data Category), the data stored in CMDP will not be migrated to SDWIS State until a future version of CMDP is released.

- In the interim, to migrate the sample results for items 5–8 in the Operational Data Category to state primacy agencies for compliance determination, laboratories and water systems may report as Chemicals all of the analytes associated with the italicized items by using a LIMS or by using the Chemicals/Radionuclides web form or templates.

- Users can download the submitted data for the italicized sample types from the CMDP application as an XML file, which will be rendered human-readable as HTML (see 6.11, below). Users also may copy all of the information in the HTML page and paste it into a separate document to view the XML file data.

- Users can obtain the submitted data for the italicized sample types from the CMDP application as an XML file by using web services. The file will not be saved to a human readable format, or in a format usable by SDWIS XMLSampling but the agency could develop their own tool for viewing the data.

A Sample Job can be in only one of the following status categories at a time:

Table 2 - Job Status Definitions

Status	Definition
Draft with Preparer	Job is currently maintained by a Preparer (Reviewer and Certifier roles also have edit rights). Modifications to the Job can still occur (add/edit/remove), and validations will be executed when Job is saved.
Draft with Reviewer	Job is currently under review (only Reviewer and Certifier roles have edit rights). Modifications can still occur (add/edit/remove), and validations will be executed when Job is saved.
Draft with Certifier	Job is currently awaiting certification (only Certifier role has edit rights). Modifications can still occur (add/edit/remove), and validations will be executed when Job is saved.
Submitted	Job has been submitted by reporting organization to primacy agency. No modifications are possible.
Accepted by State	Job data has been migrated to primacy agency compliance system. No modifications are possible.

Briefly, the submission workflow is depicted below in Figure 22 - Job Submission Workflow.

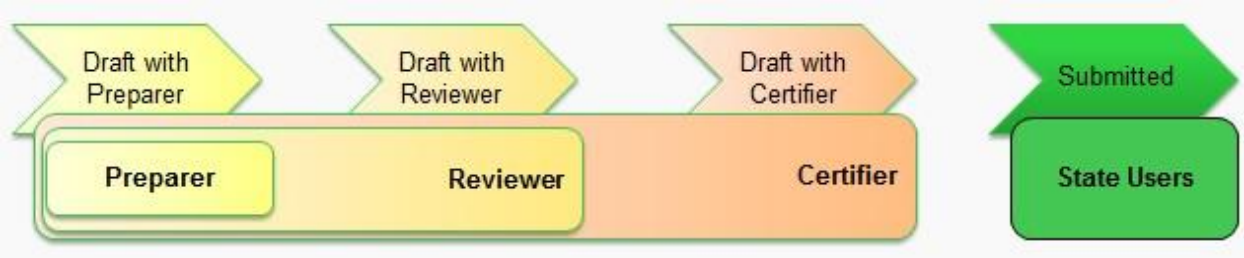


Figure 22 - Job Submission Workflow

- **Lab/PWS Preparer**: Create a Job and add samples, attachments, send a Job to Reviewer, remove a job

- **Lab/PWS Reviewer**: Review content of a Job, modify a Job, if needed; reject a Job and return to Preparer, and send to Certifier; remove a job.

- **Lab/PWS Certifier**: Review content of a Job, modify a Job if needed; reject a Job and return to Preparer or Reviewer; certify and submit to State; remove a job.

- **State Users**: Read-only access to Jobs that have been certified and submitted.

Note:
- State Laboratory Users will not need to electronically certify Jobs for CROMERR purposes.

6.1 SEARCH FOR A SAMPLE JOB

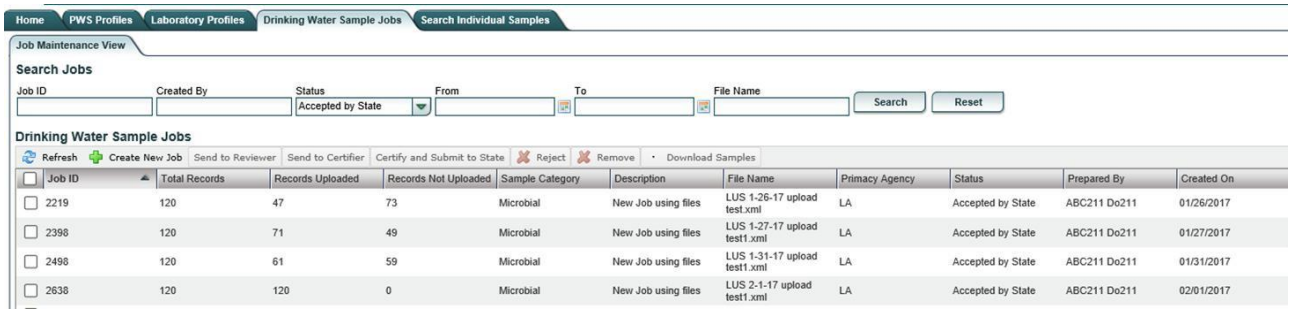


Figure 23 - Search Jobs

Users can search Jobs they have access to by using the search feature provided in the "Drinking Water Sample Jobs" Module.

To search for a Sample Job:

1) Click on the **"Drinking Water Sample Jobs"** Module Tab. (Figure 23)
2) Enter one or more of the search criteria and click the **"Search"** button, or press Enter, to

narrow down the search results. (Search can also be triggered without entering any criteria.)

3) To reset search parameters/filters, click the "**Reset**" button.

Notes:

- *Users can see the total number of records in a job, the total number of records uploaded from a job, and the total number of records not uploaded for a job on the Job Maintenance View. This information is also available in the Validations tab for a selected job.*

6.1.1 Authorizations

Available to all users.

6.1.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Search Criteria	Input fields to search a Job	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DWJ-1	Job ID	Unique ID assigned to the Job	O	Text	None	None
DWJ-2	Created By	User who created the Job	O	Text	None	None
DWJ-3	Status	Status of the Job	O	List	List of Values: Validation in Progress Draft with Preparer Draft with Reviewer Draft with Certifier Submitted Accepted by State Rejected by State Validation Failed	-
DWJ-4	From	Begin date for date range	O	Date MM/DD/YYYY	Results will include Jobs created on or after date entered	-
DWJ-5	To	End date for date range	O	Date MM/DD/YYYY	Results will include Jobs created on or before date entered	-
DWJ-6	File Name	XML file name used to upload samples	O	Text	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Results table	Table to list search results	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DWJ-1	Job ID	ID assigned to the Job	-	-	-	-
DWJ-6.2	Sample Category	List of categories of samples within the Job	-	-	Categories: Microbiological, Chemicals/ Radionuclides, Cryptosporidium, Operational Samples	-
DWJ-6.3	Description	Brief description of the Job	-	-	-	-
DWJ-6	File Name	Original XML file name used to create the Job	-	-	-	-
DWJ-7	Primacy Agency	Primacy Agency Code	-	-	-	-
DWJ-8	Status	Status of the Job	-	-	-	-
DWJ-9	Preparer	ID of user who created the Job	-	-	-	-
DWJ-10	Created On	Date when Job was created	-	-	-	-
DWJ-11	Reviewed By	ID of user who reviewed the Job	-	-	Field contains ID of user who reviewed the Job last	-
DWJ-12	Reviewed On	Date when Job was reviewed	-	-		-
DWJ-13	Certified By	ID of user who certified the Job	-	-	Field contains ID of user who certified the Job	-
DWJ-14	Certified On	Date when Job was certified	-	-		-

6.2 CREATE A NEW JOB BY ENTERING SAMPLES USING WEB FORMS

1) Under the **"Drinking Water Sample Jobs"** section, select "Job Maintenance View" tab and click the **"Create New Job"** button. (Figure 24)

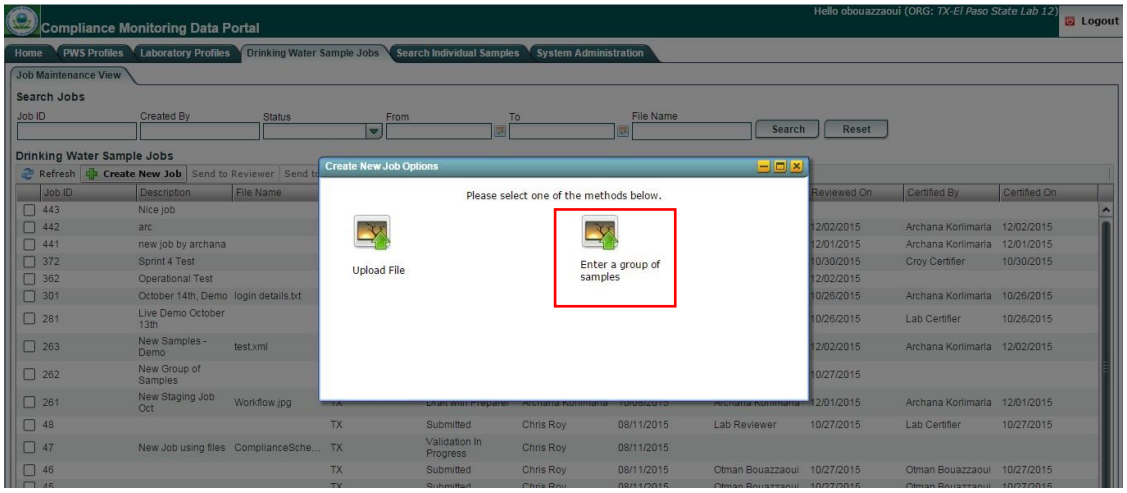


Figure 24 - Create Job - Method Selection

2) Select the method "**Enter a group of samples.**"
3) Enter a Job description and click "OK." (Figure 25)

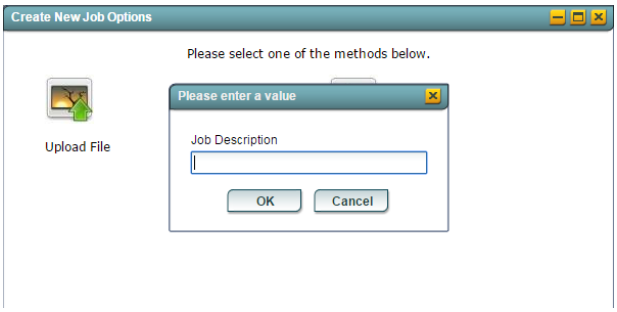


Figure 25 - Enter Job Description

4) A tab will be opened for the new Job, and user can add samples. (Figure 26)

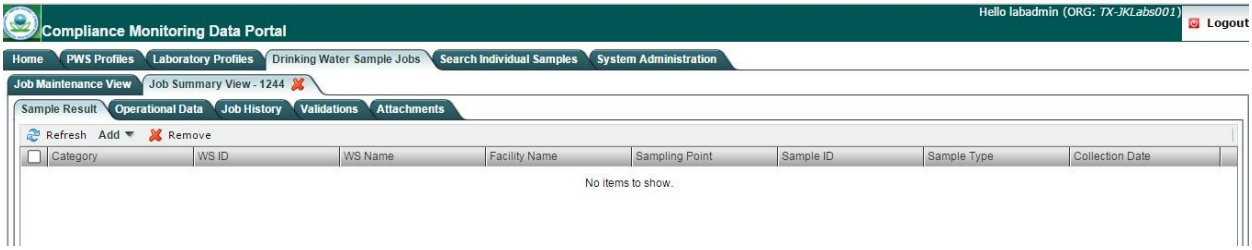


Figure 26 - New Tab for New Job Created

6.2.1 Authorizations

All users associated with a laboratory (private or state) or water system can create a Job (no restriction by role).

6.2.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Job Description	Will include a Job ID and a brief text field for Job description	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
DWJ-15	Job ID	Unique ID assigned to the Job	R	Numeric	System generated	-
DWJ-16	Description	Brief text to describe the Job	O	Text	-	-

6.3 CREATE A NEW JOB BY USING FILE UPLOAD [CMDP TEMPLATES]

Users can elect to upload XML files into CMDP manually by using the File Upload method. The XML files are generated by using the MS Excel spreadsheets (templates) available for each sample category, which can be downloaded from the Home Page. XML files created by the end user without using the templates can also be uploaded using this method.[2]

2 The user should reference the Web Services Samples Data Dictionary available through the CMDP Help Desk to view the CMDP XML schema descriptions.

6.3.1 About the Available Excel Templates

There are two (2) master workbooks that contain MS Excel Templates for the two CMDP sample categories:

Workbook 1: CMDP_ Sample_Result_Template.xlsm

This contains three (3) templates; each is in a separate sheet.

1. Microbiological
2. Chemicals/Radionuclides
3. Cryptosporidium

Workbook 2: CMDP_Operational_Data_Template.xlsm

This workbook contains nine (9) templates; each is in a separate sheet.

1. CFE Turbidity
2. IFE Turbidity
3. Chlorine Chloramine Entering DS (Distribution System)
4. Chlorine Chloramine in DS (Distribution System)
5. Chlorine Dioxide and Chlorite
6. LCR WQP (Water Quality Parameters)
7. TOC (Total Organic Carbon)
8. Ozone Treatment (Bromate)
9. THM and HAA5

Important Notes:

- Version 1.0 of CMDP will accept data and store a searchable Sample Job created using a template tab for *all* of the sample types above. However, for the italicized templates (items 5–9), the data will not be migrated to SDWIS State until a future version of CMDP is released.

- In the interim, to migrate the sample results for items 5–9 in Operational Data Template to state primacy agencies for compliance determination, laboratories and water systems may report as Chemicals all of the analytes associated with the italicized items using a LIMS or by using the Chemicals/Radionuclides web form or templates.

- Users can download the submitted data for the italicized sample types from the CMDP application as an XML file, which will be rendered human-readable as HTML (see 6.11, below). Users may also copy all of the information in the HTML page and paste it into a separate document to view the XML file data.

- Users can obtain the submitted data for the italicized sample types from the CMDP application as an XML file by using web services. The file will not be saved to a human readable format, or in a format usable by SDWIS XMLSampling but the agency could develop their own tool for viewing the data.

6.3.2 Prepare a Sample Job Using the MS Excel Templates

Populate the Template with the sample results in order to use the File Upload functionality in CMDP. Please keep the following in mind when populating the templates:

- Data validations are available in MS Excel to make sure that the data are valid and, therefore, that CMDP will accept them.
- Enter valid data types and formats in each cell so the record is not rejected. If any cell

contains data types or formats that do not conform to specifications listed in this document (please refer to the Data Elements Tables for each Sample type), the record will be rejected.

- Be aware that all data are case-sensitive. It is critical that users take into consideration the reference data existing in CMDP. For example, entering "oh0000001" as a Water System ID is not a valid value; the correct value is "OH0000001." If a record contains a value not stored in CMDP as reference data for these fields, then the value will not be considered valid, and CMDP will reject the record (row). To help avoid these kinds of errors, please log in to CMDP and view the PWS Profiles or Laboratory Profiles to check for the reference data stored in CMDP for critical fields such as: Water System ID, Water System Facility ID, Sampling Point ID, and Laboratory ID.

Notes:

*In **Workbook 1**: CMDP_ Sample_Result_Template.xlsm, each row in the template represents a sample result in the sample. For example, if there is more than one analyte (result) in a single sample, each analyte should be reported in a separate row. When a Sample Job is created in CMDP, each row (sample result) can be considered a record (e.g., 10 microbiological sample results in a sample are represented as 10 records in the CMDP Microbiological Sample Job). If invalid data are entered for any row (result) in the template, that row will not be added to the CMDP database when uploading the XML file, and the error will appear in the Data Validation Report (see section 6.14 below). All rows containing valid data for sample results will still be added to the Sample Job.*

- *In **Workbook 2:** CMDP_Operational_Data_Template.xlsm, for CFE, IFE, Residuals Entering DS, and Residuals in DS, each tab represents a single monthly report for **a water system facility (for example, the monthly CFE for a facility)**. If invalid data are entered for a report, the content of the entire tab will not be added to the CMDP database when uploading the file. All valid samples (present in other tabs within the workbook) will be added to the CMDP database. Other Operational Sample Types, when available, will allow the user to enter and report sample results for multiple facilities within a water system—e.g., THM and HAA5, LCR WQP, and Ozone Treatment (Bromate).*

6.3.3 How to Generate the XML File from the CMDP Templates

Once all samples to be reported to the primacy agency are entered into the CMDP Template, save the file and click any "**Generate XML**" button available in each sheet to create the XML file. Save the XML file in a familiar location where it can easily be found; it is the same file that will be uploaded to CMDP. (Figure 27, CFE Turbidity tab)

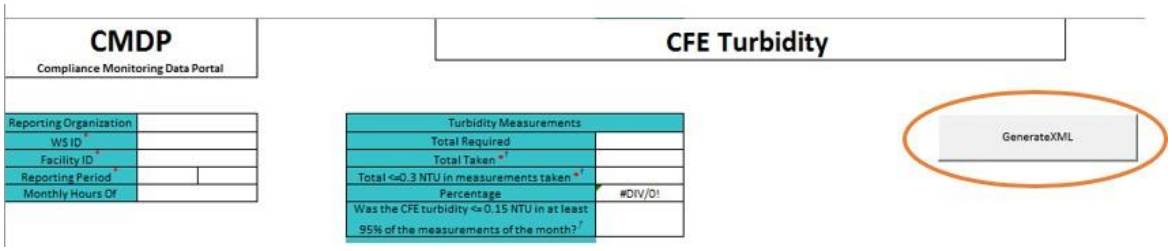


Figure 27 - Generate XML Button in an Operational Sample Template (CFE)

1) Select "Upload File" from the two options available. (Figure 28)

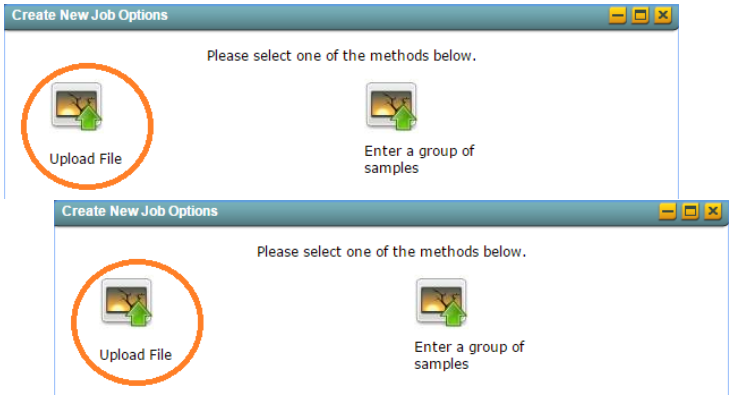


Figure 28 - Method Selection for Sample Reporting Dialog Window

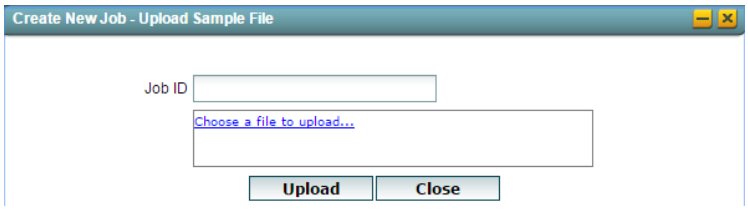


Figure 29 - Upload Dialog Window: Choose a file to upload

2) Click the "**Choose a file to upload**" link to find the XML file you generated from the Excel templates. The Job ID will be automatically assigned by CMDP.

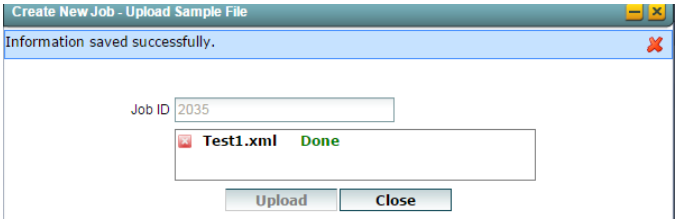


Figure 30 - Upload Dialog Window: "Done" Message

3) Wait for the "Done" flag to be displayed then click the Upload button. (Figure 30)
4) A confirmation message will be displayed with the word "**Done**" in green. Click "**Close**."

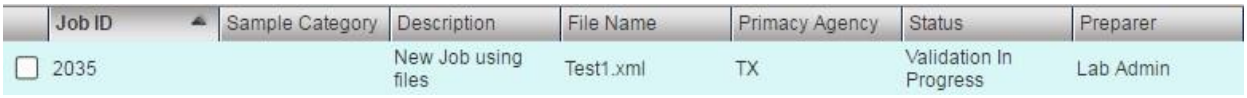


Figure 31 - Most Recent Job Added to Job Maintenance View

The file is now uploaded, and in the Job Maintenance View tab, a new Job will appear at the top of the list of Jobs as the most recent Job created. (Figure 31)

Figure 32 - Refresh Button in Toolbar

5) If the Status field still says "Validation in Progress," click the Refresh button and the status should change to "Draft with Preparer." (Figure 32) Once an XML file is uploaded, the newly created Job will go through the submission workflow for CMDP web forms shown in Figure 22 above.
6) If an invalid value exists in the file, an error message will be displayed with the text 'Failed to save information on server. Reason '– and the reason will be displayed.

You can access the Job Summary View by clicking the corresponding row from the list. This will enable you to view individually each sample added to the Job.

6.3.4 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Job	-	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
DWJ-17	Job ID	Unique ID assigned to the Job	-	Numeric	System generated	-

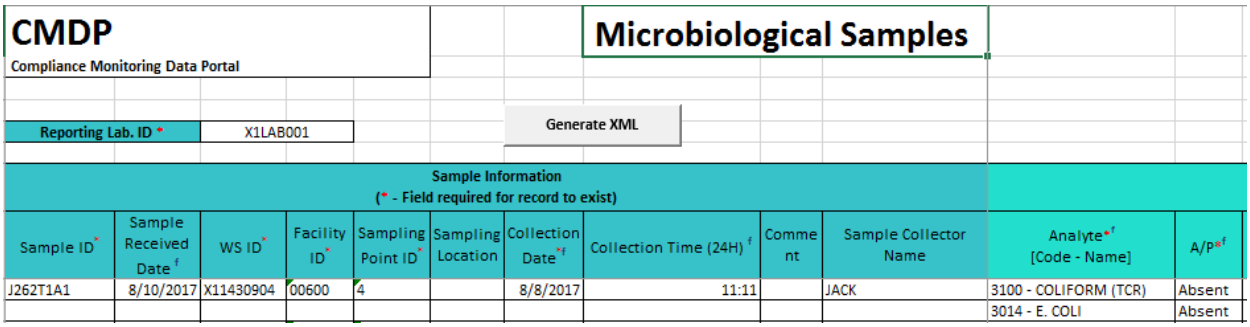
Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
DWJ-18	Description	Brief text field for description of the Job	O	Text	System generated "New Job using files"	-
DWJ-19	File Name	Source file name used to upload data into CMDP	R	File	Only XML files will be accepted for upload	-

6.3.5 Authorizations

All users associated with an organization type laboratory (private or state) or water system can create a Job (no restriction by role).

6.3.6 A Few Tips about the Templates

In the Microbiological and Chemicals/Radionuclides templates, it is possible to add multiple results to one sample by adding a result in each row. For example, Sample ID J262T1A1, in Figure 33, below includes results for two different analytes: 3100 and 3014, which were collected at the same sampling point, date and time. Add each result in a separate row and leave blank the Sample Information columns (Sample ID through Comment) so the second result (3014) can be added as part of the one sample (in this case, J262T1A1). (Figure 33)



CMDP
Compliance Monitoring Data Portal

Microbiological Samples

Reporting Lab. ID * X1LAB001

Generate XML

Sample Information (* - Field required for record to exist)											
Sample ID*	Sample Received Date f	WS ID*	Facility ID*	Sampling Point ID*	Sampling Location	Collection Date*f	Collection Time (24H) f	Comment	Sample Collector Name	Analyte*f [Code - Name]	A/P*f
J262T1A1	8/10/2017	X11430904	00600	4		8/8/2017	11:11		JACK	3100 - COLIFORM (TCR)	Absent
										3014 - E. COLI	Absent

Figure 33 - View of the Microbiological Samples Template – 1 Sample with 2 Sample Results

1) Because the CMDP templates are in MS Excel, copy and paste features are available for use. If multiple samples share the same information (same collection date, sample time, etc.), you can copy the information contained in a row and paste it in the next row.
2) When entering repeat samples, please make sure that you populate the routine (Original) Sample ID and optionally the Repeat Location field. It is important that the value (ID) entered in the Original Sample ID field exists in CMDP before the associated repeat samples are reported, otherwise the repeat samples will be rejected. To ensure this data entry works correctly when CMDP processes the content of the Template, enter the routine sample into a row in the template, and then enter any associated repeat samples in the rows *below* the row containing the routine sample.
3) Save your progress regularly when using Excel. Also, save your template prior to clicking the "Generate XML" button on each tab.
4) While it is possible to use the CMDP_ Sample_Result_Template.xlsm to enter multiple samples (Microbiological, Chemicals/Radionuclides, and Cryptosporidium) for different water systems if needed, the CMDP_Operational_Data_Template.xlsm for CFE, IFE, and

Disinfectant Residuals will only allow reports for one particular water system facility at a time.

5) The Excel Templates cannot be uploaded as Excel files to the CMDP application; only the XML files created using the "Generate XML" button can be uploaded.
6) Once an XML file is uploaded successfully, a draft Sample Job number will be created, and the contents will appear to the user in CMDP as web forms for each sample.
7) The draft Sample Job created from a Template will go through the same submission workflow depicted in Figure 22. The following features will be available in the CMDP user interface as long as the user has the appropriate permissions: Add/Remove Attachments, View Job History (any actions will be recorded when Job is in Draft with Reviewer Status and forward), View Validations, and Add/Remove Samples for a Job.
8) Some of the columns contain pick-lists where you can search for a specific value (e.g., Analytes). In that case, you can double-click the cell and enter the value to look up; the field will be populated with the result of your search when you press Enter.

6.4 OPEN AN EXISTING JOB

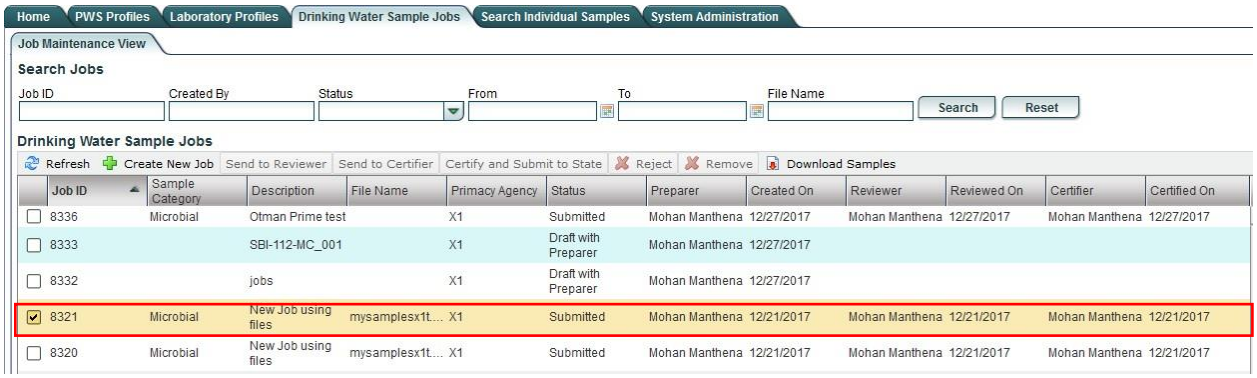


Figure 34 - Open an Existing Job

1) From the **Drinking Water Sample Jobs** search results list, select a Job by clicking on it. (Figure 34)
2) Corresponding Job details will open in a new tab.
3) To get back to the Search page from a **Drinking Water Sample Job** result, click the "**Job Maintenance View**" tab under the "**Drinking Water Sample Jobs**" tab.

Note: From the Drinking Water Sample Jobs search results list (Figure 34), select another Job by clicking on it. Each additional Job selected will open in a new tab.

6.5 SEND SAMPLE JOB TO REVIEWER

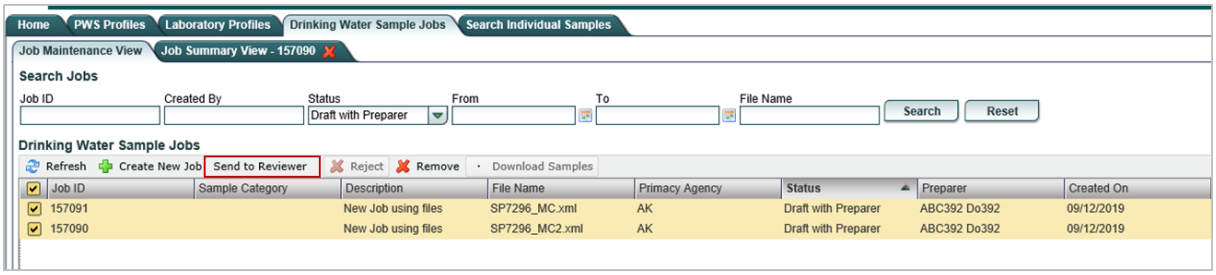


Figure 35 - Send One or More Jobs to Reviewer (Lab/PWS Users)

Once the Sample Job is created, it can be sent to a Reviewer for review.

1) Click on the check box to the left of one or more Jobs with a Status of "**Draft with Preparer**." (Figure 35)
2) Click "**Send to Reviewer**" to send the Job(s) to the Reviewer.
3) Select the individual to whom the Job(s) will be sent, if desired. (Figure 36)
4) Click "**Submit**" to submit these data for review. The Status will be updated to "**Draft with Reviewer**."
5) A confirmation message will be displayed. Click "**OK**" to close the window.
6) The "**Created On**" date is populated with the date on which the Preparer created the job.

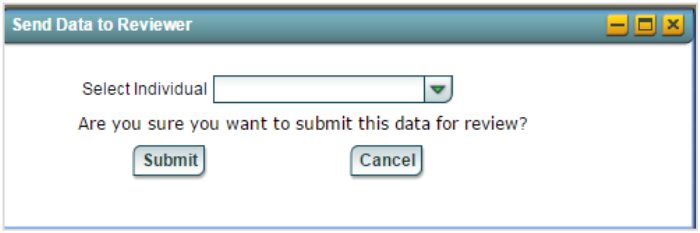


Figure 36 - Select Individual (Lab/PWS Users)

Notes:

- *In order to send multiple jobs to a Reviewer, the selected jobs must all have the status of "**Draft with Preparer**."*
- *A user can click the 'Submit' button in the Send Data to Reviewer pop-up (Figure 36 - Select Individual (Lab/PWS Users)) without selecting an individual. In this case, the Job will not be assigned to any Reviewer. If the user is authorized, he or she should select his or her own name from the pick list; this feature is beneficial for organizations that are small and will have one person regularly executing the entire submission workflow.*
- *If a user selects an individual from the pick list, the application will send an email to the individual selected as the Reviewer; and will display the Job in the My Work in Progress dashboard on the Home screen.*
- *The "Reviewed By" and "Reviewed On" columns in the Job Maintenance View will remain empty until a registered Reviewer completes his/her review and sends it to the Certifier. At that point, the "Reviewed By" and "Reviewed On" columns will display the Reviewer's name and the date on which the Job was reviewed.*

6.5.1 Authorizations

All users associated with an organization type laboratory (private or state) or water system may send a Job with "Draft with Preparer" status for review.

6.5.2 Data Elements

Group	Description	R/O/ CR	Validations	Additional Designations
Send Job to Reviewer	Once the Preparer is finished with a Job, he/she can send it for review to a Reviewer within his/her organization.	-	-	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
SJR-1	Select Individual	First name and last name of all Reviewers in the organization	O	List	List all individuals (first name and last name) that have a Reviewer, Certifier, or Administrator Role	-

6.6 SEND SAMPLE JOB TO CERTIFIER

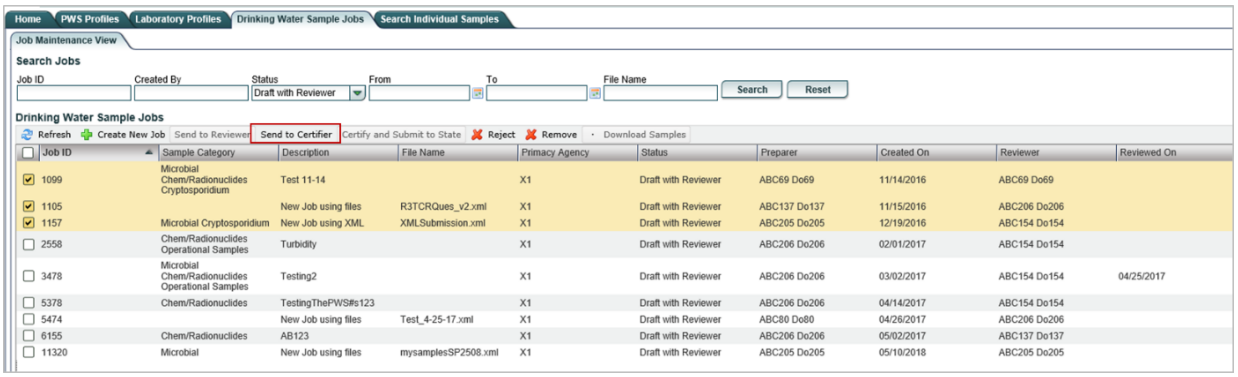


Figure 37 - Send Job to Certifier (Lab/PWS Reviewers)

Once the Sample Job is reviewed, it can be sent to a Certifier.

1) Click on the check box to the left of one or more Jobs with a status of "**Draft with Reviewer**." (Figure 37)
2) Click on "**Send to Certifier**" to send the Job(s) to the Certifier.

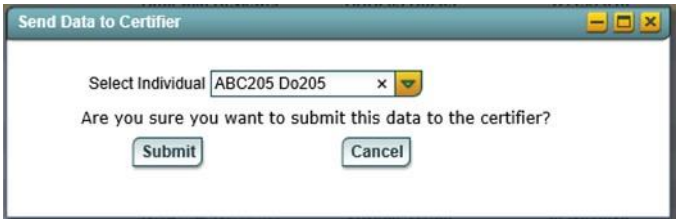


Figure 38 - Select Certifier (Lab/PWS Reviewers)

3) Select the individual to whom the Job(s) will be sent. (Figure 38)
4) Click "**Yes**" to submit the Job(s) for review by the Certifier. The status will be updated "**Draft with Certifier**."
5) A confirmation message will be displayed. Click "**OK**" to close the window.
6) The "**Reviewed On**" date is populated with the date on which the Preparer sent the jobs to the Reviewer.

Notes:

- *In order to send multiple jobs to a Certifier, the selected jobs must all have the status of "**Draft with Reviewer**."*
- *A user can click the 'Submit' button in the Send Data to Certifier pop-up (Figure 38 - Select Certifier (Lab/PWS Reviewers)) without selecting an individual. If the user is authorized, he or she should select his or her own name from the pick list; this feature is beneficial for organizations that are small and will have one person executing the submission workflow.*
- *If a user selects an individual from the pick list, the application will send an email to the individual selected as the Certifier and will display the Job in the My Work in Progress dashboard on the Home screen.*
- *The "Certified By" and "Certified On" columns in the Job Maintenance View will remain empty until a registered Certifier completes the review, certifies, and submits the Job. At that point, the "Certified By" and "Certified On" columns will display the Certifier's name and the date on which the Job was certified.*

6.6.1 Authorizations

Only users with Reviewer and Certifier roles associated with organization type laboratory (private or state) or water system may send a Job with "Draft with Reviewer" status to a Certifier for certification.

6.6.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Send Job to Certifier	Once the Reviewer has finished with a Job, he/she can send it for certification to a Certifier within his/her organization	-	-	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
SJR-2	Select Individual	First name and last name of all Certifiers in the organization	O	List	List all individuals (first name and last name) that have a have Certifier or Administrator Role	-

6.7 CERTIFY AND SUBMIT JOB TO THE STATE

Once the Certifiers receive and review the Job, they can electronically sign the Job and submit them to the primacy agency.

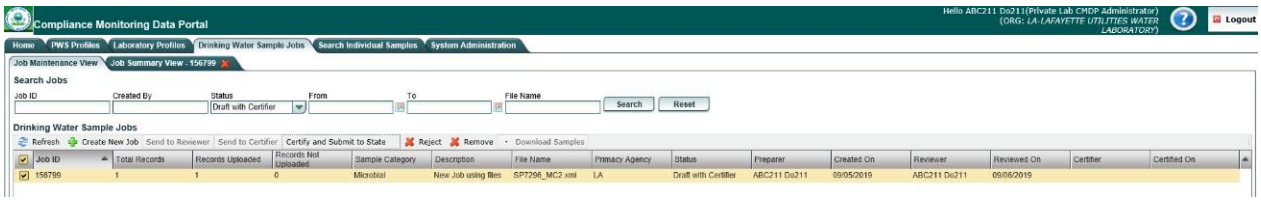


Figure 39 - Certify and Submit Job to State

1) Click on the check box to the left of one or more Jobs with a status of "**Draft with Certifier**." (Figure 39)

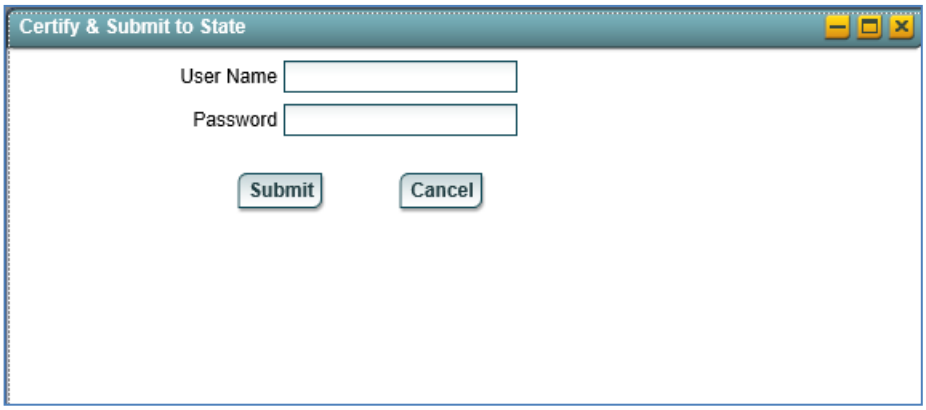


Figure 40 - Login Request to Submit to State

7) Click "Certify and Submit to State" to certify and submit the Job(s) to the state.
8) Enter User Name and Password and click "Submit." (Figure 40)
9) Answer the challenge question displayed, check the certification statement, and then click "Submit." (Figure 41, next page). The challenge questions are established in SCS during registration for a Private Lab or PWS Certifier role.
10) A confirmation message will be displayed. Click "OK" to close the window. The Job(s) Status in the Maintenance View will be updated to "**Submitted**."

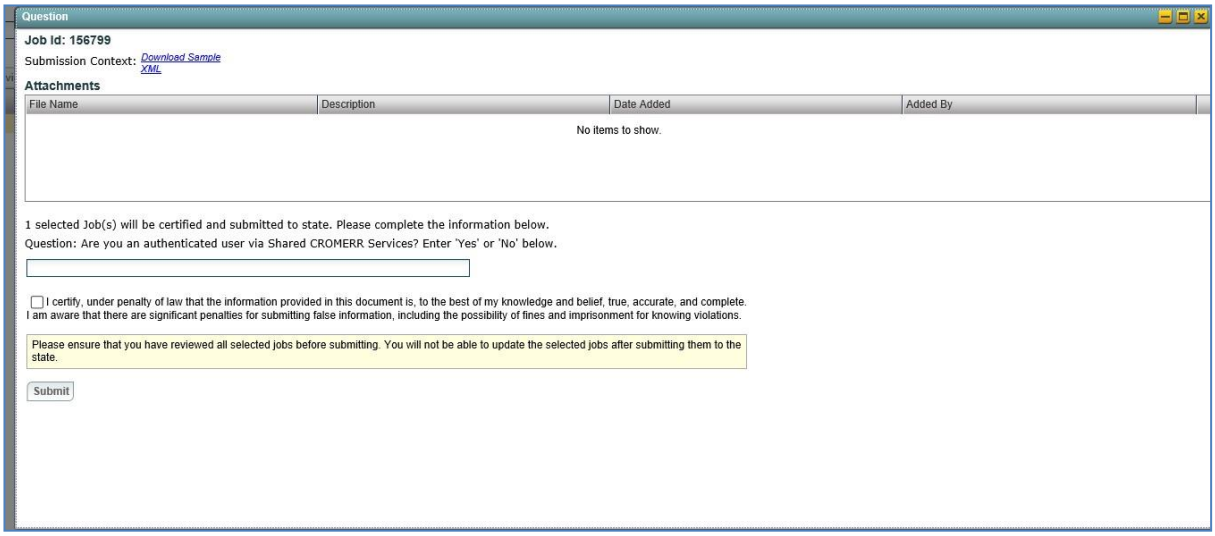


Figure 41 - Certification Ceremony - 2nd Level Authentication

Notes:

- *In order to certify and submit multiple jobs, the selected jobs must all have the status of '**Draft with Certifier**.' State Laboratories will not have to electronically sign a Job using the SCS electronic signature service and have a Submitter role to distinguish them from the Certifier role.*
- *The Challenge questions used for the 2nd level authentication will be established in SCS.*
- *A Job in "Submitted" status cannot be modified or edited.*
- *The Certifier can download an HTML file that contains all samples before submitting to State. Click the Download XML File available in the screen depicted in Figure 41 - Certification Ceremony - 2nd Level Authentication to save the file locally. The file can be opened in any web browser as an HTML page.*

  State Laboratories will not need to electronically sign a Job using the SCS electronic signature service and may submit directly to the primacy agency. The status of the Job in the Job Maintenance View will appear the same, showing both Submitted and Accepted.
-

6.7.1 Authorizations

Only users with Certifier role associated with organization type laboratory (private or state) or water system may send a Job in "Draft with Certifier" to the state.

6.7.2 Data Elements

None.

6.8 REJECT A JOB

A user (Reviewer or Certifier) can reject a draft Sample Job and may provide a reason for doing so in CMDP. Examples of rejection reasons include "Job created in error" or "Job contains invalid data"

1) Only Jobs with the "**Draft with Reviewer**" and "**Draft with Certifier**" statuses can be rejected.
2) Click on the check box to the left of one of more Jobs to be rejected. (Figure 42)

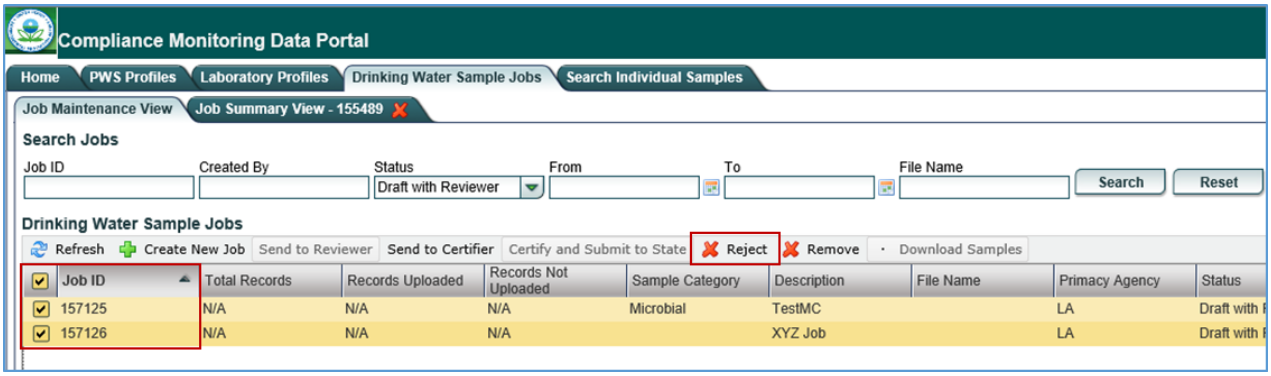


Figure 42 - Reject One or More Jobs

3) Click the "**Reject**" from the toolbar to reject the selected record.

4) If you are sure you want to reject the selected Job(s), provide an optional description and click "Reject."
5) Click "OK" to acknowledge that the Job(s) has been successfully rejected.

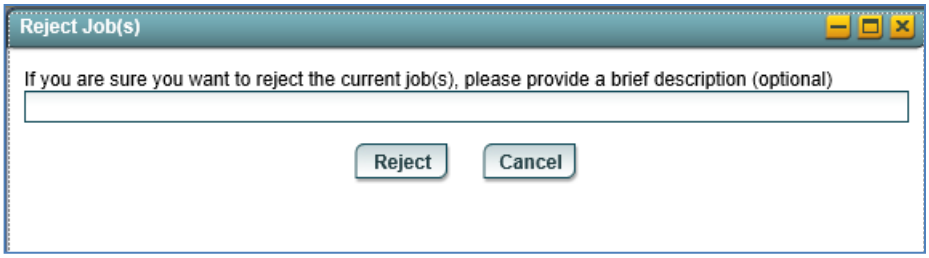


Figure 43 - Reject a Job - Confirmation

Notes:

- *Once rejected, the Job Status will be updated to "Draft with Preparer."*

6.8.1 Authorizations

Only users with Reviewer and Certifier roles associated with organization type laboratory (private or state) or water system may reject a Job.

6.8.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Reject a Job Reason	A Reviewer or Certifier can reject a Job if needed	-	-	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
SJR-3	Reason	A reason could be provided in text format to justify rejecting a Job	O	Text	The text entered as a rejection reason will be recorded in the Job History Comments column	-

6.9 REMOVE A JOB

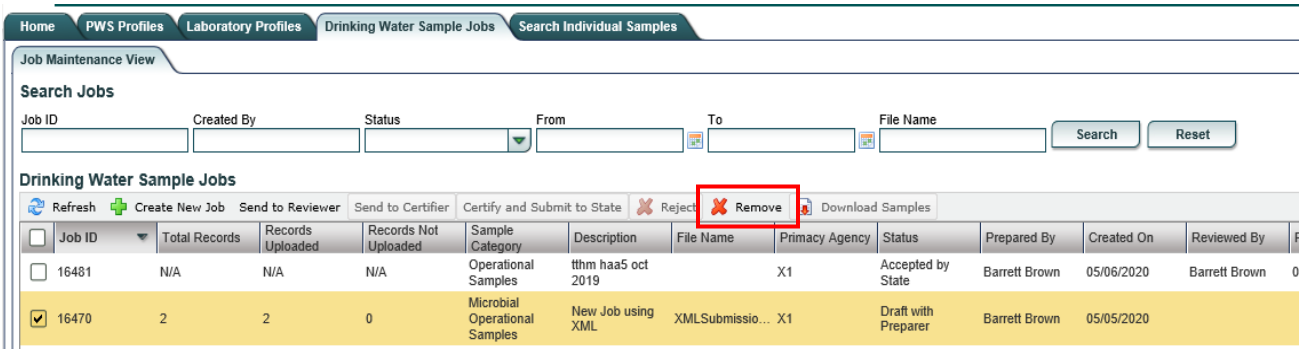


Figure 44 - Remove One or More Jobs

1) Only Jobs with the "**Draft with Preparer**," "**Draft with Reviewer**" and "**Draft with Certifier**" statuses can be removed.
2) Click on the check box to the left of one or more Jobs to be removed.
3) Click "**Remove**" to remove the selected Job(s).
4) Click "**Yes**" to confirm removing the selected Job(s).

6.10 MIGRATE JOB TO COMPLIANCE SYSTEM

Once a Job is submitted to State, it will be processed and migrated to the State Compliance System (e.g., SDWIS State) using the DSE.

- Once the sample results in the Job have successfully been exported to an XML file using the DSE, the status will change from "Submitted" to "Accepted by State."
- A Job in "Accepted by State" status cannot be modified.

6.11 DOWNLOAD JOB FILE (HTML)

Users can download a file that contains all samples within a submitted Job. The Job must be in "Submitted" or "Accepted by State" status.

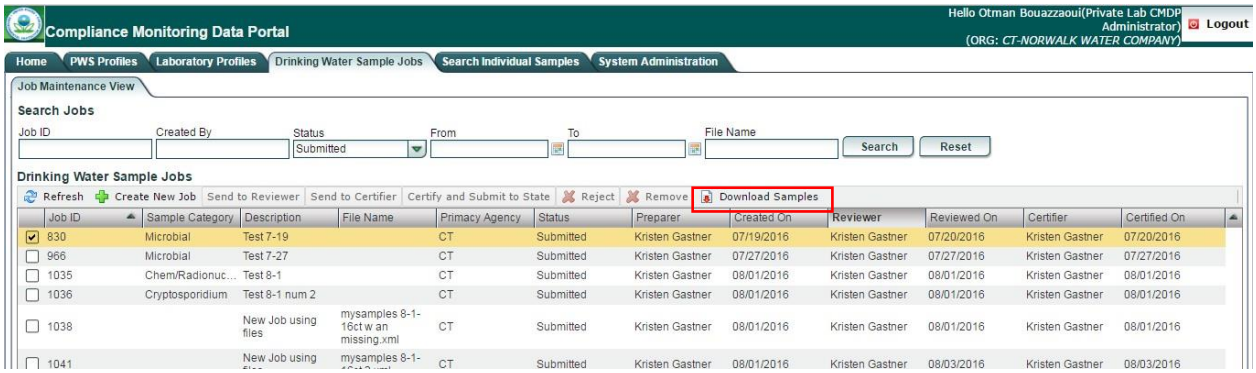
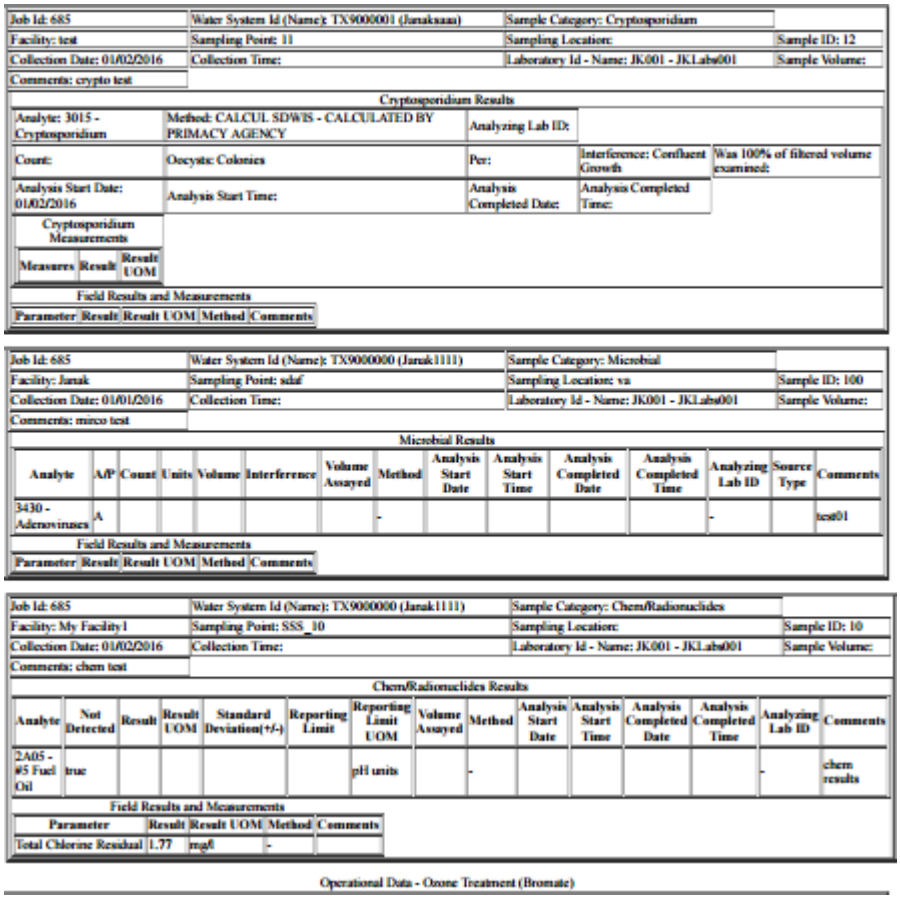


Figure 45 - Job Maintenance View: Download Samples button

1) Select a Sample Job with status "**Submitted**" from the list of Drinking Water Sample Jobs (Figure 45).
2) Click "**Download Samples**" on the toolbar.
3) The HTML file will be downloaded to your local drive.



Job Id: 685	Water System Id (Name): TX9000001 (Jarukuuu)	Sample Category: Cryptosporidium	
Facility: test	Sampling Point: 11	Sampling Location:	Sample ID: 12
Collection Date: 01/02/2016	Collection Time:	Laboratory Id - Name: JK001 - JKLabs001	Sample Volume:
Comments: crypto test			

Cryptosporidium Results

Analyte: 3015 - Cryptosporidium	Method: CALCUL SDWIS - CALCULATED BY PRIMACY AGENCY	Analyzing Lab ID:		
Count:	Oocysts: Colonies	Per:	Interference: Confluent Growth	Was 100% of filtered volume examined:
Analysis Start Date: 01/02/2016	Analysis Start Time:	Analysis Completed Date:	Analysis Completed Time:	

Cryptosporidium Measurements

Measures	Result	Result UOM

Field Results and Measurements

Parameter	Result	Result UOM	Method	Comments

Job Id: 685	Water System Id (Name): TX9000000 (Jarak1111)	Sample Category: Microbial	
Facility: Jarak	Sampling Point: sdaf	Sampling Location: va	Sample ID: 100
Collection Date: 01/01/2016	Collection Time:	Laboratory Id - Name: JK001 - JKLabs001	Sample Volume:
Comments: mirco test			

Microbial Results

Analyte	A/P	Count	Units	Volume	Interference	Volume Assayed	Method	Analysis Start Date	Analysis Start Time	Analysis Completed Date	Analysis Completed Time	Analyzing Lab ID	Source Type	Comments
3430 - Adenoviruses	A						-					-		test01

Field Results and Measurements

Parameter	Result	Result UOM	Method	Comments

Job Id: 685	Water System Id (Name): TX9000000 (Jarak1111)	Sample Category: Chem/Radionuclides	
Facility: My Facility1	Sampling Point: SSS_10	Sampling Location:	Sample ID: 10
Collection Date: 01/02/2016	Collection Time:	Laboratory Id - Name: JK001 - JKLabs001	Sample Volume:
Comments: chem test			

Chem/Radionuclides Results

Analyte	Not Detected	Result	Result UOM	Standard Deviation(+/-)	Reporting Limit	Reporting Limit UOM	Volume Assayed	Method	Analysis Start Date	Analysis Start Time	Analysis Completed Date	Analysis Completed Time	Analyzing Lab ID	Comments
2A05 - #5 Fuel Oil	true					pH units		-					-	chem results

Field Results and Measurements

Parameter	Result	Result UOM	Method	Comments
Total Chlorine Residual	1.77	mg/l	-	

Operational Data - Ozone Treatment (Bromate)

Figure 46 - Representation of the XML in HTML format

Notes:

- *The HTML file can be opened with any web browser. A style sheet will be applied to the XML file for it to be human readable. You should be able to see all the samples within a Job displayed in separate tables, as depicted in Figure 46 - Representation of the XML in HTML format.*
- *The HTML file can also be downloaded when the Job is in "Draft with Certifier" status.*

6.11.1 Authorizations

All users associated with an organization type laboratory (private or state) or water system may download samples after the Job has been certified and submitted (status is Submitted).

6.11.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Download HTML file	This will allow a user to download an HTML file that contains all the samples of a Job.	-	-	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DNL	HTML File Name	An HTML file that contains all samples of a particular Job	-	File HTML	Naming convention: Job Details_[JOB ID].html	-

6.12 VIEW / ADD / EDIT SAMPLES (MICROBIOLOGICAL / CHEMICALS / RADIONUCLIDES / OPERATIONAL SAMPLES/COMPOSITES) ASSOCIATED WITH A JOB

In the Job Summary View, users will be able to view/add/edit results in Sample Result, Operational Data, and Composite Samples.

- Sample Result – Sample Categories
    1. Microbiological (also called Microbial)
    2. Chemical/Radionuclide
    3. Cryptosporidium (a microbiological sample type with a discrete web form)
    4. Composites

- Operational Data – Sample Categories
    1. CFE Turbidity
    2. IFE Turbidity
    3. Chlorine Chloramine Entering DS (Distribution System)
    4. Chlorine Chloramine in DS (Distribution System)
    5. *Chlorine Dioxide and Chlorite*
    6. *LCR WQP (Water Quality Parameters)*
    7. *TOC (Total Organic Carbon)*
    8. *Ozone Treatment (Bromate)*
    9. TTHM and HAA5

- Composite Samples

Important Notes:

- All users have access to the data entry screens corresponding to the list above. However, State Users have read-only access. Only Laboratory and PWS Users are able to enter and submit sample data using CMDP.

- Although the application accepts data and stores, as a web form, a searchable Sample Job for the above italicized sample types (items 5–8 in the Operational Data Category), the data stored in CMDP will not be migrated to SDWIS State until a future version of CMDP is released.

- In the interim, to migrate the sample results for items 5–8 in the Operational Data Category to state primacy agencies for compliance determination, laboratories and water systems may report as Chemicals all of the analytes associated with the italicized items by using a LIMS or by using the Chemical/Radionuclide web form or templates.

- Users also can download any of the submitted data from the CMDP application as an XML file, which will be rendered human-readable as HTML (see 6.11, above). Users also may copy all of the information in the HTML page and paste it into a separate document to view the XML file data.

6.12.1 Access the Sample Results Table

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Click the **"Sample Result"** tab under the selected Job to view, add, or remove sample results.

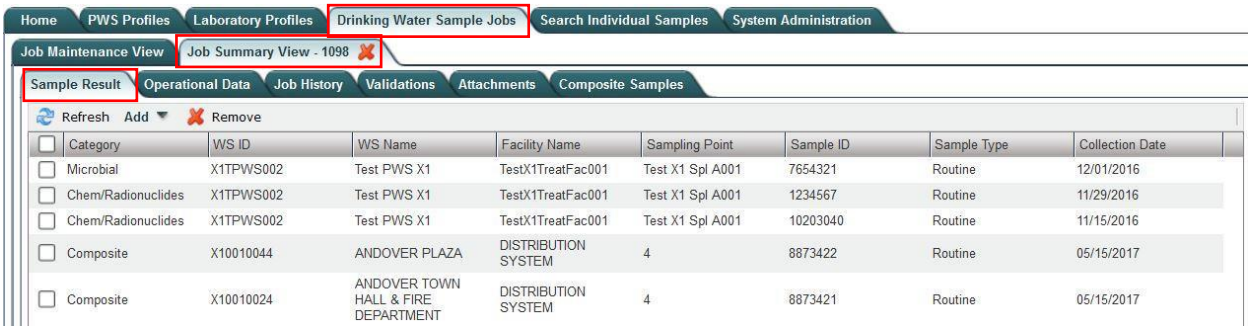


Figure 47 - Sample Results Table

6.12.2 Add a Microbiological, Chemicals/Radionuclides, or Cryptosporidium Sample to a Job

Under the "Drinking Water Sample Jobs" tab, click the "Job Maintenance View" tab.

Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.

Under the "Sample Result" tab, click "Add," then select "Microbial," "Chem/Radionuclides," or "Cryptosporidium" from the dropdown list. (Figure 48)

A new window will open with the corresponding Sample Result data entry screen.

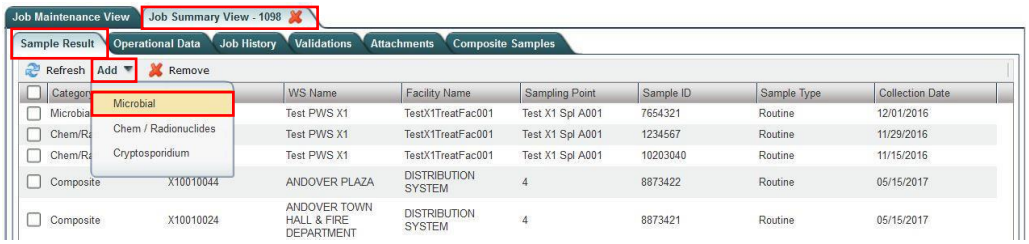


Figure 48 - Add a Sample to a Job

6.12.3 Add a Microbiological Sample to a Job

1) Select the "Drinking Water Sample Jobs" Module Tab. The "Job Maintenance View" tab appears.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under the **"Sample Result"** tab, Click "**Add**," then select "**Microbiological**" from the dropdown list. (Figure 48)
4) Enter the sample information for Microbiological Sample in the Sample Information area of the web form. All fields marked with an asterisk (*) are required. (Figure 49)

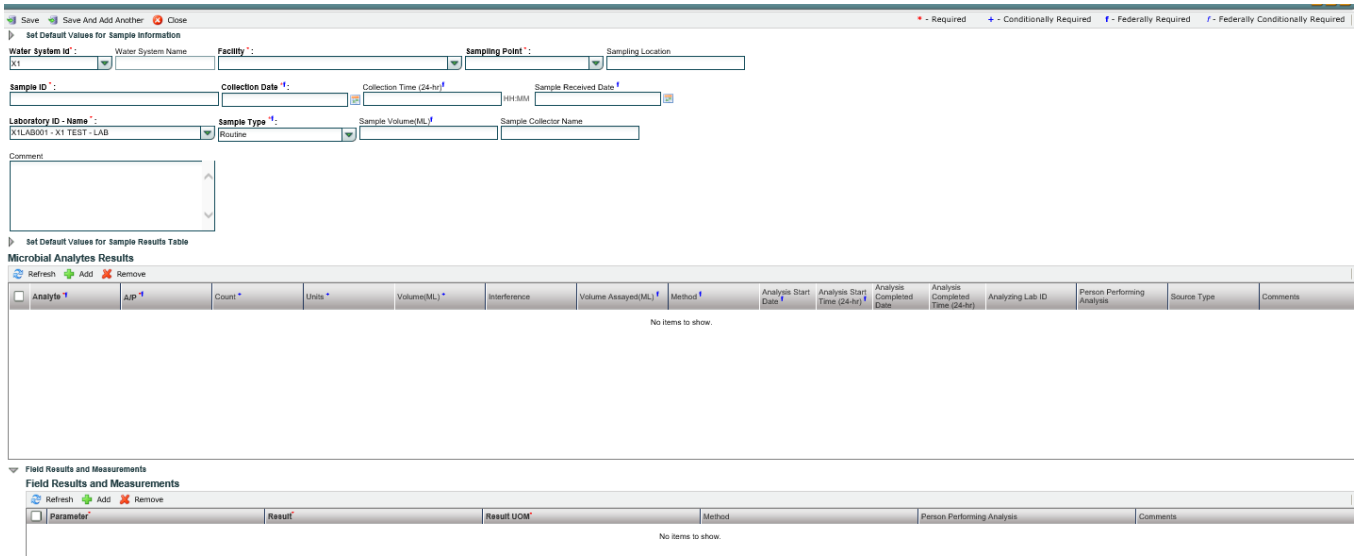


Figure 49 - Add a Microbiological Sample to Job

5) If the **"Sample Type"** selected from the pick list is **"Repeat"**, populate the **"Repeat Location."** If the **"Sample Type"** selected is **"Repeat"** or **"Triggered,"** select the **"Related Original Sample Collected."** You may select a different Water System in order to find the **"Related Original Sample"** (Figure 50).

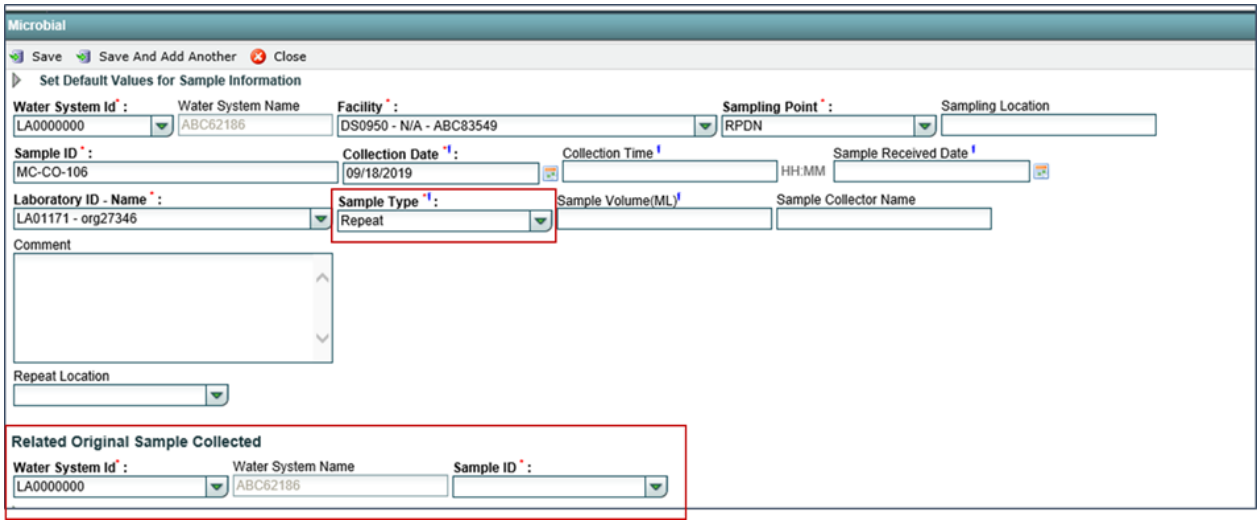


Figure 50 - Repeat Sample

6) Under the "**Microbiological Analytes Results**" grid, click "**Add**" to add microbiological analytes results. All fields marked with an asterisk (*) are required (Figure 49). Note that, when "**Add**" is clicked, the application performs validations on the information entered for the sample and saves the information if no issues are found. You won't be able to add the first record to the grid if the information entered for the sample doesn't pass all the validations.
7) Under the "**Field Results and Measurements**" grid, click "**Add**" to add field results and measurements. (Figure 49)
8) Click "**Save**" to add the sample result to the Drinking Water Sample Job.
9) Click "**Save and Add Another**" to continue adding microbiological sample results to the Drinking Water Sample Job. See 6.12.7 below for more on this feature.

Notes:

*To accommodate **"Count"** values of less than 1, select Absent from A/P and enter '<1' in the **"Comments"** field.*

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier, or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.

Group	Description	R/O/ CR	Validations	Additional Designations
Microbiological Sample Header	Sample information for microbiological analytes	R	All required fields must be populated for sample to be saved	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional validations
MIC-1	Water System ID	Water system related to the sample	R	List [ID – Name]	List of Values: Water Systems within the Primacy Agency. Display WS ID and Name in dropdown list Primacy Agency Code added by default to the WS ID field.	-
MIC-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	N/A	Disabled Field	Disabled field Field auto-populated according to selection made in MIC-1	-
MIC-2	Facility	Water system facility related to the sample	R	List [ID – Name]	List of values: Facilities within the water system selected	-
MIC-3	Sampling Point	Sampling point related to the sample	R	List [ID]	List of values: Sampling Points within the facility selected	-
MIC-4	Sampling Location	Location of the sampling point (e.g., address)	O	Text		-
MIC-5	Sample ID	ID assigned to the sample	R	Alpha-numeric		-
MIC-6	Collection Date	Date on which sample was collected	R	Date MM/DD /YYYY	Date cannot be a future date	**Federally required**
MIC-7	Collection Time	Time when sample was collected	O	Time HH/MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags	**Federally required**
MIC-7.1	Sample Received Date	Date on which lab received sample	R	Date MM/DD /YYYY	Collection Date ≤ Date ≤ Analysis Start Date	**Federally required**
MIC-8	Laboratory ID – Name	Reporting laboratory	R	List	List of values: Laboratories associated with user account; for Laboratory Users, default to selected working organization	-

MIC-9	Sample Type	The type of sample collected (e.g., routine)	R	List	List of values: Routine, Repeat, Triggered, Confirmation, Special, Batch Blanks, Field Blanks, Performance Evaluation, Shipping Blanks, Split Blanks, Maximum Residence Time, Matrix Spike	**Federally required**
MIC-10	Sample Volume	Sample volume collected	O	Number	The total number of digits allowed is 9, with a maximum of 7 numbers to the left of the decimal and a maximum of 2 decimal places, i.e. 9999999.99	**Federally required**
MIC-11	Repeat Location	Location of a repeat sample relative to the positive sample for which the repeat is being collected.	O	List	List of values: Original Site Downstream Upstream Source Alternative (RTCR) Other (TCR) Display field if MIC-9 (Sample Type) is "Repeat"	-
MIC-12	Sample ID	Original sample collected for which a repeat confirmation was needed	CR	List	List of values: Show the previous 100 samples collected for the water system Display field if MIC-9 (Sample Type) is "Repeat," "Confirmation," or "Triggered"	Conditionally Required
MIC-13	Water System ID	Water system related to the original sample	R	List [ID – Name]	List of Values: Water Systems within the Primacy Agency. Display WS ID and Name in dropdown list Default value: the Water System of the Repeat or Triggered Sample being added. Primacy Agency Code added by default to the WS ID field.	-
MIC-13.1	Water System Name	Name of the water system related to the original sample; the name can be the formal, legal, or common name used to refer to the water system	N/A	Display-only	Field auto-populated according to selection made in MIC-13	-

Group	Description	R/O/ CR	Validations	Additional Designations
Microbiological Analyte Results	Results table within a sample	O	All required fields for a result row must be populated for record to be saved	-

Code	Label	Description	R/O /CR	Forma t	Validations	Additional Designations
MIC-14	Analyte	Contaminant subject to analysis	R	List [Code-Name]	List of values: List of all microbiological analytes If MIC-14 is "3100-Coliform" and MIC- 15 is "Absent", cannot add additional MIC- 14 equal to "3014- E.Coli" with MIC-15 "Present" (cannot have E-Coli present with Coliform absent) When a TC+ sample result is reported without an E.coli result, the validations tab for Analyte 3100- Coliform will display, "Missing Sample Result for E.coli Given Reported TC+ Sample Result"	**Federally required**
MIC-15	A/P	Indicator for analyte presence or absence in the sample	R	List	List of values: Absent Present If selected value is "Present," display value in bold red	**Federally required**
MIC-16	Count	The optional *Count* field, in combination with the *Units* and *Volume(ML)* fields, indicate the density of the microbes found in the sample	O	Number	If A/P = Present, must be greater than zero or empty If A/P = Absent may be zero or empty; may not be greater than zero. The total number of digits allowed is 15, with a maximum of 10 numbers to the left of the decimal and a maximum of 5 decimal places. Note that, if the user enters zero(s) at the end of decimals, they are retained	

MIC-17	Units	The *Units* field, in combination with *Count* and *Volume*, indicate the density of the microbes found in the sample	CR	List	If Count has a value, then the Units field is required List of values: Colonies Colony Forming Units Cysts, Calculated Cysts, Observed, Most Probable Number Observations Oocysts, Calculated Oocysts, Observed, Plaque Forming Units Tubes	Conditionally required
MIC-18	Volume (ML)	The *Volume (ML)* field, in combination with *Count* and *Units*, indicate the density of the microbes found in the sample The value entered should be in milliliters (ML).	CR	Number	If Count has a value, then Volume is required The total number of digits allowed is 9, with a maximum of 7 numbers to the left of the decimal and a maximum of 2 decimal places, i.e. 9999999.99	Conditionally required

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
MIC-19	Interference	The type of interference encountered by the laboratory during the analysis of the sample.	O	List	List of values: Confluent Growth Turbid Culture – no gas Too Numerous to Count Disable field if MIC-15=Absent t	
MIC-20	Volume Assayed	Volume of the sample analyzed by the laboratory	O	Number	The total number of digits allowed is 9, with a maximum of 7 numbers to the left of the decimal and a maximum of 2 decimal places, i.e. 9999999.99 Volume Assayed (MIC-20) must be less than or equal to to Sample Volume (MIC-10).	**Federally required**
MIC-21	Method	Analytical method used by laboratory	O	List	List of values: Analytical methods corresponding to Analyte selected in MIC-14	**Federally required**
MIC-22	Analysis Start Date	Date when analysis started	O	Date MM/DD/YYYY	MIC-22 and MIC-23 must be greater than or equal to MIC-6 (collection date) and MIC-7 (collection time)	**Federally required**

MIC-23	Analysis Start Time	Time when analysis started	O	Time HH:MM (24h)	MIC-22 and MIC-23 must be greater than (collection date) and MIC-7 (collection time)	**Federally required**
MIC-24	Analysis Completed Date	Date when analysis ended	O	Date MM/DD/YYYY	MIC-24 and MIC-25 must be greater than or equal to MIC-22 and MIC-23	-
MIC-25	Analysis Completed Time	Time when analysis ended	O	Time HH:MM (24h)	MIC-24 and MIC-25 must be greater than or equal to MIC-22 and MIC-23	-
MIC-26	Analyzing Lab	Laboratory that performed the analysis (if different than reporting laboratory)	O	List	List of values: List of all laboratories within the Primacy Agency	-
MIC-27	Person Performing Analysis	Lab personnel performing analysis	O	Text	Less than or equal to 100 characters	-
MIC-28	Source Type	This optional field is disabled unless the user selects *E.coli* for MIC-14	O	List	List of values: Flowing Stream Lake Reservoir GWUDI	**Federally conditionally required**
MIC-29	Comments	Text input field for additional comments	O	Text	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Field Results and Measurements	Additional parameter measure-ments made when the sample was collected, i.e., in the field.	O	All required fields must be populated for record to be saved	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
MIC-30	Parameter	The parameter that was analyzed in the field	R	List	List of values: 1013 – Free Chlorine Residual, 1996 – Temperature 1012 – Total Chlorine Residual, 0100 – Turbidity, 1925 – pH	-
MIC-31	Result	Measured value for the field measurement	R	Numeric 0 – 999999.9999999 (6,9)	Required to add a Field Result and Measurement Note: the application retains zeros at the end of the decimal if users entered them.	-

MIC-32	Result UOM	Unit of measure for the field measurement	R	List	List of values: Mg/l Fahrenheit Celsius MTU Ph Applicable UOM for parameter selected	-
MIC-33	Method	Analytical method used to measure the field measurement	O	List	List of values: Applicable methods for parameter selected	-
MIC-34	Person Performing Analysis	Lab personnel performing analysis	O	Text	Less than or equal to 100 characters	-
MIC-35	Comments	Text field for additional comments	O	Text	-	-

6.12.4 Add a Chemical/Radionuclide Sample to a Job

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under the **"Sample Result"** tab, Click "**Add**," then select **"Chem / Radionuclides"** from the dropdown list. (Figure 48)
4) Enter information for the chemicals/radionuclides sample in the Sample Information area of the web form. All fields marked with an asterisk (*) are required. (Figure 51)

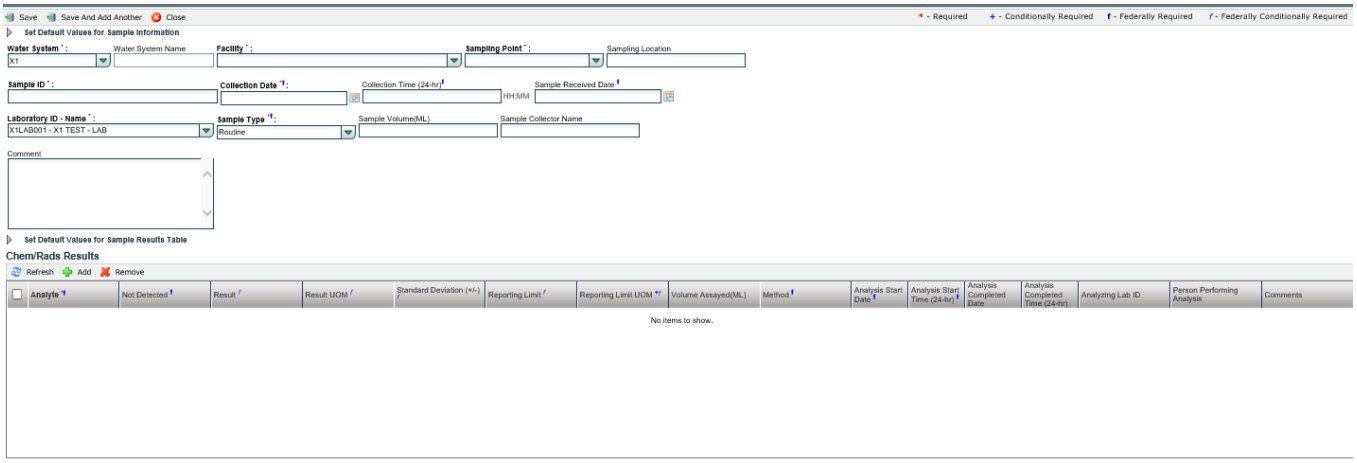


Figure 51 - Add a Chemical/Radionuclide Sample

If entering a confirmation sample, the original Sample ID is also required. Up to one hundred (100) samples collected in the water system will be displayed in the list. (Figure 52)

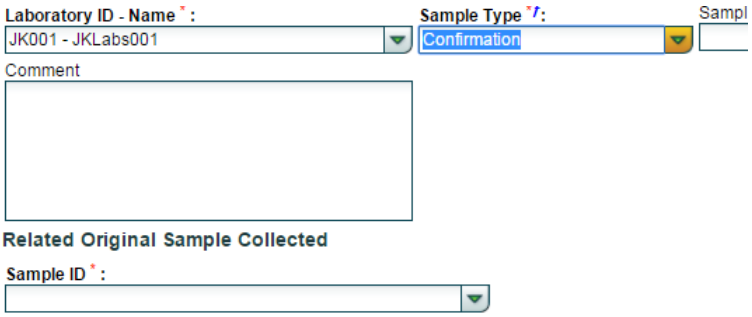


Figure 52 - Confirmation Sample

5) Under **"Chemicals/Radionuclides Results"** grid, click "**Add**" to add a chemical or radionuclide result (Figure 51). Note that, when "**Add**" is clicked, the application performs validations on the information entered for the sample and saves the information if no issues are found. You won't be able to add the first record to the grid if the information entered for the sample doesn't pass all the validations.
6) Under "**Field Results and Measurements**" grid, click "**Add**" to add a field result and measurement.
7) Click "**Save**" to add the sample result to the Drinking Water Sample Job.
8) Click "**Save and Add Another**" to continue adding Chemicals/Radionuclides sample results to the Drinking Water Sample Job. See 6.12.7 below for more on this feature.

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System users with Reviewer, Certifier, or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.
-

DATA ELEMENTS

Group	Description	R/O/ CR	Validations	Additional Designations
Chemicals/Radionuclides Sample Header	Sample information for Chemicals/Radionuclides analytes	R	All required fields need to be populated for record to be saved	-

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
CHR-1	Water System ID	Water system at which the sample was collected	R	List [ID – Name]	List of Values: Water Systems within the Primacy Agency Display WS ID and Name in dropdown list Primacy Agency Code added by default to the WS ID field	-
CHR-1.1	Water System Name	Name of the water system at which the sample was collected	N/A	Disabled Field	Disabled field Field auto-populated according to selection made in CHR-1	-
CHR-2	Facility	Water system facility at which the sample was collected	R	List [ID – Name]	List of values: Facilities within the water system selected	-
CHR-3	Sampling Point	Sampling point at which the sample was collected	R	List [ID]	List of values: Sampling Points within the facility selected	-
CHR-4	Sampling Location	Location of the sampling point (e.g., address)	O	Text	-	-
CHR-5	Sample ID	ID assigned to the sample	R	Alpha-numeric	-	-
CHR-8	Collection Date	Date on which sample was collected	R	Date MM/DD/ YYYY	CHR-8 cannot be a future date	**Federally required**
CHR-9	Collection Time	Time when sample was collected	O	Time HH/MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	**Federally required**
CHR-9.1	Sample Received Date	Date on which lab received the sample	R	Date MM/DD/ YYYY	Collection Date ≤ Sample Received Date ≤ Analysis Start Date	**Federally required**
CHR-10	Laboratory ID – Name	That laboratory that is reporting the sample and result(s)	R	List	List of values: Laboratories associated with user account For Laboratory Users, default to selected working organization	-

CHR-11	Sample Type	The type of sample collected (e.g., routine)	R	List	List of values: Routine Repeat Triggered Confirmation Special Batch Blanks Field Blanks Performance Evaluation Shipping Blanks Split Blanks Maximum Residence Time Matrix Spike	**Federally required**
CHR-13	Sample Volume (ML)	The volume of the sample collected in milliliters	O	List	The total number of digits allowed is 9, with a maximum of 7 numbers to the left of the decimal and a maximum of 2 decimal places, i.e. 9999999.99	**Federally required**
CHR-13.1	Repeat Location	Typically, not used for chemical or radionuclide samples. See above under 6.12.3.2	O	List	List of values: Original Site Downstream Upstream Source Alternative (RTCR) Other (TCR) Display field if MIC-11 (Sample Type) is "Repeat"	-
CHR-13.2	Original Sample ID	The sample for which the repeat/ triggered/ confirmation sample is being collected	R	List	List of values: Show the previous 100 samples collected for the water system. Display field if MIC-11 (Sample Type) is "Repeat" or "Confirmation" or "Triggered"	-

Group	Description	R/O/ CR	Validations	Additional Designations
Chemicals/Radionuclides Analyte Results	Results table within a sample	O	All required fields must be populated for record to be saved	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CHR-14	Analyte	Contaminant that was analyzed	R	List [Code-Name]	List of values: List of all Chemical analytes (add parameters)	**Federally required**
CHR-15	Not Detected	Indicator for detection/ Non-detection of the contaminant	R	Checkbox	Checked: Not Detected Unchecked: Detected If CHR-15 is unchecked, enable CHR-16 and CHR-17.	**Federally required**
CHR-16	Result	Measured value	CR	Numeric 0 - 999999.9 99999999	Disable CHR-16 if CHR-15 is Not Detected (Checked) Enable CHR-16 if	**Federally conditionally required if CHR-15 'Not**

				(6,9)	CHR-15 is Not Detected (Unchecked). If enabled, CHR-16 is required and must be greater than zero; it may not be zero or less than zero. Display result in bold red if analyte MCL is exceeded Retain zeros at the end of the decimal if users entered them	**Detected' is Unchecked**
CHR-17	UOM	Unit of measure	CR	List	List of values: mg/L, ug/L degree C LANG, mF/L ng/L NTU, pH units umho/cm pCi/L TON, Color Units, L/mg-M, Disable CHR-17 if CHR-15 is Not Detected (Checked), Enable CHR-17 if CHR-15 is Not Detected (Unchecked) If enabled, CHR-17 is required.	**Required if CHR-15 'Not Detected' is Unchecked**
CHR-18	Standard Deviation (+/-)	The counting error reported by the laboratory for an activity measurement	O	Numeric 0 to 9999999. 99 (7,2)		**Federally Conditionall y Required if CHR-15 is Detected (checked)**
CHR-19	Reporting Limit	The smallest Concentration of the Contaminant that can be reported by the **lab** for the Analytical method used	O	Numeric 0 - 999999.9 99999999 (6,9)		**Federally Required**
CHR-20	Reporting Limit UOM	Unit of measure for reporting limit	O	List	List of values: mg/L, ug/L, degree C, LANG, mF/L, ng/L, NTU, pH units, umho/cm, pCi/L, TON, Color Units	**Federally Required**
CHR- 21	Volume Assayed	Portion of the volume that was used in the analysis	O	Number	The total number of digits allowed is 9, with a maximum of 7 numbers to the left of the decimal and a maximum of 2 decimal places, i.e. 9999999.99 Volume Assayed (CHR-20) must be less	-

					than or equal to Sample Volume (CHR-13).	
CHR-22	Method	Analytical method used	O	List	List of values: List of methods applicable to analyte selected in CHR-14	**Federally Required**
CHR-23	Analysis Start Date	Date when Analysis started	O	Date MM/DD/ YYYY	CHR-23 and CHR-24 must be greater than or equal to CHR-8 (collection date) and CHR-9 (collection time)	**Federally Required**
CHR-24	Analysis Start Time	Time when analysis started	O	Time HH:MM (24h)	CHR-23 and CHR-24 must be greater than or equal to CHR-8 (collection date) and CHR -9 (collection time) When the Time is 00:00:00, the application does not populate the XML tags.	**Federally required**
CHR-25	Analysis Completed Date	Date when analysis ended	O	Date MM/DD/ YYYY	CHR-25 and CHR-26 must be greater than or equal to CHR-23 and CHR-24	-
CHR-26	Analysis Completed Time	Time when analysis ended	O	Time HH:MM (24h)	CHR-25 and CHR-26 must be greater than or equal to CHR-23 and CHR-24 When the Time is 00:00:00, the application does not populate the XML tags.	-
CHR-26.1	Analyzing Lab	Laboratory that performed the analysis (if different that reporting laboratory)	O	List	List of values: List of all laboratories within the Primacy Agency	-
CHR-26.2	Person Performing Analysis	Lab personnel performing analysis	O	Text	Less than or equal to 100 characters	-
CHR-28	Comments	Text field for additional comments	O	Text		-

Group	Description	R/O/ CR	Validations	Additional Designations
Field Results and Measurements	Additional parameters that could be recorded when sample is collected/analyzed	O	All required fields must be populated for record to be saved	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CHR-29	Parameter	Additional parameters analyzed in the sample	R	List	List of values: CHLORINE, Chloramine Color, Free Chlorine Residual Turbidity, Total Chlorine Residual Water Temperature, pH	-
CHR-30	Result	Measured value	R	Numeric 0 – 999999.99 9999999 (6,9)	Required to add a Field Result and Measurement Note: the application retains zeros at the end of the decimal if users entered them.	-
CHR-31	UOM	Unit of measure	R	List	List of values: Mg/l Fahrenheit Celsius MTU, pH, Applicable UOM for parameter selected Required to add a Field Result and Measurement	-
CHR-32	Method	Analytical method used	O	List	List of values: Applicable methods for parameter selected	-
CHR-33	Person Performin g Analysis	Lab personnel performing analysis	O	Text	Less than or equal to 100 characters	-
CHR-34	Comment s	Text field for additional comments	O	Text	-	-

6.12.5 Add a Positive Cryptosporidium Sample to a Job

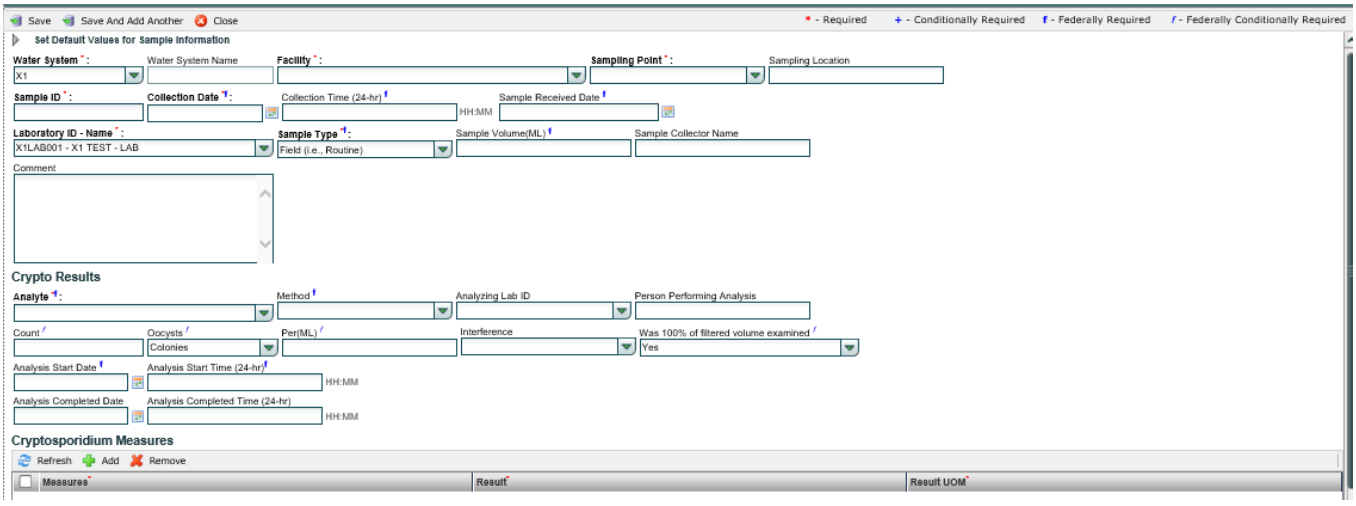


Figure 53 - Add a Positive Cryptosporidium Sample

1) Under "**Drinking Water Sample Jobs**" tab, click on "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under "**Sample Result**" tab, Click "**Add**" then select **Cryptosporidium** from the dropdown list. (Figure 48)
4) Enter metadata information for Cryptosporidium sample. All fields marked with an asterisk (*) are required. (Figure 53)
5) Under "**Crypto Results**," enter the required analyte information. (Figure 53)
6) Under "**Cryptosporidium Measures**," click "**Add**" to add other sample measures (Figure 53). Note that, when "**Add**" is clicked, the application performs validations on the information entered for the sample and cryptosporidium result above and saves the information if no issues are found. You won't be able to add the first record to the grid if the information entered for the sample doesn't pass all the validations.
7) Click "**Save**" to add the sample result to the Drinking Water Sample Job.
8) Click "**Save and Add Another**" to continue adding cryptosporidium sample results to the Drinking Water Sample Job.

Note: Use the Microbial sample to enter a cryptosporidium 'Absent' result.

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
Cryptosporidium Sample Header	Sample information for cryptosporidium analyte	R	All required fields must be populated for record to be saved	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CRY-1	Water System ID	Water system related to the sample	R	List [ID – Name]	List of Values: Water systems within the Primacy Agency, Display WS ID and Name in dropdown list, Primacy Agency Code, added by default to the WS ID field.	**Federally required**
CRY-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	N/A	Disabled Field	Disabled field Field auto-populated according to selection made in CRY-1.	**Federally required**
CRY-2	Facility	Water system facility related to the sample	R	List [ID – Name]	List of values: Facilities within the Water System selected	**Federally required**
CRY-3	Sampling Point	Sampling points related to the sample	R	List [ID]	List of values: Sampling Points within the facility selected	**Federally required**
CRY-4	Sampling Location	Location of the sampling point (e.g., address)	O	Text	-	-
CRY-5	Sample ID	ID assigned to the sample	R	Alpha-numeric	-	-
CRY-8	Collection Date	Date on which sample was collected	R	Date MM/DD/ YYYY	Date cannot be a future date	**Federally required**
CRY-9	Collection Time	Time when sample was collected	O	Time HH/MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	**Federally required**
CRY-9.1	Sample Received Date	Date on which lab received sample	R	Date MM/DD/ YYYY	Collection Date ≤ Sample Received Date ≤ Analysis Start Date	**Federally required**
CRY-10	Laboratory ID – Name	Reporting laboratory	R	List	List of values: Laboratories associated with user account For Laboratory Users, default to selected working organization	-

CRY-11	Sample Type	The type of sample collected (e.g., routine)	R	List	List of values: Routine, Repeat, Triggered, Confirmation, Special, Batch Blanks, Field Blanks, Performance Evaluation, Shipping Blanks, Split Blanks, Maximum Residence Time, Matrix Spike	**Federally required**
CRY-13	Sample Volume	Sample volume required for analysis	O	Number	The total number of digits allowed is 9, with a maximum of 7 numbers to the left of the decimal and a maximum of 2 decimal places, i.e. 9999999.99	**Federally required**

Group	Description	R/O/ CR	Validations	Additional Designations
Cryptosporidium Analyte Results	Results field for crypto analyte	O	All required field must be populated for record to be saved	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CRY-14	Analyte	Contaminant subject to analysis	R	List	List of values: Cryptosporidium	**Federally required**
CRY-15	Method	Analytical method used by laboratory	CR	List	List of values: Applicable methods for Cryptosporidium	**Federally conditionally required**
CRY-15.1	Analyzing Lab	Laboratory that performed the analysis (if different that reporting laboratory)	O	List	List of values: List of all laboratories within the Primacy Agency	-
CRY-15.2	Person Performing Analysis	Lab personnel performing analysis	O	Text	Less than or equal to 100 characters	-
CRY-16	Count	Number of oocysts counted	O	Numeric (15,5)	The total number of digits allowed is 15, with a maximum of 10 numbers to the left of the decimal and a maximum of 5 decimal places, i.e. 9999999999.99999 Retain zeros at the end of the decimal if users entered them	**Federally conditionally required**

CRY-18	Oocysts	Unit used to count oocysts	O	List	List of values: Colonies Colony Forming Units Cysts, Calculated Cysts, Observed Most Probable Number Observations Oocysts, Calculated Oocysts, Observed Plaque Forming Units Tubes	**Federally conditionally required**
CRY-19	Per	Volume	O	List	The total number of digits allowed is 9, with a maximum of 7 numbers to the left of the decimal and a maximum of 2 decimal places, i.e. 9999999.99	**Federally conditionally required**
CRY-20	Interference	Factors potentially interfering with analysis	O	List	List of values: Confluent Growth Turbid Culture – no gas Too Numerous to Count	-
CRY-23	Analysis Start Date	Date when analysis started	O	Date MM/DD/YYYY	CRY-23 and CRY-24 must be greater than or equal to CRY-8 (collection date) and CRY-9 (collection time) [CRY-23 and CRY-24] – [CRY-8 and CRY-9] must be less than 30 hours	**Federally required**
CRY-24	Analysis Start Time	Time when analysis started	O	Time HH:MM (24h)	CRY-23 and CRY-24 must be greater than or equal to CRY-8 (collection date) and CRY -9 (collection time) When the Time is 00:00:00, the application does not populate the XML tags.	**Federally required**
CRY-25	Analysis Completed Date	Date when analysis ended	O	Date MM/DD/YYYY	CRY-25 and CRY-26 must be greater than or equal to CRY-23 and CRY-24 [CRY-23 and CRY-24] – [CRY-8 and CRY-9] must be less than 30 hours	-
CRY-26	Analysis Completed Time	Time when analysis ended	O	Time HH:MM (24h)	CRY-25 and CRY-26 must be greater than or equal to CRY-23 and CRY-24 When the Time is 00:00:00, the application does not populate the XML tags.	-
CRY-27	Was 100% of filtered volume examined (Y/N)?	To indicate whether less than 100% of filtered volume was examined	O	List	List of values: Yes No	**Federally conditionally required**

Group	Description	R/O/CR	Validations	Additional Designations
Other Sample Measures			None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CRY-29	Measures	Additional measures to be reported (under certain conditions) for cryptosporidium samples	R	List	List of values: Percent filtered volume analyzed Number of oocysts Calculated number of oocysts per volume Volume assayed Volume of resuspended concentrate Volume of resuspended conc. processed	-
CRY-30	Result	Measured value	R	Numeric 0 – 999.99 (3,2)	None	-
CRY-31	UOM	Unit of measure	R	List	List of values depends on selection made in CRY-29	-

Group	Description	R/O/CR	Validations	Additional Designations
Field Results and Measurements	Additional parameters that could be recorded when sample is collected/analyzed	O	All required fields must be populated for record to be saved	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CRY-29	Parameter	Additional parameters analyzed in the sample	R	List	List of values: 1013 – Free Chlorine Residual 1996 – Temperature 1012 – Total Chlorine Residual 0100 – Turbidity 1925 – pH	-
CRY-30	Result	Measured value	R	Numeric 0 – 9999999 .99 (7,2)	Required to add a Field Result and Measurement Note: the application retains zeros at the end of the decimal if users entered them.	-
CRY-31	UOM	Unit of measure	R	List	List of values: Mg/l Fahrenheit Celsius, MTU, pH, Applicable UOM for parameter selected	-

CRY-32	Method	Analytical method used	O	List	List of values: Applicable methods for parameter selected	-
CRY-33	Person Performing Analysis	Lab personnel performing analysis	O	Text	Less than or equal to 100 characters	-
CRY-34	Comments	Text field for additional comments	O	Text	-	-

6.12.6 Add a Composite Sample to a Job

Users are able to add/edit a composite sample to a Job by using the web form in Figure 54.

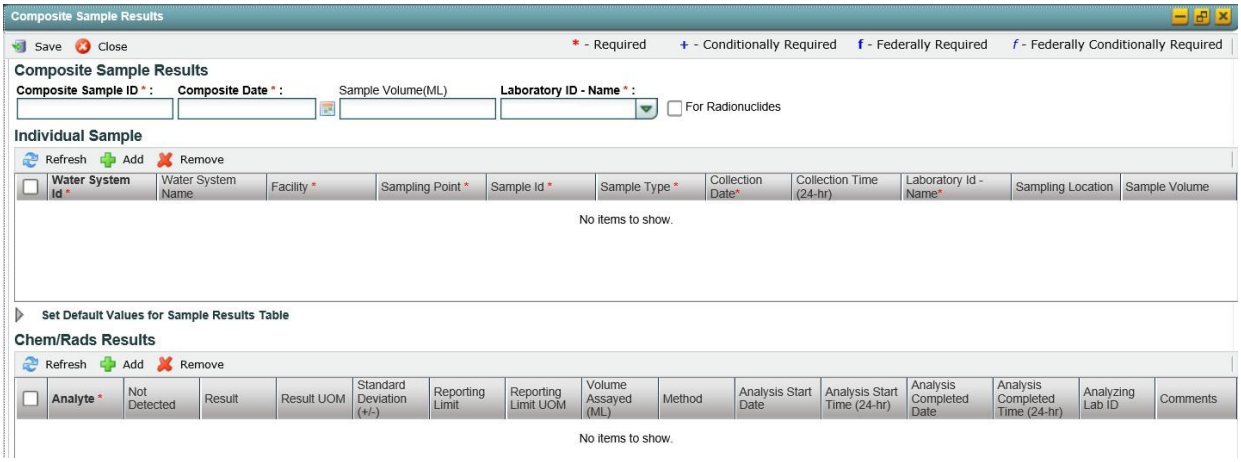


Figure 54 - Add a Composite Sample

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under the **"Composite Samples"** tab, Click "**Add.**"
4) Enter information for the composite sample in the **Composite Sample Results** area at the top of the web form. All fields marked with an asterisk (*) are required. (Figure 54)
5) In the **"Individual Sample"** grid, click "**Add**" to add each of the individual samples that were composited (Figure 54). Note that, when "**Add**" is clicked, the application performs validations on the information entered for the composite sample and saves the information if no issues are found. You won't be able to add the first record to the grid if the information entered for the sample doesn't pass all the validations.
6) In the **"Chem/Rads Results"** grid, click "**Add**" to add a chemical or radionuclide result. (Figure 54)
7) Click "**Save**" to add the composite sample to the Drinking Water Sample Job.

AUTHORIZATIONS

- If Job Status is “Draft with Preparer”: Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is “Draft with Reviewer”: Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is “Draft with Certifier”: Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is “Submitted” or “Accepted by State”: Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/ CR	Validations	Additional Designations
Composite Sample Information	Identifies the composite sample		None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CS-1	Composite Sample ID	ID assigned by user to composite sample	R	Alpha-numeric	-	-
CS-2	Composite Date	Date when sample is composited	R	Date MM/DD/ YYYY	-	-
CS-3	Sample Volume	Volume of composited sample	O	Numeric	-	-
CS-4	Laboratory ID	Reporting laboratory	R	List	List of values: Working laboratory for Laboratory Users List of all laboratories within the Primacy Agency for Water System Users	-
CS-5	For Radionuclides	Check if composite sample is for Radionuclides	O	Checkbox	-	-

Group	Description	R/O/ CR	Validations	Additional Designations
Individual Sample Information	Identifies the composite sample		If CS-5 is checked, CS-6, CS-7, CS-8, and CS-9 must be the same.	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CS-6	Water System ID	Water system related to the sample	R	List	List of all water systems within the Primacy Agency for Laboratory Users If CS-5 is checked, disable field for any additional rows added to the table	-
CS-7	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	-	-	Populated when CS-6 is selected If CS-5 is checked, disable field for any additional rows added to the table	-
CS-8	Facility	Water system facility related to the sample	R	-	If CS-5 is checked, disable field for any additional rows added to the table. List of all facilities within water system selected in CS- 6	-
CS-9	Sampling Point	Sampling point related to the sample	R	-	If CS-5 is checked, disable field for any additional rows added to the table List of all sampling points within facility selected in CS-8	-
CS-10	Sample ID	ID assigned to the sample that is part of the composite sample	R	Alpha-numeric	-	-
CS-11	Sample Type	Type of the individual sample collected (e.g., routine)	R	List	List of values: Routine, Repeat, Triggered, Confirmation, Special, Batch Blanks, Field Blanks, Performance Evaluation, Shipping Blanks, Split Blanks, Maximum Residence Time, Matrix Spike	-
CS-12	Collection Date	Date on which sample was collected	R	Date MM/DD/ YYYY	-	-
CS-13	Collection Time	Exact time when the sample was collected	O	Time HH:MM (24)	When the Time is 00:00:00, the application does not populate the XML tags.	-
CS-14	Laboratory ID - Name	Laboratory that conducted the analysis	R	List	-	-

CS-15	Sampling Location	Text to determine the physical location where sample was taken	O	Text	-	-
CS-16	Sample Volume	Volume of the sample collected	O	Numeric	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Results Information	Table to record results information		None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CS-17	Analyte	Contaminant subject to analysis	R	List [Code-Name]	List of values: List of all Chemical analytes (add parameters)	-
CS-18	Not Detected	Indicator for detection/non detection of contaminants	O	Checkbox	Checked: Not Detected Unchecked: Detected	-

CS- 19	Result	Measured value	CR	Numeric 0 to 999999.99999999 (6,9)	Disable CS-19 if CS-18 is Not Detected (Checked) Enable CS-19 if CS-18 is Not Detected (Unchecked). If enabled, CS-19 is required and must be greater than zero; it may not be zero or less than zero. A result is in bold red if it exceeded the MCL or MRDL or other established level for the analyte	**Required if CS-18 'Not Detected' is Unchecked**
CS-20	Result UOM	Unit of measure	CR	List	List of values: mg/L, ug/L degree C LANG, mF/L ng/L NTU, pH units umho/cm pCi/L TON, Color Units, Disabled if CS-18 is Not Detected (Checked) Enable if CS-18 is Not Detected (Unchecked). If enabled, Result UOM (CS-20) is required.	**Required if CS-18 'Not Detected' is Unchecked**
CS- 21	Standard Deviation (+/-)	Standard deviation associated with the analytical method	O	Numeric 0 to 9999999.99 (7,2)	-	-

CS-22	Reporting Limit	The smallest measured concentration of a sub-stance that can be reliably measured by using a given analytical method	O	Numeric 0 to 9999999. 99999999 (6,9)	-	-
CS-23	Reporting Limit UOM	Unit of measure	O	List	List of values: mg/L, ug/L degree C LANG, mF/L ng/L NTU, pH units umho/cm pCi/L TON, Color Units	-
CS-24	Volume Assayed (ML)	Portion of the volume that was subject to analysis	O	Numeric	-	-
CS-25	Method	Scientific method used for analysis	O	List	List of values: List of methods applicable to analyte selected in CS-17	-
CS-26	Analysis Start Date	Date when analysis started	O	Date MM/DD/ YYYY	-	-
CS-27	Analysis Start Time	Time when analysis started	O	Time HH:MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	-
CS-28	Analysis Complete d Date	Date when analysis was completed	O	Date MM/DD/ YYYY	-	-
CS-29	Analysis Complete d Time	Time when analysis was completed	O	Time HH:MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	-
CS-30	Analyzing Lab ID	Laboratory that conducted the analysis	O	List	-	-
CS-31	Comment s	Additional comments	O	Text	-	-

6.12.7 Use “Set Default Values for Sample Information” in Microbiological and Chemicals/Radionuclides Screens

Users can set default values when entering multiple samples in the web forms. Setting default values for sample information prevents repetitive data entry by auto-populating the sample information fields for any additional samples you are reporting, with the same values that you selected for your initial sample results. Note, however, that the following fields have a default applied whether selected in this area or not:

- Sample Type is defaulted to 'Routine' unless you select 'Sample Type' in this area and the

sample type of the current sample is other than 'Routine'

- For a laboratory user, Laboratory ID - Name is defaulted to your Working Organization.
- For a water system user, Water System ID and name are defaulted to your Working Organization.

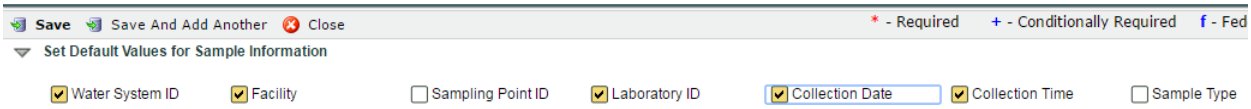


Figure 55 - Set Default Values for Sample Information

1) Check the boxes for which data element values need to be carried over to the next sample to be entered. (Figure 55)
2) Enter information for the current sample as needed.
3) Click "**Save and Add Another**."
4) A new form will be displayed for the user to enter a new sample record. The application will autopopulate the default values established by the user in Step 1.

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/ CR	Validations	Additional Designations
Set Default Values for Sample Information	These data elements allow users to set default values when entering multiple samples	O	-	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DV-1	Water System	Water system related to sample	O	Checkbox	-	-
DV-2	Facility	Facility related to sample	O	Checkbox	-	-

DV-3	Sampling Point ID	Sampling point related to sample	O	Checkbox	-	-
DV-4	Laboratory	Laboratory reporting the sample	O	Checkbox	-	-
DV-5	Collection Date	Date when sample was collected	O	Checkbox	-	-
DV-6	Collection Time	Time when sample was collected	O	Checkbox	When the Time is 00:00:00, the application does not populate the XML tags.	-
DV-7	Sample Type	Type of sample (e.g., Routine, Repeat)	O	Checkbox	-	-

6.12.8 Use "Set Default Values" for Sample Results Table (Microbiological)

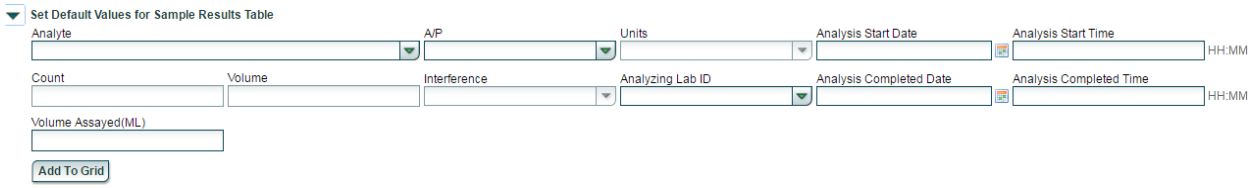


Figure 56 - Set Default Values for Sample Results Table (Microbiological)

Users can set default values for sample results when entering a Microbiological sample. The results table will be auto populated with the values set. This will help users enter multiple results at once to avoid repetitive data entry actions.

1) Populate the fields with values to be added as a group to the results table. (Figure 56)
2) Click "**Add To Grid**."
3) The results table will be populated with the values entered in the set default values for the Sample Results Table section (step 1).
4) Click "**Save and Add Another**."
5) A new form will be displayed. The values entered in the previous sample will be carried over to the new sample. After entering additional information needed for the new sample (e.g., Sample ID), the user can click the "Add to Grid" to enter the previously selected default result(s) for the new sample.

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with

Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.

- If Job Status is “Draft with Certifier”: Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is “Submitted” or “Accepted by State”: Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
Set Default (Results)	-	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
DV-8	Analyte	Contaminant subject to analysis	O	List [Code-Name]	List of values: List of all microbiological analytes	-
DV-9	A/P	Indicator for analyte presence or absence in the sample	O	List	List of values: Absent Present	-
DV-10	Count	Bacteria count in the sample	O	Numeric (15,5)	The total number of digits allowed is 15, with a maximum of 10 numbers to the left of the decimal and a maximum of 5 decimal places, i.e. 9999999999.99999	-
DV-11	Units	Unit used to measure count	O	List	List of values: Colonies, Colony Forming Units Cysts, Calculated Cysts, Observed, Most Probable Number Observations, Oocysts, Calculated Oocysts, Observed Plaque Forming Units, Tubes	-
DV-12	Volume	Volume of the sample collected at the sampling point	O	Numeric	-	-
DV-13	Interference	Factors potentially interfering with analysis	O	List	List of values: Confluent Growth, Turbid Culture – no gas Too Numerous to Count	-
DV-14	Analysis Start Date	Date when analysis started	O	Date MM/DD/ YYYY	-	-

DV-15	Analysis Start Time	Time when analysis started	O	Time HH:MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	-
DV-16	Analysis Completed Date	Date when analysis ended	O	Date MM/DD/ YYYY	-	-
DV-17	Analysis Completed Time	Time when analysis ended	O	Time HH:MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	-
DV-18	Volume Assayed	Volume that was used for analysis	O	Numeric	-	-

6.12.9 Use "Set Default Values" for Sample Results Table (Chemicals/Composites)

Users can set default values for sample results when entering a Chemicals/Radionuclides or a Composite sample. The results table will be auto-populated with the values entered into any of the fields shown in Figure 57. Setting default values will help users enter multiple results at once to avoid repetitive data entry actions.

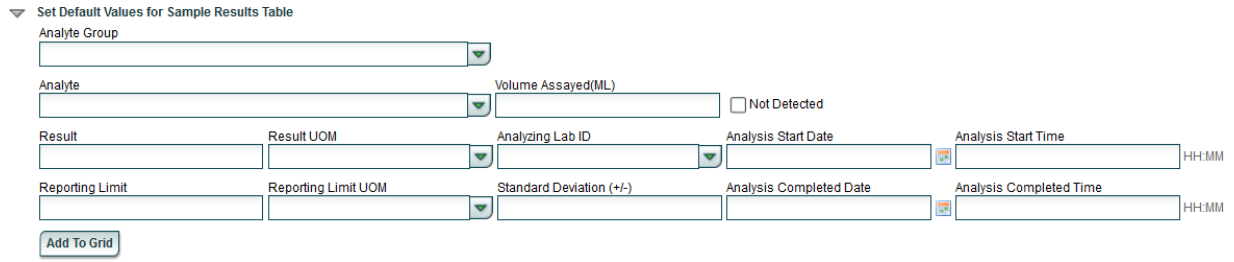


Figure 57 - Set Default Values for Sample Results (Composite)

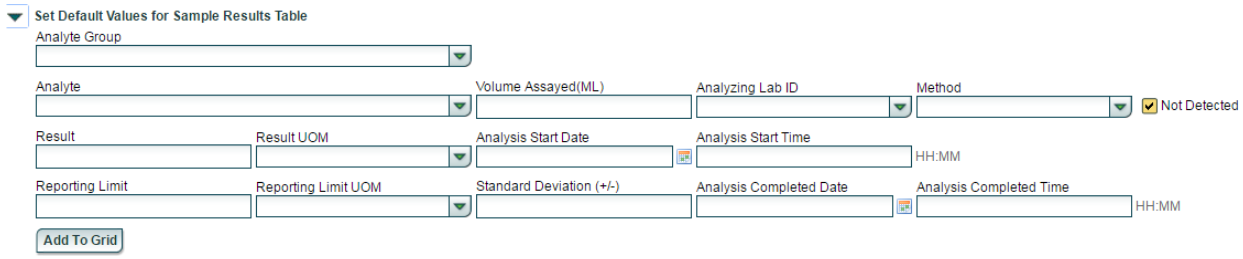


Figure 58 - Set Default Values for Sample Results (Chem/Radionuclides)

1) Populate the fields to be added as a group to the results table. (Figure 58)
2) Click "**Add To Grid**."
3) The results table will be populated with the values entered in the set default values for sample results table section.

4) Click "**Save and Add Another**."
5) A new form will be displayed. The values entered in the previous sample web form will be carried forward to the new sample. After entering additional information needed for the new sample (e.g., Sample ID), the user can click the "Add to Grid" to enter the previously selected default result(s) for the new sample.

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/ CR	Validations	Additional Designations
Set Default (Results)	Data elements that could be used multiple times in the results table	-	-	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DV-19	Analyte Groups	-	O	List	List of values: List will display Analyte Group Code and Analyte Group Name as follow: ASB-NPDWR –, Asbestos Rule DDBP-NPDWR –, Disinfectants and Disinfection Byproducts Rules, IOC-NPDWR –, Inorganic Contaminants Rule, LCR-NPDWR Lead and Copper Rule, NO3-NPDWR – Nitrate Rule, NO2-NPDWR – Nitrite Rule, RADR-NPDWR –, Revised Radionuclides Rule, SOC-NPDWR –, Synthetic Organic Contaminants Rule ,VOC-	-

					NPDWR – Volatile Organic Contaminants Rule	
DV-20	Analyte	Contaminant subject to analysis	O	List	List of values: List of all Chemicals/radionuclides analytes List of all analytes included in Analyte Group selected in DV-19 Refer to Analytes List	-
DV-21	Method	Analytical method used by the laboratory	O	List	List of all methods	-
DV-22	Not Detected	Indicator for detection/ non detection of contaminants	O	Checkbox	Checked: Not Detected Unchecked: Detected	-
DV-23	Volume Assayed	Volume of the sample analyzed by the lab	O	Number		-
DV-24	Result	Measured value	O	Numeric 0--9999.9999 (4,4)	-	-
DV-25	Result UOM	Unit of measure	O	List	List of values: mg/L, ug/L degree C LANG, mF/L ng/L NTU, pH units umho/cm pCi/L TON, Color Units	-
DV-26	Reporting Limit	The smallest con-centration (or amount) of analyte, that can be reported by the lab	O	Numeric 0-9999999.99 (7,2)	-	-
DV-27	Reporting Limit UOM	Unit of measure	O	List	List of values: mg/L, ug/L degree C LANG, mF/L ng/L NTU, pH units umho/cm pCi/L TON, Color Units	-
DV-28	Analysis Start Date	Date when analysis started	O	Date MM/DD/ YYYY	DV-28 must be less than or equal to DV30	-
DV-29	Analysis Start Time	Time when analysis started	O	Time HH:MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	-

DV-30	Analysis Completed Date	Date when analysis was completed	O	Date MM/DD/YYYY	DV-30 must be greater than or equal to DV-28	-
DV-31	Analysis Completed Time	Time when analysis was completed	O	Time HH:MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	-
DV-32	Analyzing laboratory	Laboratory that conducted the sample analysis	O	List	List of all laboratories within the Primacy Agency	-

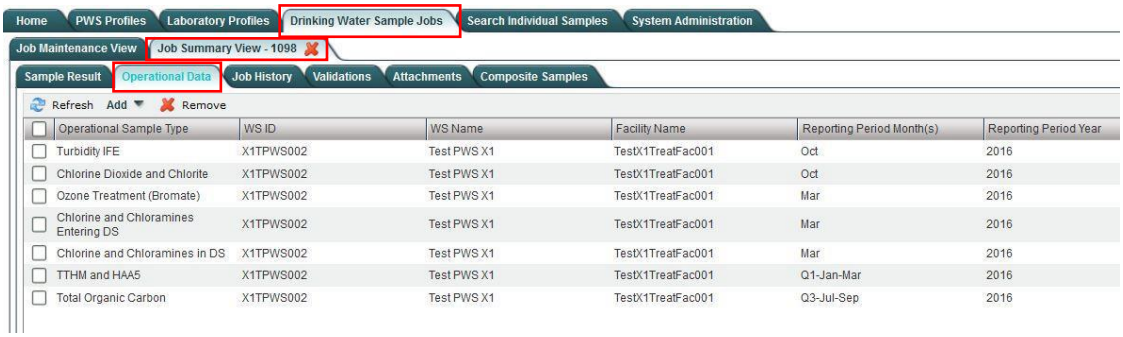


Figure 59 - Operational Sample Types Table

6.12.10 Access the Operational Sample Types Table

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Click on the "**Operational Data**" tab to view, add, or edit operational data results for an existing Sample Job. (**Error! Reference source not found.**)

6.12.11 Add Operational Sample Types to a Job

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.

3) Under the "**Operational Data**" tab, click "**Add**," and then select one of the options from the dropdown menu. (Figure 60)

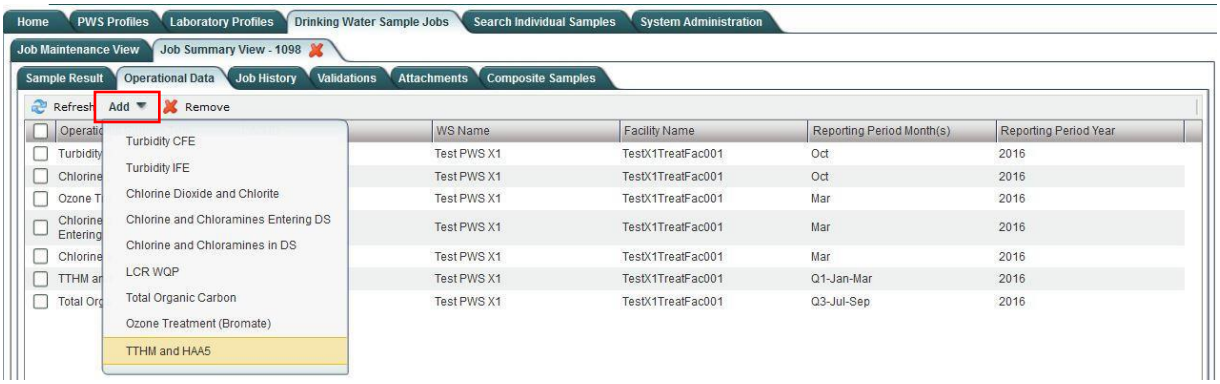


Figure 60 - Operational Sample Types List

4) Enter values in the operational data fields. All fields marked with an asterisk (*) are required. Note that the fields vary depending on which option was selected from the dropdown menu.
5) Click "**Save**" to add the operational data to the Drinking Water Sample Job.
6) Click "**Close**" to return to the Operational Data tab.

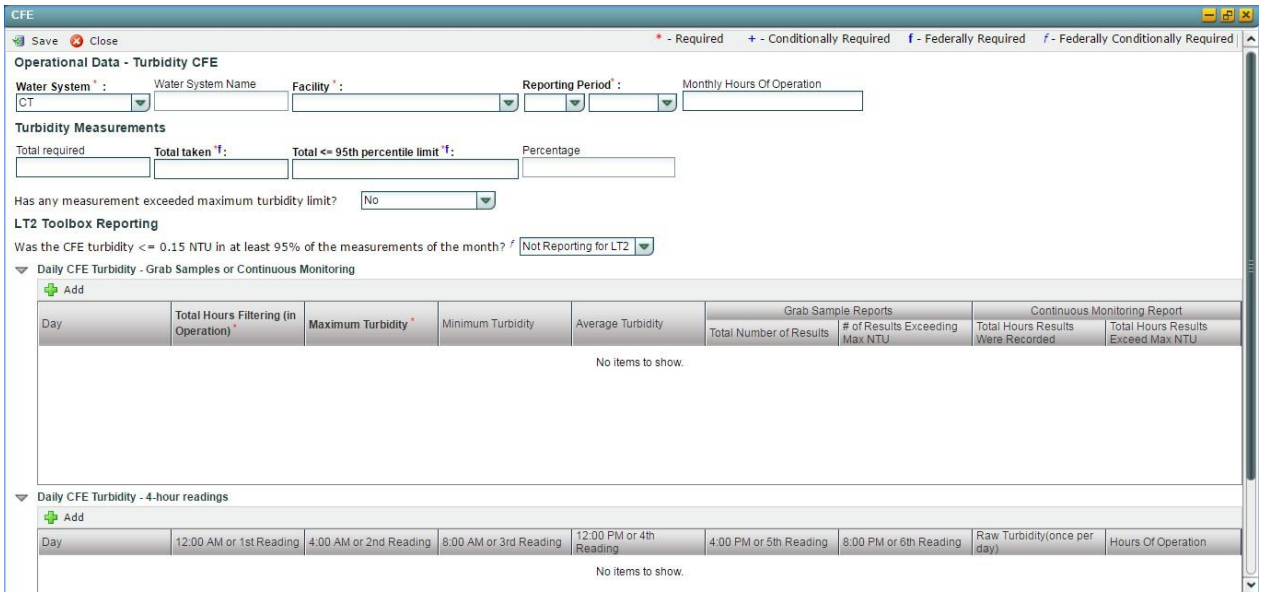


Figure 61 - Turbidity CFE

6.12.12 Add Combined Filter Effluent Turbidity Sample Type to a Job

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under **"Sample Result"** tab, Click "**Add**" then select **Turbidity CFE** from the dropdown list. (Figure 60)
4) Enter metadata information for Turbidity CFE. All fields marked with an asterisk (*) are required. (Figure 61)

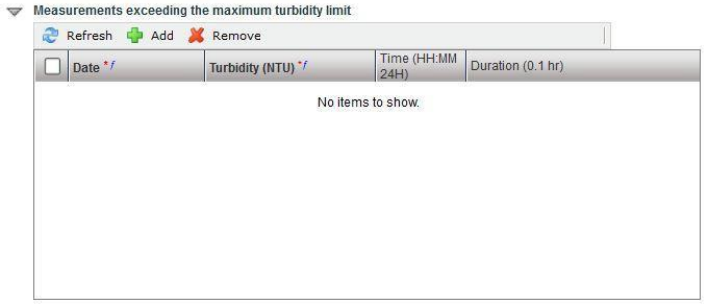


Figure 62 - Measurements Exceeding Turbidity Limit

5) If answer to "Has any measurement exceeded maximum turbidity limit?" is "**Yes**," the user can populate the Measurements Exceeding Turbidity Limit table, which will be displayed on the form. (Figure 62)
6) In the "**Grab Samples or Continuous Monitoring**" table, click "**Add**" to add daily measurements. All fields marked with an asterisk (*) are required. (Figure 61)
7) In the "**4-Hour Readings"** table, click "Add" to add measurements collected/recorded every 4 hours if needed.
8) Click "**Save**" to add the sample type to the Drinking Water Sample Job.

Note:

- *When a CFE record is saved, users will not be able to modify the reporting period.*

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.

If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/ O/ CR	Validations	Additional Designations
Turbidity CFE Sample Header	Elements to identify the Turbidity CFE record	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CFE-1	Water System ID	Water system related to the sample	R	List [ID–Name]	List of Values: water systems within the Primacy Agency, Display ID and Name in List Primacy Agency Code added by default to the WS ID field.	-
CFE-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	N/A	Disabled Field	Disabled field Field auto-populated according to selection made in CFE-1	-
CFE-2	Facility	Water system facility related to the sample	R	List	List of values: List of all facilities within the water system selected in CFE-1	-
CFE-4	Reporting Period – Month	Month of the calendar year	R	List	List of values: January to December CFE-4 and CFE-5 cannot be in the future Disabled when record is saved	-
CFE-5	Reporting Period Year	Year	R	-	List values: 2013 to current year CFE-4 and CFE-5 cannot be in the future Disabled when record is saved	-
CFE-8	Monthly Hours of Operations	Total number of hours the facility is operating during the month	O	Numeric 0 to 99999 (5,0)	None	-

Group	Description	R/O/CR	Validations	Additional Designations
Turbidity Measurements			None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CFE-9	Total Required	Total Number of CFE Turbidity measurements required	O	Numeric 0 to 99999 (5,0)	None	-
CFE-10	Total Taken	Total number of	R	Numeric	None	**Federally**

		CFE Turbidity measurements taken during the month		0 to 99999 (5,0)		**conditionally required**
CFE-11	Total <= 95th percentile limit	Total number of CFE Turbidity measurements taken during the month <= IESWTR_LT 95% levels (0.3 NTU or by filtration type)	R	Numeric 0 to 99999 (5,0)	CFE-11 must be less than or equal to CFE-10	**Federally conditionally required**
CFE-12	Percentage	Percent of CFE Turbidity measurements taken during the month <= IESWTR_LT 95% level (0.3 NTU or by filtration type)	-	Numeric 0.00 to 999.99 (5,2)	Calculated [CFE-11/CFE-10]x100	**Federally conditionally required**
CFE-6	Has any measurement exceeded maximum turbidity limit?	If yes, further elements need to be reported; please refer to CFE-13 through 16	O	List	List of values: Yes No	-
CFE-7	Was the CFE Turbidity <=0.15 NTU in at least 95% of the measurement for the month?	An LT2 toolbox credit-related question for PWS to answer for state primacy agency review and approval	O	List	List of values: Yes No - Not reporting for LT2 -If using the LT2 toolbox option, this field needs a value, but it is optional otherwise; it is federally conditionally required in that situation	**Federally conditionally required**

Group	Description	R/O/ CR	Validations	Additional Designations
Measurements exceeding the maximum turbidity limit	-	-	If the answer to CFE-6 is "YES," utilities must report the date and value of <at least one> turbidity measurements taken during the month that exceed 1 NTU or the maximum level set by the State	**Federally conditionally required**

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CFE- 13	Date	Date the turbidity measurement that exceeded maximum limit	R	Date MM/DD/YYYY	CFE-13 must be within CFE-4 and CFE-5 (reporting period)	**Federally conditionally required**

CFE- 14	Turbidity (NTU)	Measured turbidity of the exceedance in Nephelometric Turbidity Units (NTU)	R	Numeric 0 to 99.999 (5,3)	None	**Federally conditionally required**
CFE- 15	Time (HH:MM 24H)	Time the turbidity exceedance measurement was taken	O	Time HH:MM (24h)	None	-
CFE- 16	Duration (0.1 hr)	Duration of the exceedance	O	Numeric - 0 to 999.99 (5,2)	None	-

Group	Description	R/O/CR	Validations	Additional Designations
Daily CFE Turbidity – Grab Samples or Continuous Monitoring	Used for reporting daily results of continuous monitoring or grab samples	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CFE-17	Total Hours Filtering (in Operation)	Total number of hours (up to 24) that the water system was operating	O	Numeric 0 to 999.99 (5,2)	None	-
CFE-18	Maximum Turbidity	Highest daily turbidity reading	O	Numeric 0 to 99.999 (5,3)	None	-
CFE-19	Minimum Turbidity	Lowest daily turbidity reading	O	Numeric 0 to 99.999 (5,3)	None	-
CFE-20	Average Turbidity	Average of daily turbidity readings	O	Numeric 0 to 99.999 (5,3)	None	-
CFE-21	Grab Sample Reports – Total Number of Results	Total readings in grab sample	O	Numeric 0 to 99999 (5,0)	None	-
CFE-22	Grab Sample Reports - # of Results Exceeding Max NTU	Number of grab sample results exceeding maximum NTU established by state	O	Numeric 0 to 99999 (5,0)	None	-
CFE-23	Continuous Monitoring Report – Total Hours Results Were Recorded	Total number of hours per day (up to 24) that the water system was continuously recording turbidity levels	O	Numeric 0 to 999.99 (5,2)	None	-
CFE-24	Continuous Monitoring Report – Total Hours Results Over Max NTU	Total number of hours during continuous monitoring in which the maximum NTU was exceeded	O	Numeric 0 to 999.99 (5,2)	None	-

Group	Description	R/O/CR	Validations	Additional Designations
Daily CFE – 4 HR Readings	Used for reporting daily results of up to 6 four- hour turbidity measurements	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
	12:00 AM or 1st Reading	First of 6 daily 4-hour readings	O	Numeric 99.999 (5,3)	None	-
	4:00 AM or 2nd Reading	Second of 6 daily 4-hour readings	O	Numeric 99.999 (5,3)	None	-
	8:00 AM or 3rd Reading	Third of 6 daily 4-hour reading	O	Numeric 99.999 (5,3)	None	-
	12:00 PM or 4th Reading	Fourth of 6 daily 4-hour readings	O	Numeric 99.999 (5,3)	None	-
	4:00 PM or 5th Reading	Fifth of 6 daily 4-hour readings	O	Numeric	None	-
	8:00 PM or 6th Reading	Sixth of 6 daily 4-hour readings	O	Numeric 99.999 (5,3)	None	-
	Raw Turbidity (once per day)	Daily Measured Turbidity value, before treatment	O	Numeric 99.999 (5,3)	None	-
	Hours of Operation	Total number of hours each day that the water system was in operation	O	Numeric 999.99 (5,2)	None	-

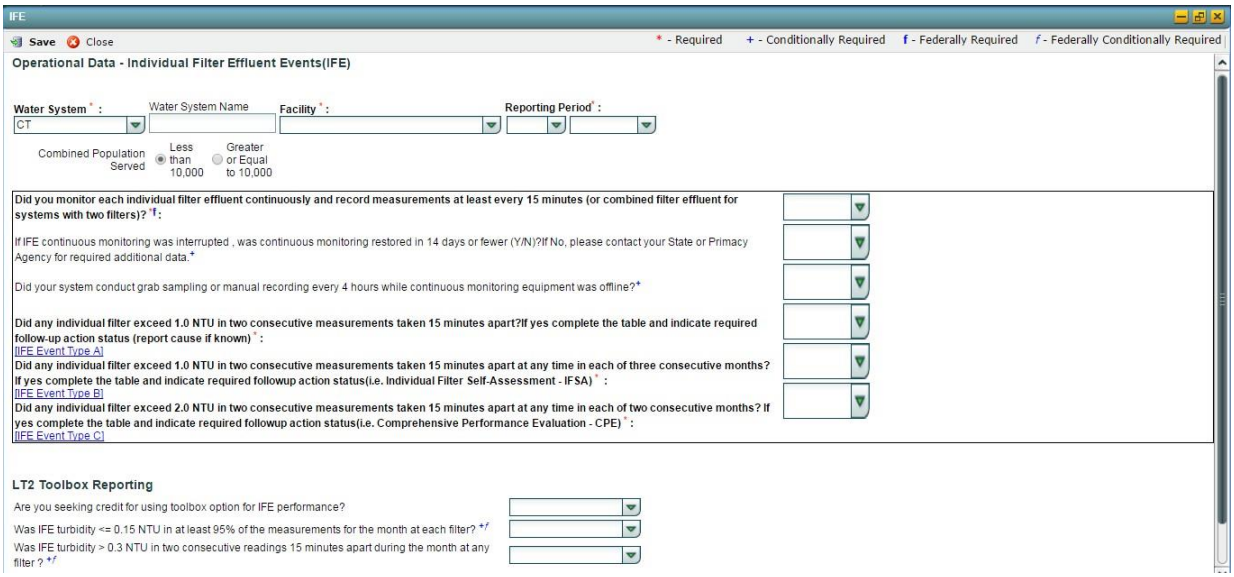


Figure 63 - Turbidity IFE

6.12.13 Add Turbidity Individual Filter Effluent Events Sample Type

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under the "**Operational Data**" tab, click "**Add**," then select "**Turbidity IFE**" from the dropdown list. (Figure 60)
4) Enter metadata information for Turbidity IFE. All fields marked with an asterisk (*) are required. (Figure 63)

Figure 64 - Individual Filters Exceeding Trigger

5) If the answer to any of the Event Type Questions (Event A, Event B, Event C) is "**Yes**," users can populate the Individual Filters exceeding Trigger table. (Figure 64)

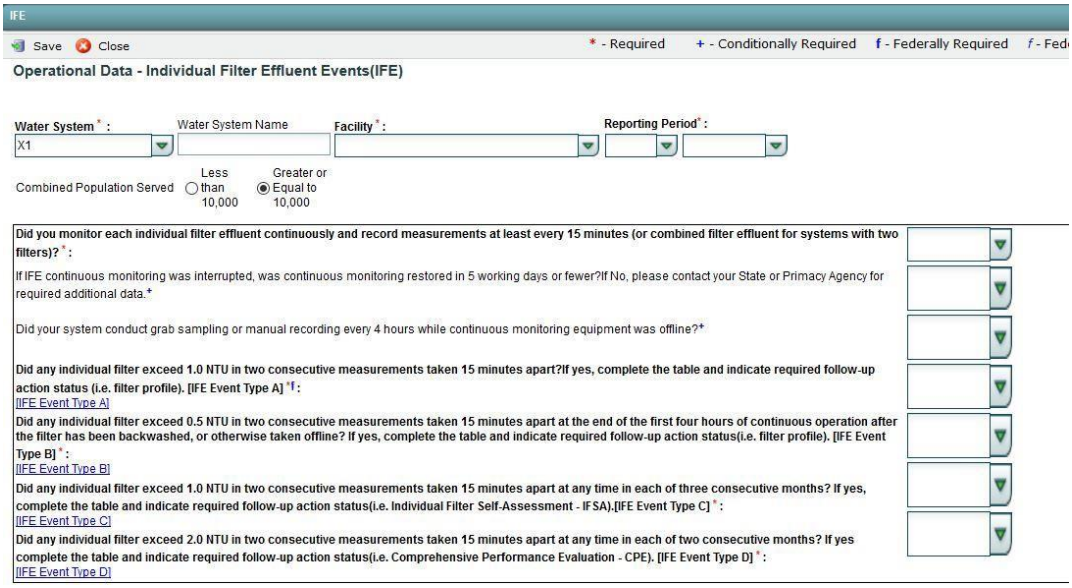


Figure 65 - Turbidity IFE (Population 10,000 or greater)

6) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 61)

Notes:

- *If the water system is serving 10,000 people or more, the IFE web form will be updated accordingly by adding an additional IFE Event D* (Figure 65)*, and users can follow the same steps described above to add the sample type to the Job.*
- *A brief description of the event type (e.g., event type A) is available if users click the hyperlink included in the event-related question.* (Figure 66).
- *When an IFE record is saved, users will not be able to modify the reporting period.*

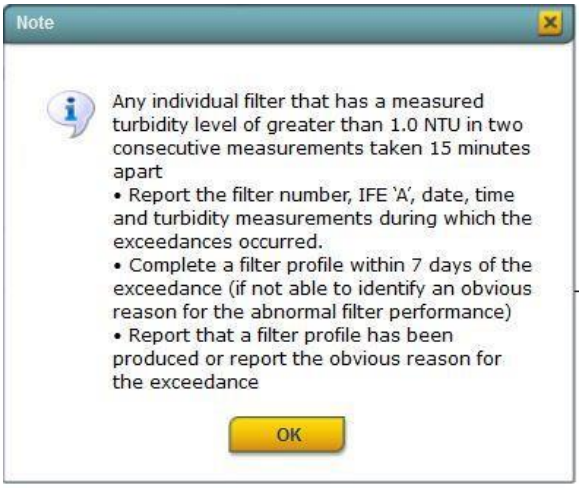


Figure 66 - Event Type A Description

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
Turbidity IFE Sample Header	-	-	None	-

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
IF0-1	Water System ID	Water system related to the sample	R	List [ID – Name]	List of Values: Water systems within the Primacy Agency Display ID and Name in List Primacy Agency Code added by default to the WS ID field	-

IF0-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	-	Disabled Field	Disabled field Field auto-populated according to selection made in IF0-1	-
IF0-2	Facility	Water system facility related to the sample	R	List	List of values: List of all facilities within the water system selected in CFE-1	-
IF0-4	Reporting Period – Month	Month of the calendar year	R	List	List of values: January to December Reporting period cannot be in the future Disabled when record is saved	-
IF0-5	Reporting Period Year	Year	R	List	List values: 2013 to current year Reporting period cannot be in the future Disabled when record is saved	-
IF0-6	Combined Population Served	Population served by the water system	R	Radio button	Two options: Less than 10,000 Greater than or equal to 10,000	-

Group	Description	R/O /CR	Validations	Additional Designations
Turbidity IFE – Questions (<10,000)	Questions about Turbidity IFE applicable to water systems serving a population less than 10,000		Display questions if IF0-6 is less than 10,000	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
IF0-9	Q1	See below	R	List	List of values Yes No	**Federally required**
IF0-10	Q2	See below	CR	List	List of values Yes No N/A Disable IF0-10 if IF0-9 is Yes Required if IF0-9 is No	**Federally conditionally required**
IF0-11	Q3	See below	CR	List	List of values Yes No Disable IF0-11 if IF0-9 is Yes Required if IF0-9 is No	**Federally conditionally required**
IF0-12	Q4	See below	R	List	List of values Yes No If IF0-12 is yes, IF0-9 must be yes	**Federally required**
IF0-13	Q5	See below	R	List	List of values Yes No If IF0-13 is yes, IF0-9 must be yes	**Federally required**
IF0-14	Q6	See below	R	List	List of values Yes No If IF0-14 is yes, IF0-9 must be yes	**Federally required**

- Q1: Did you monitor each individual filter effluent continuously and record measurements at least every 15 minutes (or combined filter effluent for systems with two filters)?
- Q2: If IFE continuous monitoring was interrupted was continuous monitoring restored in 14 days or fewer (Y/N)? If No, please contact your State or Primacy Agency for required additional data.
- Q3: Did your system conduct grab sampling or manual recording every 4 hours while continuous monitoring equipment was offline?
- Q4: Did any individual filter exceed 1.0 NTU in two consecutive measurements taken 15 minutes apart? If yes complete the table and indicate required follow-up action status (report cause if known). [IFE Event Type 'A']
- Q5: Did any individual filter exceed 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of three consecutive months? If yes complete the table and indicate required follow-up action status (i.e. Individual Filter Self-Assessment - IFSA). [IFE Event Type 'B']
- Q6: Did any individual filter exceed 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of two consecutive months? If yes complete the table and indicate required follow-up action status (i.e. Comprehensive Performance Evaluation - CPE). [IFE Event Type 'C']

Group	Description	R/O/ CR	Validations	Additional Designations
Turbidity IFE Questions - >10,000	Questions about Turbidity IFE applicable to water systems serving a population greater than or equal to 10,000	-	Display questions if IF0-6 is greater than or equal to 10,000	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
IF1-9	Q1	See below	R	List	List of values: Yes No	**Federally required**
IF1-10	Q2	See below	CR	List	List of values: Yes No Disable IF1-10 if IF1-9 is Yes Required if IF1-9 is No	**Federally conditionally required**
IF1-11	Q3	See below	CR	List	List of values: Yes No Disable IF1-10 if IF1-9 is Yes Required if IF1-9 is No	**Federally conditionally required**
IF1-12	Q4	See below	R	List	List of values: Yes No If IF1-12 is Yes, IF1-9 must be Yes	**Federally required**
IF1-13	Q5	See below	R	List	List of values: Yes No If IF1-13 is Yes, IF1-9 must be Yes	**Federally required**
IF1-14	Q6	See below	R	List	List of values: Yes No If IF1-14 is Yes, IF1-9 must be Yes	**Federally required**
IF1-15	Q7	See below	R	List	List of values: Yes No If IF1-15 is Yes, IF1-9 must be Yes	**Federally required**

- Q1: Did you monitor each individual filter effluent continuously and record measurements at least every 15 minutes (or combined filter effluent for systems with two filters)?
- Q2: If IFE continuous monitoring was interrupted, was continuous monitoring restored in 5 working days or fewer? If No, please contact your State or Primacy Agency for required additional data.
- Q3: Did your system conduct grab sampling or manual recording every 4 hours while continuous monitoring equipment was offline?
- Q4: Did any individual filter exceed 1.0 NTU in two consecutive measurements taken 15 minutes apart? If yes, complete the table and indicate required follow-up action status (i.e. filter profile). [IFE Event Type 'A']
- Q5: Did any individual filter exceed 0.5 NTU in two consecutive measurements taken 15 minutes apart at the end of the first four hours of continuous operation after the filter has been backwashed, or otherwise taken offline? If yes, complete the table and indicate required follow-up action status (i.e. filter profile). [IFE Event Type 'B']
- Q6: Did any individual filter exceed 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of three consecutive months? If yes, complete the table and indicate required follow-up action status (i.e. Individual Filter Self-Assessment - IFSA). [IFE Event Type 'C']
- Q7: Did any individual filter exceed 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of two consecutive months? If yes complete the table and indicate required follow-up action status (i.e. Comprehensive Performance Evaluation - CPE). [IFE Event Type 'D']

Group	Description	R/O/CR	Validations	Additional Designations
Additional Questions	-	-	All required fields must be populated for record to be saved	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
IF0-15	Are you seeking credit for using toolbox option for IFE performance?	An LT2 toolbox credit-related question for PWS to answer for state primacy agency review and approval	O	List	List of values: Yes No	-
IF0-16	Was IFE turbidity <=0.15 NTU in at least 95% of the measurements for the month in each filter?	An LT2 toolbox credit-related question for PWS to answer for state primacy agency review and approval	CR	List	List of values: Yes No Required if IF0-15 is Yes (Federally required if IF0-15 is Yes)	**Federally conditionally required**

IF0-17	Was IFE turbidity >0.3 NTU in two consecutive readings 15 minutes apart during the month at any filter?	An LT2 toolbox credit-related question for PWS to answer for state primacy agency review and approval	CR	List	List of values: Yes No Required if IF0-15 is Yes (Federally required if IF0-15 is Yes)	**Federally conditionally required**

Group	Description	R/O/ CR	Validations	Additional Designations
Individual Filter Effluent (IFE) Event Type (IFE A, B, C, or D)	-	-	All required fields must be populated for record to be saved	-

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
IF0- 18	Filter Number	Number of the individual filter where the IFE event occurred	R	Alpha-numeric	Federally required if: IF0-12 is Yes IF0-13 is Yes IF0-14 is Yes IF1-12 is Yes IF1-13 is Yes IF1-14 is Yes IF1-15 is Yes	**Federally conditionally required**
IF0- 19	Individual Event	IFE event type A-D	R	List	List of values: A B C D (If IF0-6 is greater than or equal to 10,000)	-
IF0- 20	Date	Date of the event type A-D	R	Date MM/DD/ YYYY	IF0-19 must be within the reporting period Federally required if: IF0-12 is Yes or IF0-13 is Yes or IF0-14 is Yes or IF1-12 is Yes or IF1-13 is Yes or IF1-14 is Yes or IF1-15 is Yes	**Federally conditionally required**
IF0- 21	Time (HH:MM 24H)	Time of the event type A-D	O	HH:MM (24h)	-	-
IF0- 22	Turbidity	Value of turbidity measure-ment, in NTU, associated with the event type A- D	R	Numeric 0 to 99.999 (5,3)	Federally conditionally required if: IF0-12 is Yes or IF0-13 is Yes or IF0-14 is Yes or IF1-12 is Yes or IF1-13 is Yes or IF1-14 is Yes or IF1-15 is Yes	**Federally conditionally required**

6.12.14 Add Chlorine Dioxide and Chlorite Sample Type

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.

3) Under the "**Operational Data**" tab, click "**Add**," and then select "**Chlorine Dioxide and Chlorite**" from the dropdown list. (Figure 60)
4) Enter metadata information for Chlorine Dioxide and Chlorite. All fields marked with an asterisk (*) are required. (Figure 67)

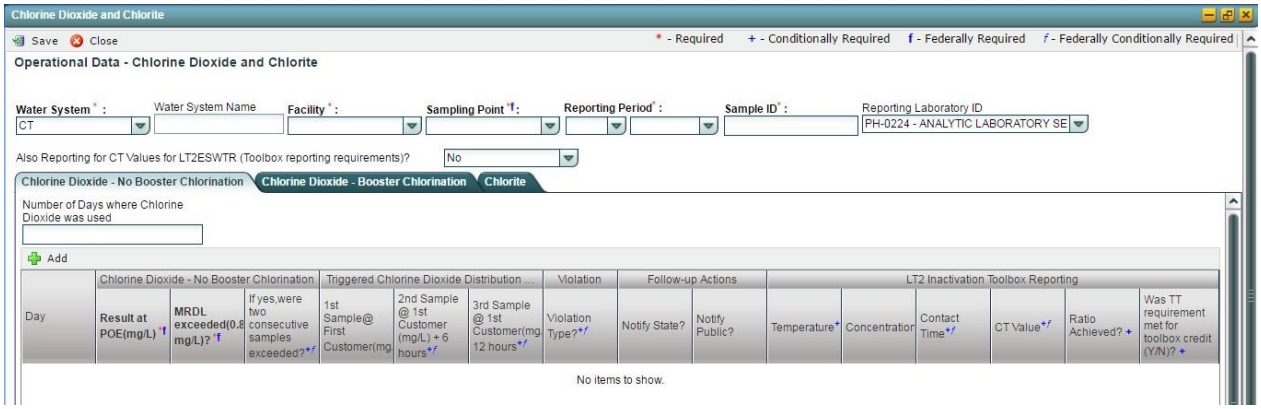


Figure 67 - Chlorine Dioxide and Chlorite

5) If no booster chlorination is used, use the first tab "**Chlorine Dioxide – No Booster Chlorination**." If booster chlorination is used, use the second tab "**Chlorine Dioxide – Booster Chlorination**."
6) The "**Chlorite**" tab can be used to report daily measures for Chlorite. (Figure 68)

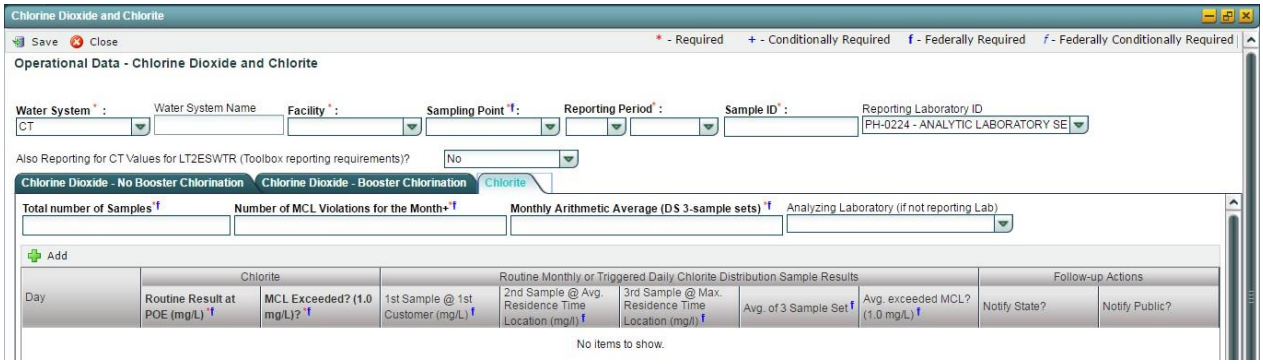


Figure 68 - Chlorite Data Entry Screen

7) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 61)

Notes:

- *When a Chlorine Dioxide/Chlorite web form is saved, users will not be able to modify the reporting period.*
- *Chlorine Dioxide/Chlorite web forms utilize monthly reporting periods. Submitters should report one monthly web form for each quarterly reporting period to meet the federal chlorite reporting requirements per 40 CFR §141.134.*
-

- If Job Status is “Draft with Preparer”: Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is “Draft with Reviewer”: Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is “Draft with Certifier”: Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is “Submitted” or “Accepted by State”: Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
Chlorine Dioxide and Chlorite Sample Header	-	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CLC-1	Water System ID	Water system related to the sample	R	List [ID –Name]	List of Values: water systems within the Primacy Agency Display ID and Name in List, Primacy Agency Code added by default to the WS ID field.	-
CLC-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	-	Disabled Field	Disabled field Field auto-populated according to selection made in CLC-1	-
CLC-2	Facility	Water system facility related to the sample	R	List	List of values: List of all facilities within the water system selected in CLC-1	-
CLC-3	Sampling Point	Sampling Point related to the record	R	List	List of values: List of all sampling points within the facility selected in CLC-2	**Federally required**

CLC-4.0	Sample ID	ID number for the Chlorine Dioxide or Chlorite sample	R	Alpha-numeric		Please enter any value; data element will not be used for compliance determination
CLC-5	Reporting Period – Month	Month of the calendar year	R	List	List of values: January to December Reporting period cannot be in the future Disabled when record is saved	-
CLC-6	Reporting Period Year	Year	R	List	List values: 2013 to current year Reporting period cannot be in the future Disabled when record is saved	-
CLC-7	Reporting for CT Values for LT2ESWTR Toolbox Reporting requirements	An LT2 toolbox credit related for PWS to answer for state primacy agency review and add approval	O	List	List of values: Yes No	-
CLC-7.1	Reporting Laboratory	Name of analytical laboratory performed analysis of any sample results for Chlorine Dioxide & is reporting the results to the state primacy agency	R	List	List of values: List of laboratories associated with the user account	

Group	Description	R/O/CR	Validations	Additional Designations
Chlorine Dioxide – No Booster Chlorination	-	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CLC-8	Number of Days where Chlorine Dioxide was used	Number of days during the month on which Chlorine Dioxide was used to disinfect water	O	Numeric 0 to 99999 (5,0)	None	-

CLC-9	Result at POE (mg/L)	Value of sample at the Point of Entry (POE) to the distribution system	R	Numeric 0 to 99.999 (5,3)	Display result in bold red if MCL (0.8mg/L) is exceeded.	**Federally required**
CLC-10	MRDL exceeded (0.8 mg/L)	Whether the value of the sample exceed the MRDL	R	List	List of values: Yes No Default value to Yes and disabled if CLC-9 > MCL.	**Federally required**
CLC-11	If yes, were two consecutive samples exceeded?	Whether two consecutive samples taken at the POE exceeded the MRDL	CR	List	List of values: Yes No Required if CLC-10 is Yes (Federally required if CLC-10 is Yes)	**Federally conditionally required**
CLC-12	1st Sample @First Customer (mg/L)	First triggered Chlorine Dioxide distribution sample	CR	Numeric 0 to 99.999 (5,3)	Required if CLC-10 is Yes (Federally required if CLC-10 is Yes)	**Federally conditionally required**
CLC-13	2nd Sample @1st Customer (mg/L) + 6 hours	Second triggered Chlorine Dioxide distribution sample	CR	Numeric 0 to 99.999 (5,3)	Required if CLC-10 is Yes (Federally required if CLC-10 is Yes)	**Federally conditionally required**
CLC-14	3rd Sample @1st Customer (mg/L) + 12 hours	Third triggered Chlorine Dioxide distribution sample	CR	Numeric 0 to 99.999 (5,3)	Required if CLC-10 is Yes (Federally required if CLC-10 is Yes)	**Federally conditionally required**
CLC-15	Violation Types- Acute Violation?	Whether the MRDL violation was Acute	CR	List	List of values: Yes No Required if CLC-10 is Yes (Federally required if CLC-10 is Yes)	**Federally conditionally required**
CLC-16	Violation Types- NonAcute Violation	Whether the MRDL violation was NonAcute	CR	List	List of values: Yes No Required if CLC-10 is Yes (Federally required if CLC-10 is Yes)	**Federally conditionally required**
CLC-17	Notify State?	Whether the PWS notified the state about the MRDL violation.	O	List	List of values: Yes No	-
CLC-18	Notify Public?	Whether the PWS notified the public about the MRDL violation	O	List	List of values: Yes No	-
CLC-19	Temperature	Water	CR	Numeric	Required if	**Federally**

		temperature for CT calculation			CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**conditionally required**
CLC-20	Concentration	Concentration of chlorine dioxide for CT calculation expressed in mg/L.	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**Federally conditionally required**
CLC-21	Contact Time	Time (T, in minutes) concentration is measured for CT calculation	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**Federally conditionally required**
CLC-22	CT Value	Value from table 2.1 in 40 CFR 141 Subpart H. Cryptosporidium inactivation by Chlorine Dioxide and Ozone	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**Federally conditionally required**
CLC-23	Ratio Achieved	Ratio: of (Product of CLC-21 and CLC 20) to CLC-22, or calculated CT divided by the CT table value from CLC-22	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	-
CLC-24	Was TT requirement met for toolbox credit (Y/N)?	An LT2 toolbox credit-related question for PWS to answer; for state primacy agency review and approval based on reported chlorine dioxide reporting	CR	List	List of values: Yes No Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	-

Group	Description	R/O/CR	Validations	Additional Designations
Chlorine Dioxide – Booster Chlorination	-	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CLC-25	Number of Days where Chlorine Dioxide was used	Number of days in the month in which Chlorine Dioxide was used as a disinfectant	O	Numeric 0 to 99999 (5,0)	None	-
CLC-26	Result at POE (mg/L)	Value of the measurement at the Point of Entry (POE) to the distribution system	R	Numeric 0 to 99.999 (5,3)	Display result in bold red if MCL (0.8mg/L) is exceeded.	**Federally required**
CLC-27	MRDL exceeded (0.8 mg/L)	Whether the value of CLC-26 exceeds the MRDL of 0.8 mg/L	R	List	List of values: Yes N0 Default value to Yes and disabled if CLC-26 is greater than MCL.	**Federally required**
CLC-28	If yes, were two consecutive samples exceeded?	Whether two consecutive samples taken at the POE exceeded the MRDL	CR	List	List of values: Yes No Required if CLC-27 is Yes (Federally required if CLC-27 is Yes)	**Federally conditionally required**
CLC-29	1st Sample @First Customer (mg/L)	First triggered Chlorine Dioxide distribution sample	CR	Numeric 0 to 99.999 (5,3)	Required if CLC-27 is Yes (Federally required if CLC-27 is Yes)	**Federally conditionally required**
CLC-30	2nd Sample @1st Customer (mg/L) + 6 hours	Second triggered Chlorine Dioxide distribution sample	CR	Numeric 0 to 99.999 (5,3)	Required if CLC-27 is Yes (Federally required if CLC-27 is Yes)	**Federally conditionally required**
CLC-31	3rd Sample @1st Customer (mg/L) + 12 hours	Third triggered Chlorine Dioxide distribution sample	CR	Numeric 0 to 99.999 (5,3)	Required if CLC-27 is Yes (Federally required if CLC-27 is Yes)	**Federally conditionally required**
CLC-33	Violation Type	Whether the MRDL violation was acute, non-acute	CR	List	List of values: Yes No No Violation Required if CLC-27 is Yes (Federally required if CLC-27 is Yes)	**Federally conditionally required**
CLC-34	Notify State?	Whether the PWS notified the state about the MRDL violation	O	List	List of values: Yes No	-
CLC- 35	Notify	Whether the PWS	O	List	List of values:	-

	Public?	notified the public about the MRDL violation			Yes No	
CLC-36	Temperature	Water temperature for CT calculation for inactivation using chlorine dioxide	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**Federally conditionally required**
CLC-37	Concentration	Concentration of chlorine dioxide for CT calculation, expressed in mg/L	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**Federally conditionally required**
CLC-38	Contact Time	Time (T, in minutes) concentration is measured for CT calculation	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**Federally conditionally required**
CLC-39	CT Value	Value from table 2.1 in 40 CFR 141 Subpart H. Cryptosporidium inactivation by Chlorine Dioxide and Ozone	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**Federally conditionally required**
CLC-40.1	Ratio Achieved	Ratio of (Product of CLC-21 and CLC 20) to CLC-22, or calculated CT divided by the CT table value from the EPA regulation	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	-
CLC-41.1	Was TT requirement met for toolbox credit (Y/N)?	An LT2 toolbox credit-related question for PWS to answer; for state primacy agency review and approval based on reported chlorine dioxide reporting	CR	List	List of values: Yes No Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	-

Group	Description	R/O/CR	Validations	Additional Designations
Chlorite	-	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CLC-38.1	Total Number of	Total number of samples taken in	R	Numeric 0 to		**Federally required**

	Samples	the month		99999 (5,0)		
CLC-39.1	Number of MCL Violations for the Month	Total number of samples taken in which the value exceeded the Chlorite MCL of 1.0 mg/L	R	Numeric 0 to 99999 (5,0)		**Federally required**
CLC-40.2	Monthly Arithmetic Average (DS 3-sample sets)	Average of the distribution system 3- sample sets (routine, monthly, and triggered)	R	Numeric 0 to 99.999 (5,3)		**Federally required**
CLC-41.2	Laboratory ID	Analyzing laboratory if the reporting lab did not perform the sample analysis for the Chlorite results	O	List	List of values: List of all laboratories within the Primacy Agency	
CLC-42	Routine Result at POE	Value of sample taken at the Point of Entry (POE) to the distribution system.	R	Numeric 0 to 99.999 (5,3)	Display result in bold red if MCL (1.0 mg/L) is exceeded.	**Federally required**
CLC-43	MCL Exceeded?	Whether the MCL for the routine daily POE sample (CLC-42) exceeded the Chlorite MCL of 1.0 mg/l.	R	List	List of values: Yes No Default value to Yes and disabled if CLC-42 is greater than MCL	**Federally required**
CLC-44	1st Sample @ 1st Customer (mg/L)	Value of first sample in routine monthly distribution three-sample set or triggered three-sample set	O	Numeric 0 to 99.999 (5,3)	-	**Federally required**
CLC-45	2nd Sample @ Avg. Residence Time Location (mg/L)	Value of second sample in routine monthly distribution three-sample set or triggered three-sample set	O	Numeric 0 to 99.999 (5,3)	-	**Federally required**
CLC-46	3rd Sample @ Max. Residence Time Location (mg/L)	Value of third sample in routine monthly distribution three-sample set or triggered three-sample set	O	Numeric 0 to 99.999 (5,3)	-	**Federally required**

CLC-47	Average of 3 Sample Set	Average of the routine or triggered distribution three-sample set.	O	Numeric 0 to 99.999 (5,3)	Calculated value: CLC47=(CLC44 +CLC45+CLC46)/3 Editable field	**Federally required**
CLC48	Average. exceeded MCL? (1.0 mg/L)	Whether CL-47 was greater than 1.0 mg/l	O	List	List of values: Yes No	**Federally required**
CLC-49	Notify State?	Whether the PWS notified the State of the Chlorite MCL violation	-	List	List of values: Yes No	-
CLC-50	Notify Public?	Whether the PWS notified the public of the Chlorite MCL violation?	O	List	List of values: Yes No	-

6.12.15 Add Chlorine Chloramines Entering the Distribution System Sample Type

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under **"Operational Data"** tab, Click "**Add**" then select **Chlorine Chloramines Entering DS** from the dropdown list. (Figure 60)
4) Enter metadata information for Chlorine and Chloramines Entering Distribution System. All fields marked with an asterisk (*) are required. (Figure 69, next page)
5) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 61)

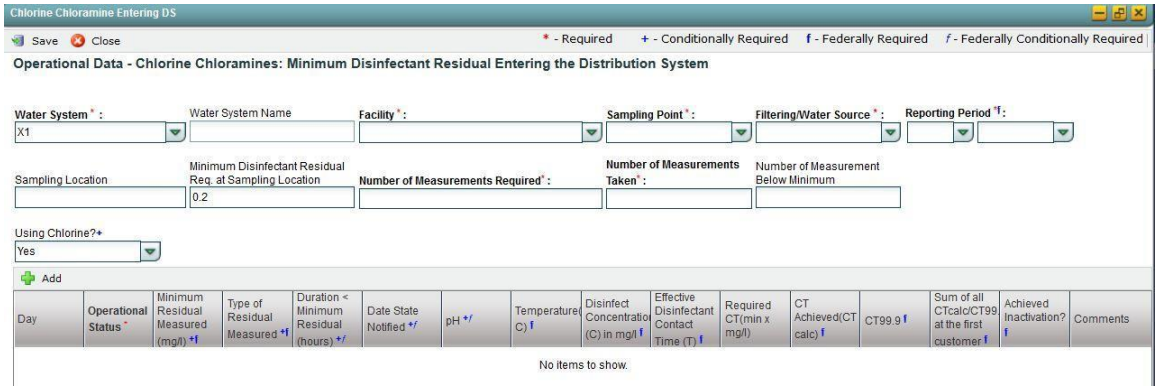


Figure 69 - Chlorine Chloramines Entering the Distribution System (Unfiltered Water)

Note: The default view of this screen is for unfiltered systems; if the user selects Groundwater or Filtered Water in the Filtering/Source Water field, the form displayed will be updated so that the columns for "pH" through "Achieved Inactivation?" are removed. (Figure 70)

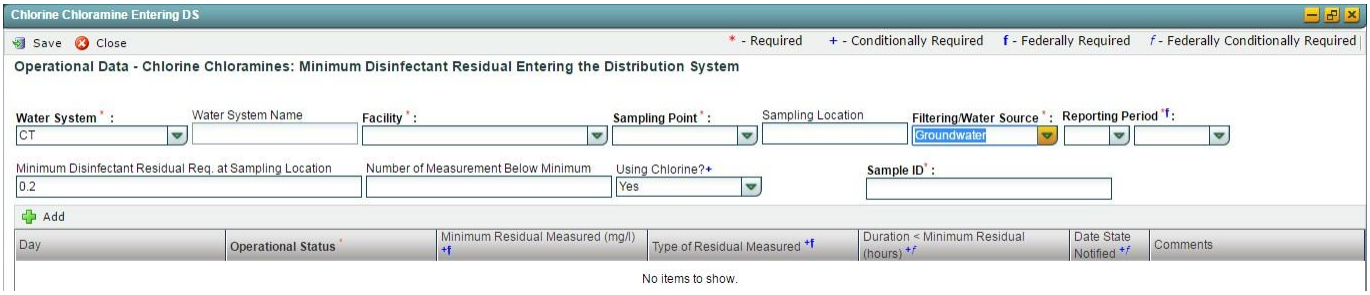


Figure 70 - Chlorine Chloramines Entering DS - Filtered/Groundwater

Notes:

- *When a Chlorine chloramine entering the distribution system record is saved, the user will not be able to modify the Reporting Period and the "Minimum Disinfectant Residual Required at Sampling Location" fields.*

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role)
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
Chlorine Chloramines Entering DS Sample Header	-	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CED-1	Water System ID	Water system related to the sample	R	List [ID – Name]	List of Values: water systems within the Primacy Agency Display ID and Name in List Primacy Agency Code added by default to the WS ID field.	-

CED-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	N/A	Disabled Field	Disabled field Field auto-populated according to selection made in CED-1	-
CED-2	Facility	Water system facility related to the sample	R	List	List of values: List of all facilities within the Water System selected in CED-1	-
CED-3	Sampling Point	Sampling point related to the sample	R	List	List of values: All sampling points within the facility selected in CED-2	-
CED-4	Sampling Location	Physical Location where sampling occurred	O	Text		-
CED-5	Filtering/ Water Source	Identifies whether the PWS is using a filtered or Unfiltered surface water source, or a Groundwater source, for the facility about which the residuals are being reported	R	List	List of values: Filtered Surface Water Unfiltered Surface Water Groundwater	-
CED-7	Reporting Period-Month	Month of the calendar year	R	List	List of values: January to December CED-7 and CFE-8 cannot be in the future Disabled when record is saved	**Federally required**
CED-8	Reporting Period-Year	Year	R	List	List values: 2011 to current year CED-7 and CFE-8 cannot be in the future Disabled when record is saved	**Federally required**
CED-8.1	Sample ID	ID number of the sample	R	Alpha-numeric		Please enter any alpha-numeric value; this field is not used for compliance determination and will be Removed from a future

						version of CMDP
CED-9	Minimum Dis-infectant Residual Req. at Sampling Location	Minimum disinfectant concentration in mg/l per state requirement	O	Numeric 0 to 99.999 (5,3)	Default value is 0.2. Field enabled. Disabled when record is saved	-
CED-10	Number of Measure ments Below Min.	Number of Measurements less than the state-required Minimum (CED-9)		Numeric 0 to 99999 (5,0)		-
CED-11	Number of Measure ments Required	Number of Measurements that must be taken in the Monitoring period	R	Numeric 0 to 99999 (5,0)		
CED-11.1	Number of Measure ments Taken	Number of Measurements actually taken in the Monitoring period	R	Numeric 0 to 99999 (5,0)		
CED-12	Using Chlorine? (Y/N)	Whether chlorine is being used as a disinfectant.	CR	List	List of values: Yes No Required if CED-5 is Unfiltered Surface Water	-

Group	Description	R/O/CR	Validations	Additional Designations
Measurements Table (Unfiltered Surface Water)			None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
CED-16	Operation al Status	Indicates if the facility was operation during the day	R	List	List of values: On Off	-
CED-17	Minimum Residual (mg/L)	Minimum Residual Measured at Sampling Location (mg/l)	R	Numeric 0 to 99.999 (5,3)	Disable if CED-16 is Off	**Federally required**
CED-18	Type of Residual Measured	Type of residual measured	R	List	List of values: Free Total Combined Disable if CED-16 is Off	**Federally required**
CED-19	Duration< Minimum Residual (hours)	Number of hours for which the measured residual is less than minimum	CR	Numeric 0 to 999.99 (5,2)	Required if CED-17 is less than CED-9 (Federally conditionally required if CED-17 is less than CED-9)	**Federally conditionally required**

		state- required residual.			Disable if CED-16 is Off	
CED-20	Date State Notified	Date state was notified by the PWS that the residual was less than the minimum for more than 4 hours	CR	Date	Required if CED-17 is less than CED-9 (Federally conditionally required if CED-17 is less than CED-9) Disable if CED-16 is Off	**Federally conditionally required**
CED-21	pH	The daily measurement of pH of dis-infected water	CR	Numeric 0 to 999.9 (4,1)	Required if CED-12 is Yes Disable if CED-16 is Off	**Federally conditionally required if chlorine is used**
CED-22	Temp-erature	The daily measurement of water temperature in degrees centigrade following each point of disinfection	O	Numeric 0 to 99.9 (3,1)	Disable if CED-16 is Off	**Federally required for unfiltered SW systems**
CED-23	Disinfect. Con-centration (C) in mg/L	The daily residual disinfectant concentration in mg/L	O	Numeric 0 to 99.999 (5,3)	Disable if CED-16 is Off	**Federally required for unfiltered SW systems**
CED-24	Effective Dis-infectant Contact Time (T)	The disinfectant contact time (in minutes) used for calculating the CT value	O	Numeric 0 to 99.999 (5,3)	Disable if CED-16 is Off	**Federally required for unfiltered SW systems**
CED-25	Required CT (min x mg/L)	An optional field for reporting a state- required CT	O	Numeric 0 to 99.999 (5,3)	Disable if CED-16 is Off	**-**
CED-26	CT Achieved (CT calc)	The actual CT value calculated using CED- 23 and CED- 24	O	Numeric 0 to 99.999 (5,3)	Disable if CED-16 is Off	**Federally required for unfiltered SW systems**
CED-27	CT99.9	The CT value for 99.9 percent inactivation per 40 CFR 141, Subpart H, Tables 1.1 to 3.1	O	Numeric 0 to 99.999 (5,3)	Disable if CED-16 is Off	**Federally required for unfiltered SW systems**

CED-28	Sum of all CT calc/CT99.9 at first customer	The total inactivation ratio using CED-26 and CED-27	O	Numeric 0 to 99.999 (5,3)	Disable if CED-16 is Off	**Federally required for unfiltered SW systems**
CED-29	Achieved Inactivation	Whether the inactivation ratio calculated in CED-28 is > or = 1.0	O	List	List of values: Yes No Disable if CED-16 is Off	**Federally required for unfiltered SW systems**
CED-30	Comment	An optional field for the PWS operator	O	Text		

Group	Description	R/O/CR	Validations	Additional Designations
Measurements Table for Filtered Surface Water (SW) or Groundwater (GW)			None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CED-31	Operational Status	Indicates if the facility was operating during the day	R	List	List of values: On Off	-
CED-32	Minimum Residual Measured (mg/L)	Minimum Residual Measured at Sampling Location (mg/l)	R	Numeric 0 to 99.999 (5,3)	Disable if CED-16 is Off	**Federally required**
CED-33	Type of Residual Measured	Type of residual measured	R	List	List of values: Free Total Combined Disable if CED-16 is Off	**Federally required**
CED 13	Duration < Minimum Residual (hours)	Amount of time, in hours, that the measured residual (CED-32) was less than the minimum required	CR	Numeric 0 to 999.99 (5,2)	Required if CED-32 is less than CED-9 (Federally conditionally required if CED-32 is less than CED-9) Disable if CED-31 is Off	**Federally conditionally required**

CED 14	Date State Notified	Date state was notified that the measured residual (CED-32) was less than the minimum required for more than 4 hours	CR	Date	Required if CED-13 is more than (Federally conditionally required if CED-32 is less than CED-9) Disable if CED-31 is Off	**Federally conditionally required**
CED-15	Comment	An optional comment field	O	Text	-	-

6.12.16 Add Chlorine Chloramines in the Distribution System Sample Type

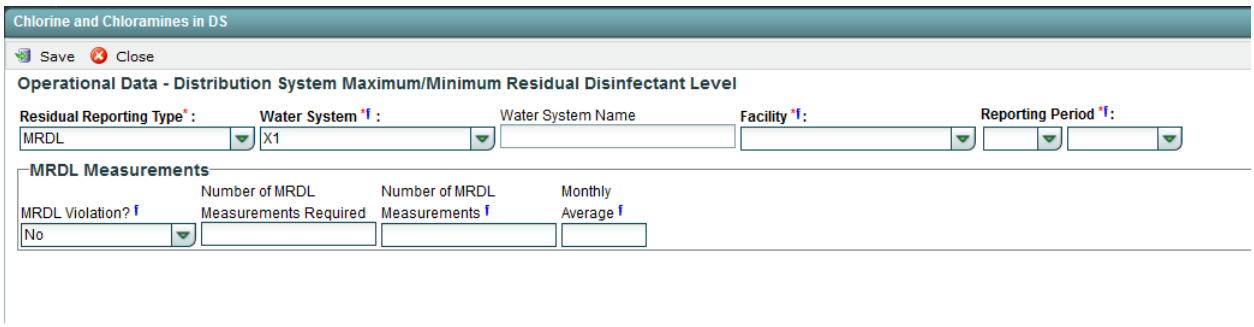


Figure 71 - Chlorine Chloramines in the Distribution System (MRDL)

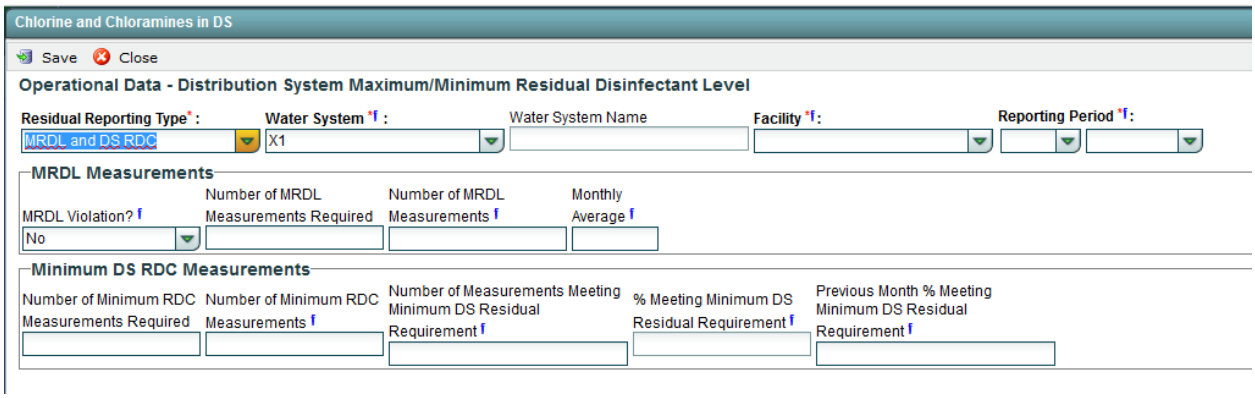


Figure 72 – Chlorine Chloramines in the Distribution System with Minimum DS RDC

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under "**Operational Data**" tab, Click "**Add**" then select "**Chlorine Chloramines in DS**" from the dropdown list. (Figure 60)
4) Enter metadata information for Chlorine and Chloramines Entering Distribution System. All

fields marked with an asterisk (*) are required. (Figure 72)

5) Click "**Save**" to add the sample type to the Drinking Water Sample Job.

Notes:

- *If reporting period month is an end of a calendar quarter (March, June, September, or December) the Quarterly RAA field will be displayed on the form for the user to populate.*
- *When a Chlorine chloramines in the distribution system record is saved, user will not be able to modify the Reporting Period field. If a Reporting Period is entered by error, the record must be deleted and a new record must be created.*

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role)
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
Chlorine Chloramines in DS Sample Header	-	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
CID-0.1	Residual Reporting Type	Users have to select the type of residual summary they are reporting	R	List [ID] -MRDL - MRDL and DS RDC	MRDL is selected by default. Depending on the value selected from dropdown list, fields on the screen will be hidden or displayed	
CID-1	Water System ID	Water system related to the sample	R	List [ID – Name]	List of Values: water systems within the Primacy Agency Display ID and Name in List Primacy Agency Code added by default to the WS ID field.	**Federally required**

CID-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	N/A	Disabled Field	Disabled field Field auto-populated according to selection made in CID-1	**Federally required**
CID-2	Facility	Water system facility related to the sample	R	List	List of values: List of all facilities within the water system selected in CID-1.1	**Federally required**
CID-4	Reporting Period – Month	Month of the calendar year	R	List	List of values: January to December CID-4 and CFE-5 cannot be in the future Disabled when record is saved	**Federally required**
CID-5	Reporting Period Year	Year	R	List	List values: 2013 to current year CFE-4 and CFE-5 cannot be in the future Disabled when record is saved	**Federally required**
CID-6	Quarterly RAA	Quarterly running annual average for MRDL	O	Numeric 0 to 99.999 (5,3)	Display if CID-4 is March, June, September or December	**Federally required**
CID-7	MRDL Violation ?	Whether there was a violation for distribution system MRDL of 4.0 mg/L	O	List	List of values: Yes No	**Federally required**
CID-8	Number of MRDL Measure-ments	Number of Maximum Residual Dis-infectant Level measurements taken in the month	O	Numeric 0 to 99999 (5,0)	-	**Federally required**
CID-8.1	Number of MRDL Measure-ments Required	Number of Maximum Residual Disinfectant Level Measurements Required in the month	O	Numeric 0 to 99999 (5,0)	-	
CID-9	Monthly Average	Average of detected DS Residual Measurements for the month	O	Numeric 0 to 99.999 (5,3)	-	**Federally required**
CID-10	Number of Measure-ment	Number of DS residual Measurements	O	Numeric 0 to 99999	CID-10 must be less than or equal to CID-13	**Federally required**

	Meeting Min DS Residual Require-ment	with a Detected residual		(5,0)		
CID-11	% Meeting DS Residual Require-ment	Percent of current month's DS Residual Measurements with a detected residual	O	Numeric 0 to 999.999 (6,3)	Calculated. Equal to Percent(CID-10/CID-13)	**Federally required**
CID-12	Previous Month % Meeting DS Residual Require-ment	Percent of Previous month's DS Residual Measurements with a Detected residual	O	Numeric 0 to 999.999 (6,3)	-	**Federally required**
CID-13	Number of Minimum RDC Measure-ments	Number of Minimum Residual Disinfectant Concentration Measurements taken during The Monitoring period	O	Numeric 0 to 99999 (5,0)		**Federally required**
CID-13.1	Number of Minimum RDC Measure-ments Required	Number of Minimum Residual Disinfectant Concentration Measurements required during The Monitoring period	O	Numeric 0 to 99999 (5,0)		

6.12.17 Add Lead and Copper Water Quality Parameters Sample Type

1) Under "**Drinking Water Sample Jobs**" tab, click on "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under "**Operational Data**" tab, Click "**Add**" then select "**LCR WQP**" from the dropdown list. (Figure 60)
4) Enter metadata information for Lead and Copper WQP. All fields marked with an asterisk (*) are required. (Figure 73)
5) Users can either enter distribution tap samples or entry point samples using the tables provided. (Figure 73)
6) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 61)

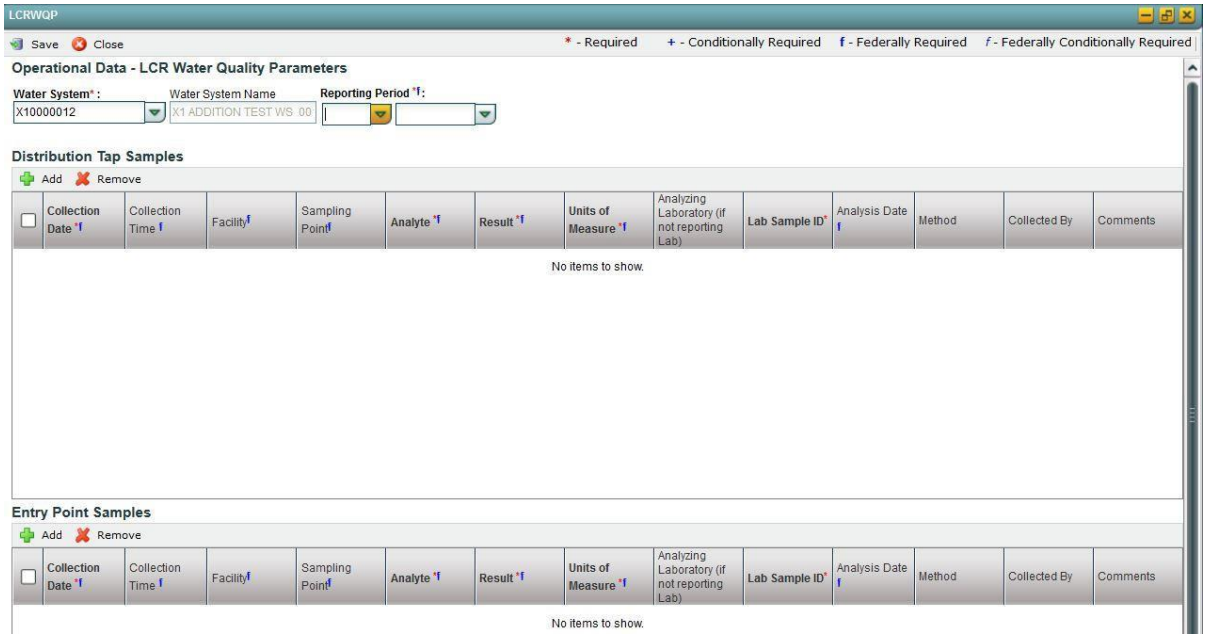


Figure 73 - Lead and Copper Water Quality Parameters

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role)
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job
-

Notes:

- *When a Lead and Copper WQP record is saved, users will not be able to modify the reporting period.*

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
LCR – WQP Sample Header			None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
LCR-1	Water System ID	Water system related to the sample	R	List [ID – Name]	List of Values: water systems within the Primacy Agency Display ID and Name in List Primacy Agency Code added by default to the WS ID field.	-
LCR-2	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	NA	Disabled Field	Disabled field Field auto-populated according to selection made in LCR-1	-
LCR-4	Reporting Period – Month	Month of the calendar year	R	List	List of values: January to December LCR-4 and LCR-5 cannot be in the future Disabled when record is saved	**Federally required**
LCR-5	Reporting Period Year	Year	R		List values: 2013 to current year CFE-4 and CFE-5 cannot be in the future Disabled when record is saved	**Federally required**

Group	Description	R/O/CR	Validations	Additional Designations
Distribution Tap Samples			None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
LCR-6	Collection Date	Date when sample was collected	R	Date MM/DD /YYYY	LCR-6 must be within LCR-4 and LCR-5 (reporting period)	**Federally required**
LCR-7	Collection Time	Time when sample was collected	R	Time Should it be R since federally required? HH:MM (24h)	When the Time is 00:00:00, the Application does not populate the XML tags.	**Federally required**
LCR-8.1	Facility ID	Facility related and sampling point related to facility	O	List	List of values: List of all facilities in water system selected in LCR-1	**Federally required**
LCR-8.2	Sampling	ID number	O	List	List of values:	**Federally**

	Point ID	of the Sampling Point			All sampling points in Facility selected in LCR-8.1	**required**
LCR-9	Analyte/ Parameter Code and Name	Analyte or parameter that was subject to Parameter Code and Name	R	List	List of values: 1925 – pH 1064 - Conductivity 1996 - Temperature 1927 - Alkalinity Total 1044 - Orthophosphate 1049 – Silica 1019 - 1919 - Calcium	**Federally required**
LCR-10	Result	Result measured	R	Numeric		**Federally required**
	Units of Measure	Unit of measure	R	List	List of values: MG/L uG/L pH Unit Degree Celsius uMHO/cm	**Federally**
LCR-12	Analyzing Lab ID (if not reporting lab)	Laboratory that performed the analysis (if different than the reporting laboratory)	O	List	List of values: Laboratories within the Primacy Agency	-
LCR-13	Lab Sample ID	Assigned ID	R	Alpha-numeric	-	-
LCR-14	Analysis Date	Date when Analysis occurred	O	Date MM/DD /YYYY	LCR-14 must be greater than or equal to LCR-6 (collection date)	**Federally required**
LCR-15	Method	Analytical method used	O	List	List of values: Methods applicable to Analyte/Parameter selected in LCR-9	**Federally required**
LCR-16	Collected By	Individual or entity that collected the sample	O	Text	-	-
LCR-17	Comments		O	Text	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Entry Point Samples	-		None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
LCR-18	Collection Date	Date when sample was collected	R	Date MM/DD/ YYYY	LCR-18 must be within LCR-4 and LCR-5 (reporting period)	**Federally required**
LCR-19	Collection Time	Time when sample was collected	R	Time HH:MM (24h)	When the Time is 00:00:00, the application does not populate the XML tags.	**Federally required**
LCR-20	Facility ID - Sampling Point ID	Facility related and sampling point	R	List	List of values: List of all facilities in water system selected in	**Federally required**

		related to facility			LCR-1	
LCR-21	Analyte/ Parameter Code and Name	Analyte or Parameter that was subject to analysis	R	List	List of values: 1925 – pH, 1064 – Conductivity, 1996 – Temperature, 1927 – Alkalinity Total, 1044 - Orthophosphate, 1049 – Silica, 1019 – Calcium, 1919 - Calcium	**Federally required**
LCR-22	Result	Result measured	R	Numeric (8,4)	-	**Federally required**
LCR-23	Units of Measure	Unit of measure	R	List	List of values: MG/L uG/L pH Unit Degree Celsius uMHO/cm	**Federally required**
LCR-24	Analyzing Lab ID (if not reporting lab)	Laboratory that performed the analysis (if different than the reporting lab)	O	List	List of values: Laboratories within the Primacy Agency	-
LCR-25	Lab Sample ID	Assigned ID	O	Alpha-numeric	-	-
LCR-26	Analysis Date	Date when analysis occurred	O	Date MM/DD /YYYY	LCR-26 must be greater than or equal to LCR-18 (collection date)	**Federally required**
LCR-27	Method	Analytical method used	O	List	List of values: Methods applicable to Analyte/Parameter selected in LCR-21	**Federally required**
LCR-28	Collected By	Individual or entity That Collected the sample	O	Text		-
LCR-29	Comments		O	Text		-

6.12.18 Add Total Organic Carbon Operational Sample Type

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under the "**Operational Data**" tab, Click "**Add**," and then select "**Total Organic Carbon**" from the dropdown list. (Figure 60)
4) Enter metadata information for Total Organic Carbon. All fields marked with an asterisk (*) are required. (Figure 74)
5) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 61)

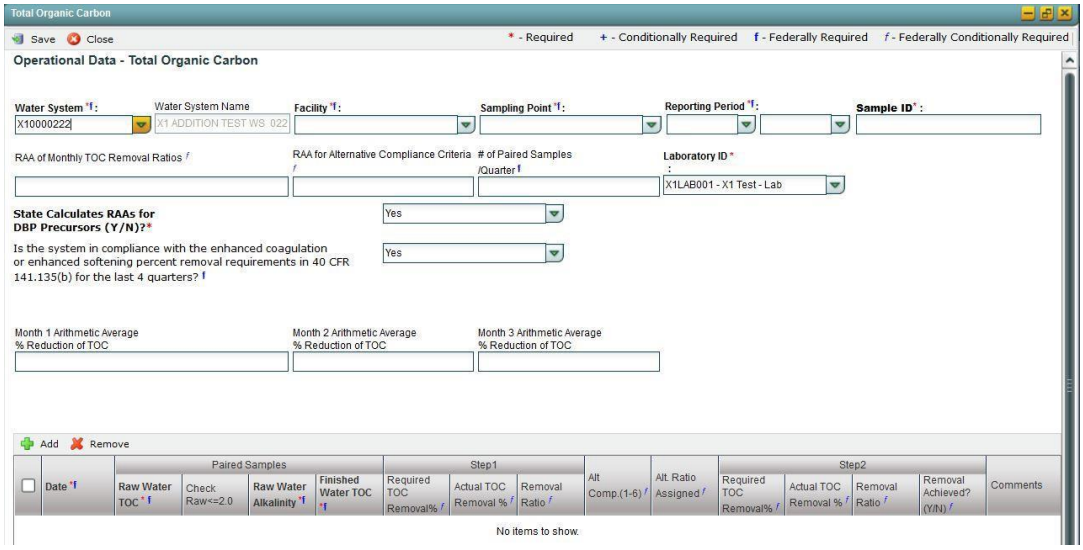


Figure 74 - Total Organic Carbon

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.

Note:

- *When a TOC record is saved, users will not be able to modify the reporting period.*

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
Total Organic Carbon	-	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
TOC-1	Water System ID	Water system related to the sample	R	List [ID – Name]	List of Values: Water systems within the Primacy Agency Display ID and Name in List Primacy Agency Code added by default to the WS ID field.	-
TOC-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	NA	Disabled Field	Disabled field Field auto-populated according to selection made in TOC-1	-
TOC-2	Facility	Water system facility related to the sample	R	List	List of values: List of all facilities within the water system selected in TOC-1	-
TOC-6	Laboratory ID	Laboratory reporting the data; assumed to be the laboratory that performed the analysis	O	List	List of values: List of all laboratories available to the user For Laboratory Users, default to selected working organization	-
TOC-4	Reporting Period	Quarter for which the monthly values are reported to the state primacy agency	R	List	List of values: Q1- Jan – Mar Q2- Apr – Jun Q3- Jul – Sep Q4- Oct – Dec Disabled when record is saved	-
TOC-5	Reporting Period – Year	Year of the reporting period	R	List	List of values: 2013 to current year TOC-4 and TOC-5 cannot be in the future Disabled when record is saved	
TOC-5.1	Sample ID	ID number of the sample analysis	R	Alpha-numeric	-	-
TOC-12	Monthly Arithmetic Average % Reduction of TOC	Average of the percent reduction for each paired TOC sample	-	Numeric 0 to 999.99 (5,2)	Monthly average is recorded for the month and reported for the quarter. Federally	**Federally Conditionally required**

					conditionally required if the state chooses NOT to perform the calculation	
TOC-7	State Calculates RAAs for DBP Precursors (Y/N)?	Whether the State Calculates the RAA for the PWS	R	List	List of values: Yes No	-
TOC-8	RAA of Monthly TOC Removal Ratios.	Running Annual Average based on the last 12 Monthly Removal ratios	-	Numeric 0 to 999.99 (5,2)	-	**Federally Conditionally required**
TOC-9	RAA for Alternative Compliance Criteria	Running Annual average for The Alternative Compliance criterion (1-6)	-	Numeric 0 to 999.99 (5,2)	-	**Federally Conditionally required**
TOC-10	# of Paired	Number of paired TOC Samples Collected during the last quarter	-	Numeric 0 to 999.99 (5,0)	-	**Federally required**
TOC-11	Is the system in com-pliance with the enhanced coagulation or enhanced softening percent removal requirements in 40 CFR 141.135(b) for the last 4 quarters?	Whether the PWS is in compliance with the Disinfection Byproducts (DB) rule requirements for DBP precursors	-	List	List of values: Yes No	**Federally required**
TOC-11.1	Month 1 Arithmetic Average % Reduction of TOC	Calculated TOC percent removal for the first month of the reporting period	O	Numeric (5,2)	-	-
TOC-11.2	Month 2 Arithmetic Average % Reduction of TOC	Calculated TOC percent removal for the second month of the reporting period	O	Numeric (5,2)	-	-
TOC-11.3	Month 3 Arithmetic Average % Reduction of TOC	Calculated TOC percent removal for the third month of the reporting period	O	Numeric (5,2)	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Results Table	-	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
TOC-13	Date	Collection date	R	Date MM/DD/ YYYY	Cannot be a future date. Date must be within reporting period.	**Federally required**
Paired Sample						
TOC-15	Raw Water TOC	Value of TOC in mg/L, before treatment	R	Numeric 0 to 999.99 (5,2)	-	**Federally required**
TOC-16	Check Raw<=2.0	Whether the raw water TOC measurement was <=2.0	R	Numeric 0 to 999.99 (5,2)	-	**Federally required**
TOC-17	Raw Water Alkalinity	Value of alkalinity in mg/L, before treatment	O	Numeric 0 to 999.99 (5,2)	-	-
TOC-18	Finished Water TOC	Treated water TOC, in mg/L	R	Numeric 0 to 999.99 (5,2)	-	**Federally required**
Step 1						
TOC-19	Required TOC Removal %	Step 1	O	Numeric 0 to 999.999 (6,3)	-	**Federally conditionally required**
TOC- 20	Actual TOC Removal %	Step 1	O	Numeric 0 to 999.999 (6,3)	-	**Federally conditionally required**
TOC-21	Removal Ratio	Step 1	O	Numeric	Calculated by CMDP: = TOC-20/TOC-19	**Federally conditionally required**
Alternative Compliance Criteria						
TOC-22	Alt. Comp. (1-6)	Alternative Compliance Criterion (ACC) 1 through 6	O	Numeric 0 to 999 (3,0)	-	**Federally conditionally required**
TOC-23	Alt. Ratio Assigned	Alternative Compliance Criterion ratio assigned	O	Numeric 0 to 999.99 (5,2)	-	**Federally conditionally required**
Step 2						
TOC-24	Required. TOC Removal (%)	Step 2	O	Numeric	-	**Federally conditionally required**

TOC-25	Actual TOC Removal %	-	O	Numeric	-	**Federally conditionally required**
TOC-26	Removal Ratio	Step 2	O	Numeric	Calculated by CMDP: = TOC-25/TOC-24	**Federally conditionally required**
TOC-27	Step 2 Removal Achieved? (Y/N)		O	List	List of values: Yes No	**Federally conditionally required**
TOC-28	Comments		O	Text	-	-

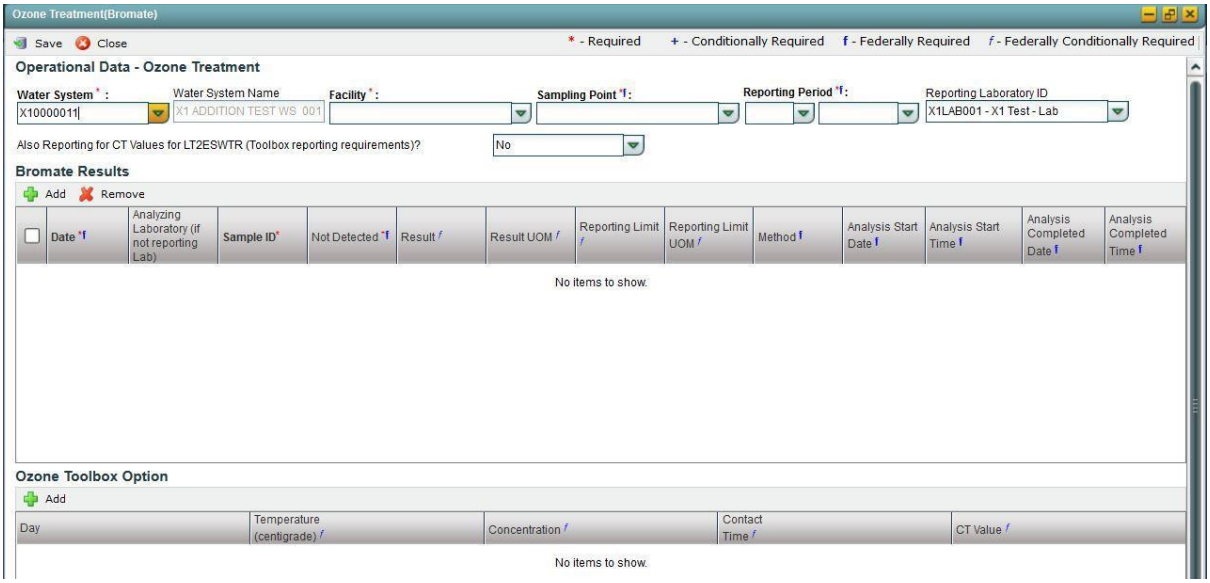


Figure 75 - Ozone Treatment (Bromate)

6.12.19 Add Ozone Treatment (Bromate) Sample Type

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under "**Operational Data**" tab, click "**Add,**" and then select **Ozone Treatment (Bromate)** from the dropdown list. (Figure 60)
4) Enter metadata information for Ozone Treatment (Bromate). All fields marked with an asterisk (*) are required. (Figure 75)
5) Use the Bromate Results table to enter results and the Ozone Toolbox Option if the answer to the Toolbox Reporting Requirement is "**Yes**."
6) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 75)

Notes:

- *If the selected reporting period month is the end of a calendar quarter (March, June, September, or December), Quarterly Bromate RAA, and Number of Samples Taken will automatically be displayed on the form.*

- *User will not be able to modify the reporting period once the Ozone Treatment (Bromate) record is saved.*

AUTHORIZATIONS

- If Job Status is "Draft with Preparer": Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is "Draft with Reviewer": Only Laboratory or Water System Users with Reviewer, Certifier, or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Draft with Certifier": Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is "Submitted" or "Accepted by State": Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/CR	Validations	Additional Designations
Ozone Treatment (Bromate) Sample Header	-	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
OTB-1	Water System ID	Water system related to the sample	R	List [ID – Name]	List of Values: Water systems within the Primacy Agency Display ID and Name in List Primacy Agency Code added by default to the WS ID field.	-
OTB-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	N/A	Disabled Field	Disabled field Field auto-populated according to selection made in OTB-1	-
OTB-2	Facility	Water system facility related to the sample	R	List	List of values: List of all facilities within the water system selected in OTB-1	-
OTB-3	Sampling Point	Sampling point related to the sample	R	List	List of values: List of all sampling points within the facility selected in OTB-2	**Federally required**

OTB-5	Reporting Period-Month	Month of the calendar year	R	List	List of values: January to December OTB-5 and OTB-6 cannot be in the future Disabled when record is saved	**Federally required**
OTB-6	Reporting Period-Year	Year	R	List	List values: 2013 to current year OTB-5 and OTB-6 cannot be in the future Disabled when record is saved	**Federally required**
OTB-7	Also Reporting for CT Values for LT2ESWTR (Toolbox Reporting requirements)?	An LT2 toolbox credit-Related question for PWS to answer for State Primacy Agency review and approval	O	List	List of values: Yes No	
OTB-8	Quarterly Bromate RAA	Running Annual average for the current quarter	O	Numeric	Display if OTB-5 is March, June, September, December	**Federally required**
OTB-9	Total Number of Samples Taken		O	Numeric	Display if OTB-5 is March or June or September or December	**Federally required**
OTB-9.1	Reporting Laboratory ID	State-Assigned Laboratory ID of the Reporting Laboratory (assume to be the analytical Laboratory Unless Otherwise noted by the submitter).			List of values: Laboratories associated with the user account	

Group	Description	R/O/CR	Validations	Additional Designations
Bromate Results	-	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
OTB-10	Date	Date sample was collected	R	Date MM/DD/YYYY	OTB-10 must be within OTB- 5 and OTB- 6 (reporting period)	**Federally required**
OTB-11	Laboratory	Laboratory that performed	O	List	List of values: List of laboratories within the Primacy Agency	-

		the sample analysis				
OTB-12	Sample ID	Assigned ID	O	Alpha-numeric	-	-
OTB-13	Not Detected	Whether the analyte was detected or not detected	R	Checkbox	Not Detected if checked	-
OTB-14	Result	Value of the sample result	CR	Numeric 0 to 99.999 (5,3)	Disable if OTB-13 is checked (not detected)	**Federally required**
OTB-15	UOM	Unit of measure	CR	List	List of values: mg/L ug/L degree C LANG mF/L ng/L NTU pH units umho/cm pCi/L TON Color Units Disable if OTB-13 is checked (not detected)	**Federally conditionally required**
OTB-16	Reporting Limit	The smallest measured concentration of a substance that can be reliably measured by using a given analytical method	CR	Numeric 0 to 99.999 (5,3)	Disable if OTB-13 is checked (not detected)	**Federally conditionally required**
OTB-17	Reporting Limit UOM	Unit of measure for reporting limit	CR	List	List of values: mg/L ug/L degree C LANG mF/L ng/L NTU pH units umho/cm pCi/L TON Color Units Required if OTB-13 is not checked Disable if OTB-13 is checked (not detected)	**Federally conditionally required**
OTB-18	Method	Analytical method used	O	List	List of values: List of methods applicable to Bromate	**Federally required**
OTB-19	Analysis Start Date	Date when analysis started	O	Date MM/DD/YYY Y	OTB-19 must be greater than or equal to OTB-10	**Federally required**
OTB-19.1	Analysis Start Time	Date when analysis started	O	Time HH:MM (24h)	OTB-20 and OTB-21 must be greater than or equal to OTB-19 and OTB-19.1. When the Time is 00:00:00, the application does not populate the XML tags.	-

OTB-20	Analysis Completed Date	Date when analysis ended	O	Date MM/DD/ YYYY	OTB-20 and OTB-21 must be greater than or equal to OTB-19 and OTB-19.1	-
OTB-21	Analysis Completed Time	Date when analysis ended	O	Time HH:MM (24h)	OTB-20 and OTB-21 must be greater than or equal to OTB-19 and OTB-19.1. When the Time is 00:00:00, the application does not populate the XML tags.	-

Group	Description	R/O/CR	Validations	Additional Designations
Ozone Toolbox Option	-	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
OTB-22	Temperature	Water temperature for CT calculation	O	Numeric 0 to 99.9 (3,1)	None	-
OTB-23	Concentration	concentration of chlorine dioxide for CT calculation expressed in mg/L.	O	Numeric 0 to 99.999 (5,3)	None	-
OTB-24	Contact Time	Time (T, in minutes) concentration is measured for CT calculation	O	Numeric 0 to 99.999 (5,3)	None	-
OTB-25	CT Value	Value from table 2.1 in 40 CFR 141 Subpart H. Cryptosporidium inactivation by Chlorine Dioxide and Ozone	O	Numeric 0 to 99.999 (5,3)	None	-

6.12.20 Add TTHM and HAA5 Sample Type

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Under the "**Operational Data**" tab, click "**Add**," and then select "**TTHM and HAA5**" from the dropdown list. (Figure 60)
4) Enter metadata information for TTHM and HAA5. All fields marked with an asterisk (*) are required. (Figure 76)
5) Use the TTHM table to enter TTHM results and the HAA5 table to enter HAA5 results.
6) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 61)

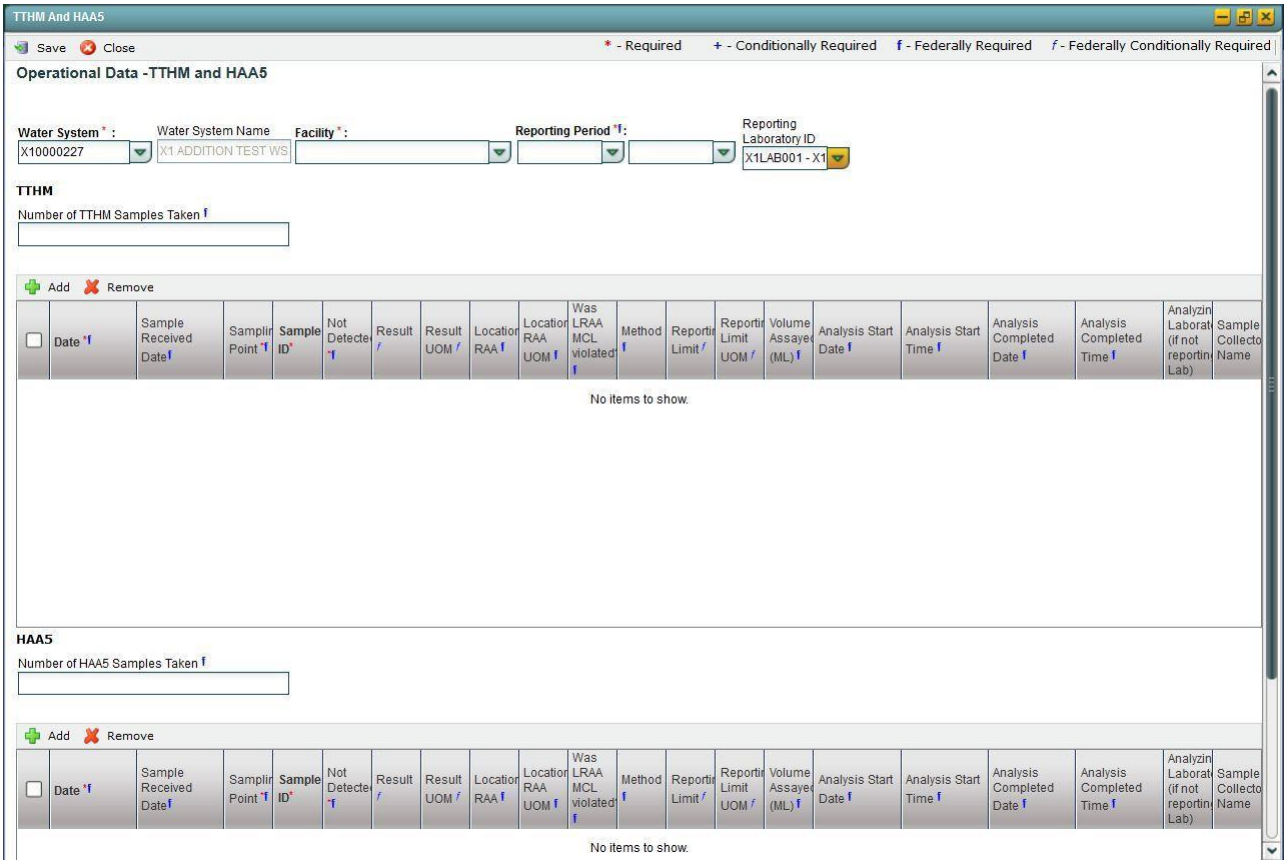


Figure 76 - TTHM and HAA5

6.12.20.1 AUTHORIZATIONS

- If Job Status is “Draft with Preparer”: Only users associated with an organization type laboratory or water system can add/edit/remove a sample to/from a Job (no restriction by role).
- If Job Status is “Draft with Reviewer”: Only Laboratory or Water System Users with Reviewer, Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is “Draft with Certifier”: Only Laboratory or Water System Users with Certifier or Administrator Roles can add/edit/remove a sample to/from a Job.
- If Job Status is “Submitted” or “Accepted by State”: Users cannot add/edit/remove a sample to/from a Job.

DATA ELEMENTS

Group	Description	R/O/ CR	Validations	Additional Designations
TTHM HAA5 Sample Header	Information that defines the sample collected	-	None	-

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
TTH-1	Water System ID	Water system related to the sample	R	List [ID –Name]	List of Values: Water systems within the Primacy Agency Display ID and Name in List Primacy Agency Code added by default to the WS ID field.	-
TTH-1.1	Water System Name	Name of the water system; the name can be the formal, legal, or common name most generally used to refer to the water system	N/ A	Disabled Field	Disabled field Field auto-populated according to selection made in TTH-1	-
TTH-2	Facility	Water system facility related to the sample	R	List	List of values: List of all facilities within the water system selected TTH-1	-
TTH-3	Sampling Point	Sampling point related to the sample	R	List	List of values: List of all sampling points within the facility selected in TTH-2	**Federally required**
TTH-5	Reporting Period – Quarter	Calendar quarter to determine the reporting period	R	List	List of values: Q1 – Jan- Mar Q2 – Apr- Jun Q3 – Jul- Sep Q4 – Oct – Dec Disabled when record is saved	**Federally required**
TTH-6	Reporting Period – Year	Year	R	List	List values: 2013 to current year. Disabled when record is saved	**Federally required**
TTH-6.1	Reporting Laboratory ID	Reporting entity	O	List	List of values: List of all laboratories available to the user	-

Group	Description	R/O/CR	Validations	Additional Designations
TTHM Results	Results table to have all the results	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
TTH-7	Number of TTHM Samples Taken	-	O	Numeric 0 to 99999 (5,0)	-	**Federally required**
TTH-8	TTHM Locationa l RAA	TTHM locational running annual average	O	Numeric 0 to 99.999 (5,3)	-	**Federally required**

TTH-9.1	Was LRAA MCL violated?	Whether the TTHM locational running annual average MCL was violated at the Sampling Point	O	List	List of values: Yes No	**Federally required**
TTH-11	Date	Date when sample was collected	R	Date MM/DD/ YYYY	TTH-11 must be within TTH-5 and TTH-6 (reporting period)	**Federally required**
TTH-11.1	Sample Received Date	Date on which lab received sample	R	Date MM/DD/ YYYY	Date ≤ Sample Received Date ≤ Analysis Start Date	**Federally required**
TTH-12	Analyzing Laboratory (if not Reporting Lab)	Laboratory that performed the analysis (if different from reporting lab)	O	List	List of values: List of all laboratories within the Primacy Agency	-
TTH-13	Sample ID	Assigned ID	O	Alpha-numeric	-	-
TTH-14	Not Detected	Indicator to determine if contaminant was detected	R	List	List of values (online form): true false List of values (Excel template): YesNo Not detected if true/Yes	**Federally required**
TTH-15	Result	Measure value	CR	Numeric 0 to 99.999 (5,3)	Disable if TTH-14 is true/Yes (not detected) (Federally conditionally required if analyte detected: TTH-14 is not true/Yes)	**Federally conditionally required**
TTH-16	Result UOM	Unit of measure	CR	List	List of values: MG/L UG/L NG/L Disable if TTH-14 is true/Yes (not detected) (Federally conditionally required if analyte detected: TTH-14 is not true/Yes)	**Federally conditionally required**
TTH-17	Reporting Limit	The smallest measured concentration of a substance that can be reliably measured by using a given analytical method	CR	Numeric 0 to 99.999 (5,3)	Disable if TTH-14 is true/Yes (not detected) (Federally conditionally required if analyte detected: TTH-14 is not true/Yes)	**Federally conditionally required**
TTH-18	Reporting Limit UOM	Unit of measure	CR	List	List of values: MG/L UG/L NG/L Disable if TTH-14 is true/Yes	**Federally conditionally required**

					(not detected) (Federally conditionally required if analyte detected: TTH-14 is not true/Yes)	
TTH-19	Method	Analytical method used	O	List	List of Values, List of Methods applicable to TTHM	**Federally required**
TTH-20	Analysis Start Date	Date when analysis started	O	Date MM/DD/ YYYY	TTH-20 must be greater than or equal to TTH-11	**Federally required**
TTH-21	Analysis Complete Date	Date when analysis ended	O	Date MM/DD/ YYYY	TTH-21 must be greater than or equal to TTH-20	**Federally required**
TTH-22	Analysis Complete Time	Time when analysis ended	O	Time HH:MM (24h)	-	**Federally required**
TTH-23	Sample Collector Name	Name of the Person who collected the sample	O	Alpha-numeric		

Group	Description	R/O/CR	Validations	Additional Designations
HAA5 Results	-	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
TTH-10	Number of HAA5 Samples Taken	-	O	Numeric 0 to 99999 (5,0)	-	**Federally required**
TTH-11.1	HAA5 Locationa l RAA	Locational running annual average for HAA5	O	Numeric 0 to 99.999 (5,3)	-	**Federally required**
TH-12.1	Was LRAA MCL violated?	Whether the locational RAA for HAA5 was violated	O	List	List of values: Yes No	**Federally required**
TTH-23	Date	Date when sample was collected	R	Date MM/DD/ YYYY	TTH-23 must be within TTH-5 and TTH-6 (reporting period)	**Federally required**
TTH-23.1	Sample Received Date	Date lab received sample	R	Date MM/DD/ YYYY	Date ≤ Sample Received Date ≤ Analysis Start Date	**Federally required**
TTH-24	Analyzing Laboratory (if not Reporting Lab)	Laboratory that performed the analysis (if different from reporting lab)	O	List	List of values: List of all laboratories within the Primacy Agency	-
TTH-25	Sample	Assigned ID	O	Alpha-	-	-

	ID			numeric		
TTH-26	Not Detected	Indicator to determine if contaminant was detected	R	List	List of values (online form): true false List of values (Excel template): Yes No Not detected if true/Yes	**Federally required**
TTH-27	Result	Measured value	CR	Numeric 0 to 99.999 (5,3)	Disable if TTH-26 is true/Yes (not detected) (Federally condition-ally required if analyte detected: TTH-26 is not true/Yes)	**Federally conditionally required**
TTH-28	Result UOM	Unit of measure	CR	List	List of values: MG/L UG/L NG/L Disable true/Yes (not detected) (Federally condition-ally required if analyte detected: TTH-26 is not true/Yes)	**Federally conditionally required**
TTH-29	Reporting Limit	The smallest measured concentration of a substance that can be reliably measured by using a given analytical method	CR	Numeric 0 to 99.999 (5,3)	Disable if TTH-26 true/Yes (not detected) (Federally conditionally required if analyte detected: TTH-26 is not true/Yes)	**Federally conditionally required**
TTH-30	Reporting Limit UOM	Unit of measure	CR	List	List of values: MG/L UG/L NG/L Disable if TTH-26 is true/Yes (not detected) (Federally condition-ally required if analyte detected: TTH-26 is not true/Yes)	**Federally conditionally required**
TTH-31	Method	Analytical method used	O	List	List of Values, List of Methods applicable to TTHM	**Federally required**
TTH-32	Analysis Start Date	Date when analysis started	O	Date MM/DD/ YY YY	TTH-32 must be greater than or equal to TTH-23 (Collection date) and before or equal to TTH-33 (Analysis Complete Date)	**Federally required**
TTH-33	Analysis Complete Date	Date when analysis ended	O	Date MM/DD/ YY YY	TTH-33 must be greater than or equal to TTH-23 (Collection date) and greater than or equal to TTH-32 (Analysis Start Date)	**Federally required**
TTH-34	Analysis	Time when	O	Time		**Federally**

	Complete Time	analysis ended		HH:MM (24h)		**required**
TTH-23	Sample Collector Name	Name of the Person who collected the sample	O	Alpha-numeric		

6.13 JOB HISTORY

The Job History Sub Tab shows any modifications made by a user during the Sample Job workflow and to the samples included in the Job. Information recorded and shown here includes the Rejection Reason.

Job History will be recorded only after a change in Job Status to "Draft with Reviewer." Changes made by a Preparer to his or her draft Sample Job are not recorded.

1) Select the "**Drinking Water Sample Jobs**" tab. The "**Job Maintenance View**" tab will appear. (Figure 77)

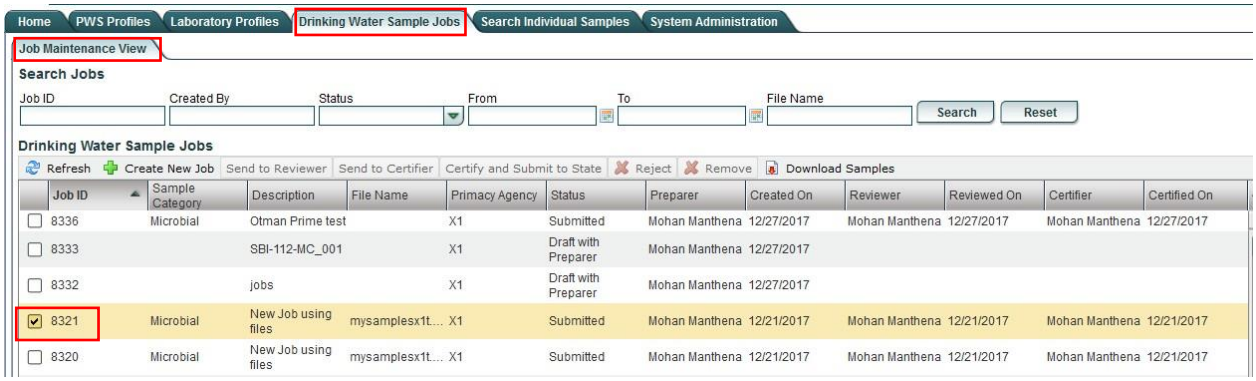


Figure 77 - Job Maintenance View

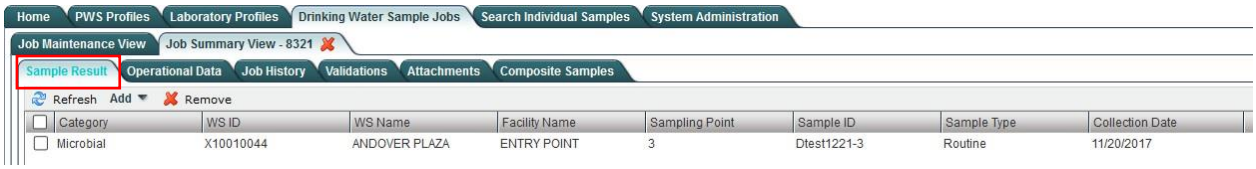


Figure 78 - Sample Result

2) Select a Job from the "**Job Maintenance View**" (Figure 77) to view **Sample Result** Job details in a new tab (Figure 78).

Figure 79 - Job History (All Users)

3) Click the "**Job History**" tab to view the history details of the Job selected (Figure 79).

6.13.1 Authorizations

Only Laboratory and Water System Users (no role restrictions).

Note:

- *The system will start recording history when the Job Status changes from "Draft with Preparer" to "Draft with Reviewer."*

6.13.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Job History	List of modifications made by a user during the Sample Job workflow and to the samples included in the Job	-	None	View only

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
JOH-1	Action	Element to identify the type of change	-	-	List of values: Record Updated	-
JOH-2	Audit Category	Category of the audit	-	-	List of values: • Job sent to reviewer • Job sent to certifier • Job Rejected • Job certified and sent to state • Chem/Radionuclides • Microbial	-
JOH-3	Audit Key		-	-	Data elements to identify the sample separated by a comma jobid wsid facilityName sampleID sampleCategory collectionDate labSampleCd analyteName	-

JOH-4	Last Modi-fication	Details about data modified, including the data field name, the old value of the field, and the new value of the field	-	-	[name of field modified] OldValue: NewValue:	-
JOH-5	Updated Date & Time	The date on which the record was modified				
JOH-6	Updated By	The name of the user who updated the record				
JOH-7	comments	The text entered as a rejection reason.	-	-	-	-

6.14 VALIDATIONS

The Validations Tab includes the results of any validation checks made during the process of submitting an XML file or when using web forms. Some of the data fields in each data entry screen are federally required or federally conditionally required. *These fields are not required to contain valid values in order to save and submit samples within a Job.* However, any records with missing values for federally required or federally conditionally required fields will be considered validation errors and will appear in the Validations Tab.

The Validations Tab includes three different tables:

Top Table - Federal Reporting Validation Results: This table contains results of validations checked against fields entered via the web form or the XML upload processes that are federally required or federally conditionally required to see if there is a value (Figure 80). If those fields are left blank, they will be listed as errors in this table. Any errors displayed in this

table, however, will not prevent a Laboratory or Water System User from certifying and submitting a Job to State.

Middle Table - XML Submittal Validation Summary: This table contains a summary count of all sample records found in an XML file (Figure 80). Based on this summary count, the user will be able to identify the number of samples that contain no errors and the number that contain errors. Errors used for the count are: 1) invalid (either not permitted or not valid compared to stored reference data for the field) data entries for federally required, federally conditionally required, or software required

fields; 2) missing values for software required fields for each sample; and 3) business rule validation errors in the XML file. This table is only relevant for Jobs that were created using the XML File Upload method or LIMS method of reporting. To be included in any Sample Job that is certified and submitted to a state primacy agency, any

sample records with errors need to be corrected either a) locally and re-uploaded to CMDP using XML file upload (or LIMS) or b) by adding web forms to the existing Sample Job that contain the corrected sample records.

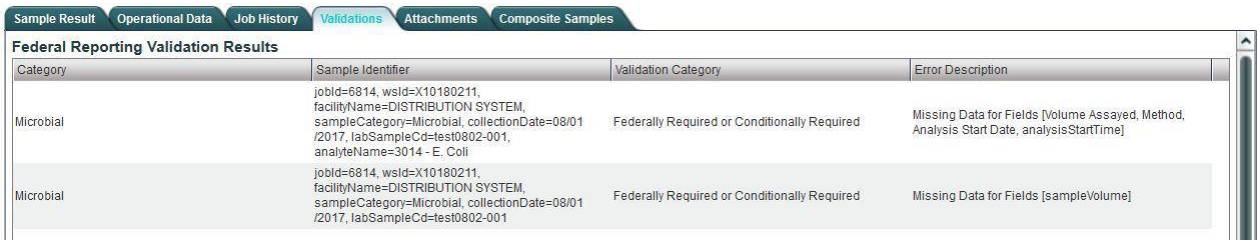


Figure 80 - Federal Reporting Validation Results table

Bottom Table - XML Submittal Validation Error Details: This table contains details of the errors found in the XML Submittal Validation Summary (Figure 81). Users will be able to access the details by selecting a row from this table. Any samples with errors need to be corrected and re-uploaded to CMDP using XML file upload (or LIMS). Errors displayed in this table include invalid data entries (permitted values not respected) and missing software required fields for each sample. To be included in any Sample Job that is certified and submitted to a state primacy agency, any sample records with errors need to be corrected either a) locally and re-uploaded to CMDP using XML file upload (or LIMS) or b) by adding web forms to the existing Sample Job that contain the corrected sample records.

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Select a Job from the **Drinking Water Sample Jobs** list to view Job details in a new tab.
3) Click the "**Validations**" tab to view the validation error details of the Job selected. (Figure 80)
4) If any Federally Required fields or Federally Conditionally Required fields are missing from the sample record, you will be able to open the corresponding sample that has the missing values.

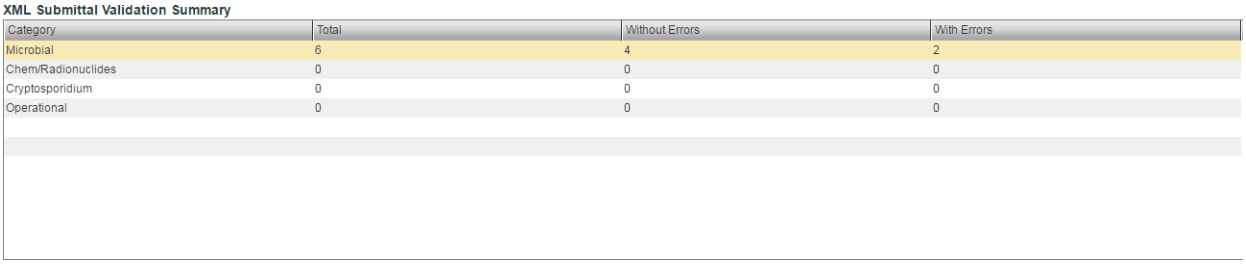


Figure 81 - Validations Table for XML Submittal

5) LIMS and Templates submissions validations are shown in Figure 80:

XML Submittal Validation Error Details

Category	Validation Category	Sample Identifier	Error Description
Microbial	Critical	{"sampleCategory":"Microbial","facilityName":"Test1223",... 08-02"}	{"facSamplingPointId":"Invalid Facility Sampling Point Id.","wsId":"Invalid Water System Id.","facilityId":"Invalid Facility Id."}
Microbial	Critical	{"sampleCategory":"Microbial","facilityName":"Test1","sam.. 08-02"}	{"facSamplingPointId":"Invalid Facility Sampling Point Id.","facilityId":"Invalid Facility Id."}

Figure 82 - Validations Table for XML Submittal Error Details

a. Use the XML Submittal Validation Summary to evaluate the number of samples that have errors in them (Figure 81).

b. This table will not be used in cases where a Job was created using the UI and samples were added using the web forms.

c. To view the details about any errors flagged in the XML Submittal Validation, click the appropriate row, and details will be displayed in the XML Submittal Validation Error Details (Figure 82)

If samples in a Job are being modified by users, the Validations tab will be refreshed according to the latest modification. Any fixed items will be removed from the list (Validation passed).

6.14.1 Authorizations

All users (no role restrictions).

6.14.2 Data Elements

Group	Description	R/O/ CR	Validations	Additional Designations
Federal Reporting Validation Results	Any missing federally required fields from samples within a Job will be displayed in this table	-	-	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
VAL-0	Category	Category of the sample Microbiological, Cryptosporidium, etc.	-	-	List of values: Microbiological Chemicals/Radionuclides Cryptosporidium CFE Turbidity IFE Turbidity LCR WQP Chlorine Dioxide Chlorine Chloramines in DS Chlorine Chloramines entering DS	-

					Total Organic Carbon Ozone Treatment (Bromate) TTHM and HAA5	
VAL-1	Sample ID	Elements to identify the sample; user will use those elements to locate the sample	-	-	Data elements to identify the sample separated by a "," e.g., Jobid=123, wsid=TX0000001, facilityName=test, sampleID=001	-
VAL-2	Validation Category	Category of the validation	-	-	Federally Required Field Federally Conditionally Required Field	-
VAL-3	Error Description	Details about missing or invalid data	-	-	Missing Data Element + List of data elements missing separated by a "," e.g., Missing Data Element [Analysis Start Date, Analysis End Date]	-

Note:- The following data elements will only be used for XML file upload.

Group	Description	R/O/CR	Validations	Additional Designations
XML Submittal Validation Summary	A summary table that counts samples with errors and without errors	-	-	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
VAL-4	Category	Category of the sample (Microbiological, Cryptosporidium, etc.)	-	-	List of values: Microbiological Chemicals/Radionuclides Cryptosporidium CFE Turbidity IFE Turbidity LCR WQP Chlorine Dioxide Chlorine Chloramines in DS Chlorine Chloramines entering DS Total Organic Carbon Ozone Treatment (Bromate) TTHM and HAA5	-
VAL-5	Total	Total number of samples found in the XML file	-	Numeric	Count number of samples in XML file used for file upload	-
VAL-6	With Errors	Total number of samples that contain errors	-	Numeric	Count number of samples that have errors: invalid data entered or missing required fields.	-

VAL-7	Without Errors	Total number of samples that do not contain errors	-	Numeric	Count number of samples that do not have errors	-

Group	Description	R/O/CR	Validations	Additional Designations
XML Submittal Validation Error Details	Table to provide details about errors	N/A	-	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
VAL-8	Category	Provides the category of the sample Microbiological , Cryptosporidium , etc.	-	-	List of values: Microbiological Chemicals/Radionuclides Cryptosporidium CFE Turbidity IFE Turbidity LCR WQP Chlorine Dioxide Chlorine Chloramines in DS Chlorine Chloramines entering DS Total Organic Carbon Ozone Treatment (Bromate) TTHM and HAA5	-
VAL-9	Validation Category	Critical	-	-	-	-
VAL-10	Sample Identifier	Elements to identify the sample in the XML file that contains the error	-	-	Elements include: wsID, jobId, stateAssignedFacID, sampleCategory, sampleCd, collectionDate	-
VAL-11	Error Description	Further description to determine the error	-	-	-	-

6.14.3 CMDP Validation Matrix

The following tables describe the different validations available in CMDP using all reporting methods. You will find a definition of each validation type below.

Table 3 - CMDP Validation Matrix

CMDP Reporting Method	Data Validation Error Appears in CMDP Validation Report (by Validation Type)				
	Schema (Field Names or Data Types)	**Software Required Field (Missing Value)**	**Business Rule**	**Reference Data**	**Federally Required**
Web Form via CMDP UI	Not Applicable – validation error appears in web form	Not Applicable – validation error appears in web form	Not Applicable – validation error appears in web form	Not Applicable – validation error appears in web form	Yes – for null values only
XML via CMDP LIMS (Web Service)	No. XML file is rejected and errors appear in web service response	Yes	Yes	Yes	Yes – for null values only
CMDP Reporting Method	**Data Validation Error Appears in CMDP Validation Report (by Validation Type)**				
	Schema (Field Names or Data Types)	**Software Required Field (Missing Value)**	**Business Rule**	**Reference Data**	**Federally Required**
XML via CMDP UI (Manual)	No. Schema in the XML file must watch the CMDP schema, or the file will be rejected and the error will appear in the user interface	Yes	Yes	Yes	Yes – for null values only

Data Validation Error Results for XML File, by Validation Type				
Schema (Field Names or Data Types)	**Software Required Field (Missing Value)**	**Business Rule**	**Reference Data**	**Federally Required**
Entire file is rejected, and no Sample Job ID number is created	Sample Job ID number is created, but no records are saved	Sample Job ID number is created, records with errors are rejected, records without errors are saved	Sample Job ID number is created, records with errors are rejected, records without errors are saved	Sample Job ID number is created and records are accepted with null value errors

Schema

If the user is using LIMS for XML upload, the XML schema must be valid for the upload to be successful.

Software Required Field

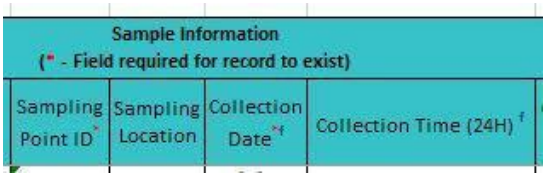


Figure 83 - Sample Information (Partial) from Microbiological Template

As an example, if a user is using the Excel Templates to upload samples into CMDP, if any required fields from the Sample Information section are left blank, the sample will not be created, and the critical error will be displayed in the Validations tab as part of the 2nd and 3rd tables (XML Submittal Validation Summary and XML Validation Submittal Validation Details). A Job will still be created and will contain any valid samples. (Figure 83)

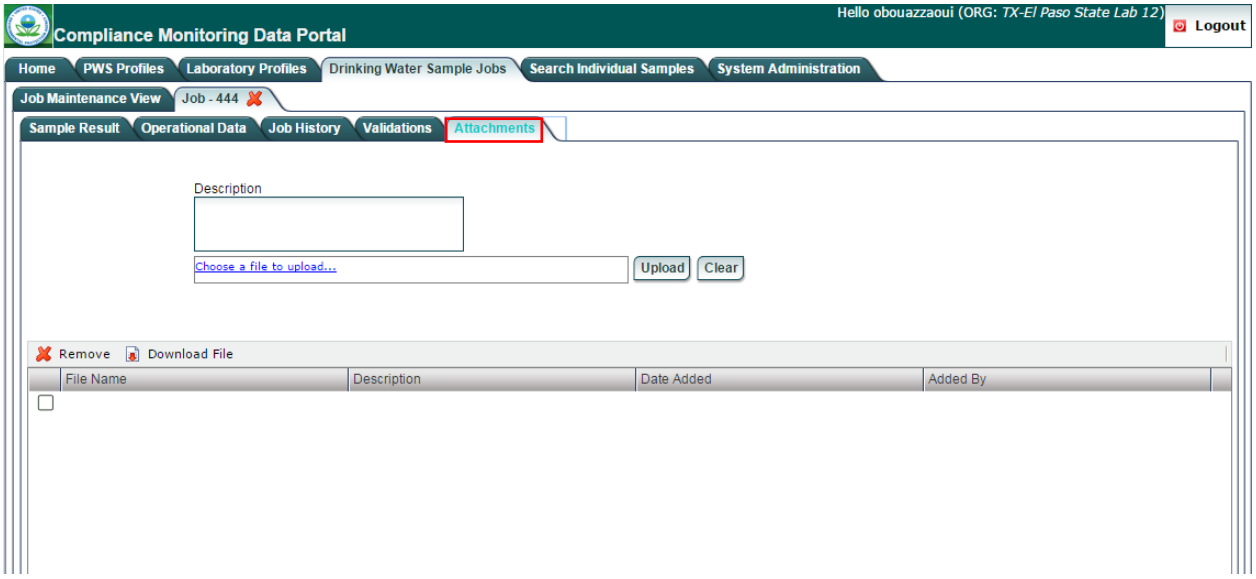


Figure 84 - Job Attachments

Business Rule

As an example, consider the following business rule: The total Sample Volume of a sample must be greater than or equal to the Volume Assayed. If this validation fails, a record will not be created, and an error will be displayed as part of tables 1 and 2 (XML Submittal Validation Summary and XML Submittal Validation Details).

Reference Data

As an example, if a user enters a Water System ID in the MS Excel Template that does not exist as reference data in the CMDP database, the record will be rejected. Those records that have valid reference data will be created.

Federally Required

If any of these elements are missing from an Excel Template, for example, those errors will be displayed in the 1st table in the Validations tab (Federally Reporting Validations Results).

6.15 ATTACHMENTS

To upload attachments

1) Under the "**Drinking Water Sample Jobs**" tab, click the "**Job Maintenance View**" tab.
2) Create a new Job or select a Job from the Jobs search list to view Job details in a new tab.
3) Click the "**Attachments**" tab to upload any attachments related to the selected Job. (**Error! Reference source not found.**)
4) Provide a description of the file to be uploaded in the textbox.
5) Click "**Choose a file to upload**," select a file, and click "**Open**." Then click "**Upload**."

To remove attachments:

1) From the attachments grid, select an attachment(s) by clicking on the check box(es).
2) Click "**Remove**" to remove selected records from the attachments grid.

To download an attachment

1) Click "**Download File**" to download the selected attachment(s).

6.15.1 Authorizations

- Only users (all roles) associated with a laboratory (private or state) or add/remove attachments to a Job
- All users (no role restrictions) should be able to download attachments.

6.15.2 Data Elements

Group	Description	R/O/ CR	Validations	Additional Designations
Add Attachments	Allows user to add a file attachment to a Job	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DWJ-27	File Name	File name with extension	R	Text	-	-
DWJ-28	Description	Text describing attachment	O	Text	-	-

Group	Description	R/O/CR	Validations	Additional Designations
Attachments List	List of all files attached to the Job	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
DWJ-29	File Name	File name plus extension	-	-	-	-
DWJ-30	Description	Text describing attachment	-	-	-	-
DWJ-31	Date Added	Date when the file was attached to the Job	-	-	System generated	-
DWJ-32	Added By	User who added the attachment	-	-	Autopopulated (User ID)	-

7 SEARCH INDIVIDUAL SAMPLES

This system module allows users to search samples across Jobs and locate an individual sample without opening a Job. This will allow the user to search samples by different criteria (by water system, collection period, etc.). Note, however, you cannot change a sample or result in this module.

7.1 SEARCH SAMPLES

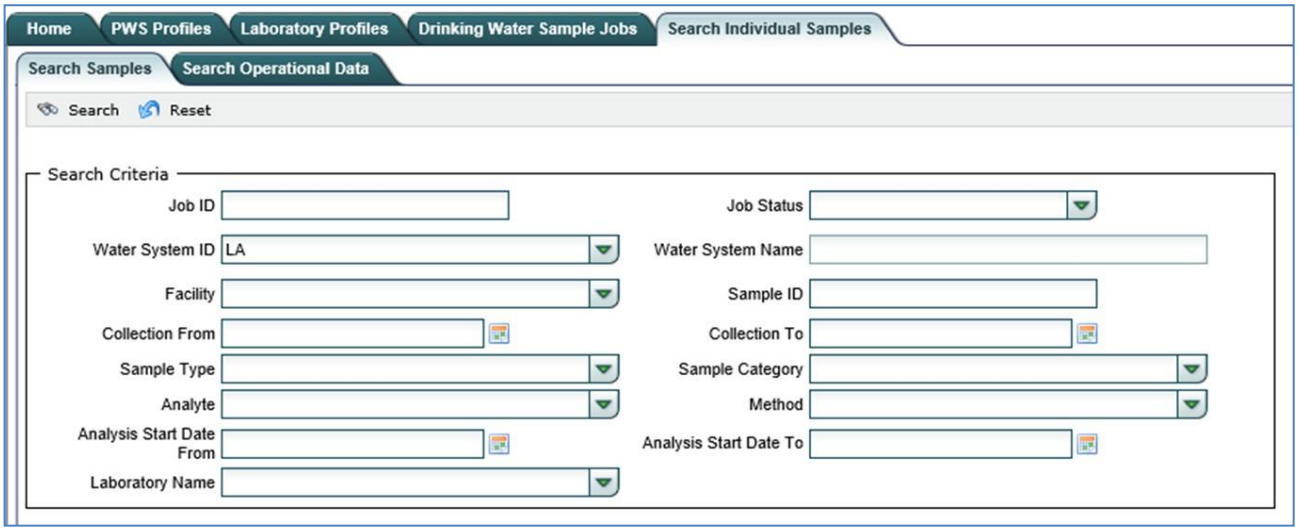


Figure 85 - Search Samples (Microbiological/Chemicals/Radionuclides/Cryptosporidium)

Users can search samples (Microbiological/Chemicals/Radionuclides/Cryptosporidium) by using the search feature provided in the "Search Individual Samples" Module.

1) Click the "**Search Individual Samples**" tab. (Figure 85)
2) Click the "**Search Samples**" tab.
3) Enter one or more of the search criteria and click the "**Search**" button to narrow down the search results. The default search criteria is the first two letters of the Water System ID
4) Click on a Sample Results row to view the details of the sample and its result(s). Click **Close** at the top of the sample form to return to the list of sample results.
5) To reset search parameters/filters, click the "**Reset**" button. Note that selecting the "**Reset**" button resets the search criteria to the default search criteria (the first two letters of the Water System ID) and clears the grid under **Sample Results**. To run another search, go back to step 3 above.

Note:

- *Note that any sample opened from this section of the application will reference the Job ID and Job Status.*

7.1.1 Authorizations

- Users (all roles) associated with a laboratory, water system, or state laboratory should be

able to search all samples within their organization

- Users associated with a state will be able to search samples (Submitted Jobs only).

7.1.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Sample Results Search Criteria	-	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
SIS-1	Job ID	Unique ID assigned to the Job	O	Freeform	-	-
SIS-2	Job Status	Status of the Job	O	List	List of values: Validation in Progress Draft with Preparer Draft with Reviewer Draft with Certifier Submitted Accepted by State Validation Failed	-
SIS-3	Water System	Water system related to the sample	O	List [WS ID – WS Name] The default is the first two letters of the Water System ID	List of values: List of all water systems user has access to	-
SIS-4	Facility	Water system facility related to the sample	O	List [WSF ID – WSF Name]	List of values: List of all facilities in water system selected in SIS-3	-
SIS-5	Collection Date From	Start date for the date range when sample collection occurred	O	Date MM/DD/YYYY	-	-
SIS-6	Collection Date To	End date for the date range when sample collection occurred	O	Date MM/DD/YYYY	-	-
SIS-7	Sample ID	ID assigned to the sample	O	Freeform	-	-
SIS-8	Sample Type	Type of sample (e.g., routine)	O	List	List of values: Routine Repeat Triggered	-

					Confirmation Special Batch Blanks Field Blanks Performance Evaluation Shipping Blanks Split Blanks Maximum Residence Time Matrix Spike	
SIS-9	Sample Category	Category of the sample (e.g., microbiological)	O	List	List of values: Microbiological Chemicals/ Radionuclides Cryptosporidium	-
SIS-10	Analyte	Analytes related to the sample	O	List	List of values: List of analytes	-
SIS-10.1	Method	Analytical method used	O	List	List of values: List of methods applicable to analyte selected in SIS- 10	-
SIS-10.2	Analysis Start Date From	The earliest date from which to search for Analysis Start Date within a date range. The search will show results for samples with Analysis Start Dates on or after the Analysis From Date.	O	Date MM/DD/ YYYY		
SIS-10.3	Analysis Start Date To	The latest date to search for an Analysis Start Date within a date range. The search will show results for samples with Analysis Start Dates on or before the Analysis To Date.	O	Date MM/DD/ YYYY		
SIS-11	Laboratory ID	ID of the reporting laboratory	O	List	List of values: List of all laboratories user has access to	-

Group	Description	R/O/CR	Validations	Additional Designations
Sample Results Table	List of the search results	-	None	-

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
SIS-12	Job ID	Unique ID assigned to the Job	-	Read-only	None	-
SIS-13	Job Status	Status of the Job	-	Read-only	None	-
SIS-14	Water System ID	Federal ID of the water system	-	Read-only	None	-
SIS-15	Water System Name	Name of the water system related to the sample	-	Read-only	None	-
SIS-16	Facility	Water system facility within the water system	-	Read-only	None	-
SIS-17	Sample ID	ID assigned to the sample	-	Read-only	None	-
SIS-18	Sample Type	Type of sample (e.g., routine)	-	Read-only	None	-
SIS-19	Collection Date	Date when sample was collected	-	Read- only	None	-
SIS-20	Sample Category	Category of the sample record (e.g., microbiological)	-	Read-only	None	-
SIS-21	Analyte	Analytes related the sample	-	Read-only	None	-
SIS-22	Laboratory	Reporting laboratory	-	Read-only	None	-

7.2 SEARCH OPERATIONAL DATA

Users can search samples (Microbiological/Chemicals/Radionuclides/Cryptosporidium) by using the search feature provided in the “Search Individual Samples” Module.

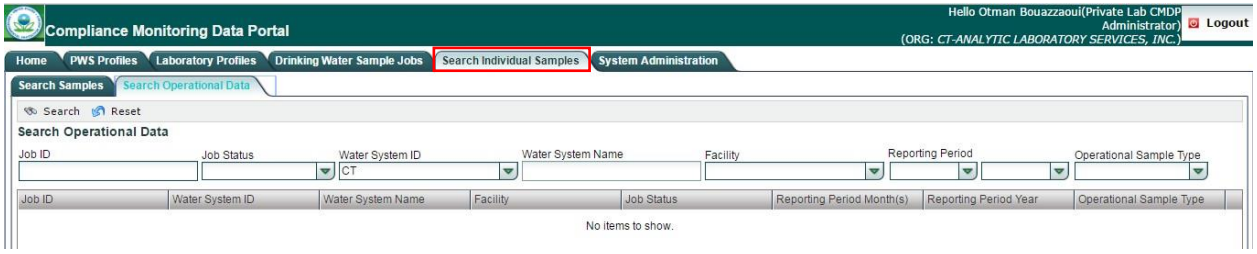


Figure 86 - Search Operational Sample Types

1) Click the **“Search Individual Samples”** tab. (Figure 86)
2) Click the “**Operational Data**” tab.
3) Enter one or more of the search criteria and click the **“Search”** button to narrow down the

search results.

4) Click on a row in the grid to view the details of an operational data record. Click **Close** at the top of the form to return to the list of records.

5) To reset search parameters/filters, click the "**Reset**" button. Note that selecting the "**Reset**" button resets the search criteria to the default search criteria (the first two letters of the Water System ID) and clears the grid. To run another search, go back to step 3 above.

7.2.1 Authorizations

- Users (all roles) associated with a laboratory, water system, or state laboratory should be able to search all samples within their organization.
- Users associated with a state will be able to search samples (data restrictions apply).

7.2.2 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Operational Sample Type Search Criteria	Data elements used to search for an Operational Sample Type record	-	None	-

Code	Label	Description	R/O /CR	Format	Validations	Additional Designations
SIS-23	Water System ID	Water System ID	O	List [WS ID– Name]	List of values: List of all water systems user has access to	-
SIS-23.1	Water System Name	Water System Name corresponding to ID entered	-	Read-Only Text	-	-
SIS-24	Facility	Facility related to the sample	O	List [WSF ID – WSF Name]	List of values: List of all Water System facilities within the water system selected in SIS-23	-
SIS-24.1	Job ID	ID assigned to the Job	O	Numeric	-	-
SIS-25	Job Status	Status of the Job (e.g., Draft with Preparer)	O	List	List of values: Validation in Progress Draft with Preparer Draft with Reviewer Draft with Certifier Submitted Accepted by State Validation Failed	-
SIS-26	Monitoring Period Month(s)	Month(s) of monitoring period	O	List	List of values: January to December Q1, Q2, Q3, Q4	-

SIS-27	Monitoring Period - Year	Year of the monitoring period	O	List	List of values: 2011 to current year	-
SIS-28	Operational Sample Type	Category of the operational sample (e.g., CFE Turbidity)	O	List	CFE Turbidity IFE Turbidity Chlorine Dioxide, Chlorine Chloramine entering DS Chlorine Chloramine in DS LCR WQP Total Organic Carbon TTHM and HAA5 Ozone Treatment (Bromate)	-

Group	Description	R/O/CR	Validations	Additional Designations
Operational Sample Types Results Table	Table where search results are displayed	-	None	-

Code	Label	Description	R/O/CR	Format	Validations	Additional Designations
SIS-29	Job ID	ID assigned to the Job	-	-	-	-
SIS-30	Water System	Water system ID related to the sample	-	-	-	-
SIS-31	Water System Name	Water System Name corresponding to the ID entered	-	-	-	-
SIS-32	Facility	Facility related to the sample	-	-	-	-
SIS-33	Job Status	Status of the Job (e.g., Draft with Preparer)	-	-	-	-
SIS-34	Reporting Period Month(s)	Month(s) of the monitoring period	-	-	-	-
SIS-35	Reporting Period Year	Year of the monitoring period	-	-	-	-
SIS-36	Operational Sample Type	Category of the operational sample (e.g., CFE Turbidity)	-	-	-	-

8 SYSTEM ADMINISTRATION

This system module, accessible to System Administrators, allows State CMDP Administrators to manage Change Requests. Additional System Administration functionality may become available in future versions of CMDP.

8.1 MANAGE RECEIVED PROFILE CHANGE REQUESTS

State CMDP Administrators can either accept or reject Profile Change Requests submitted by laboratories or water systems.

8.1.1 Process Definition

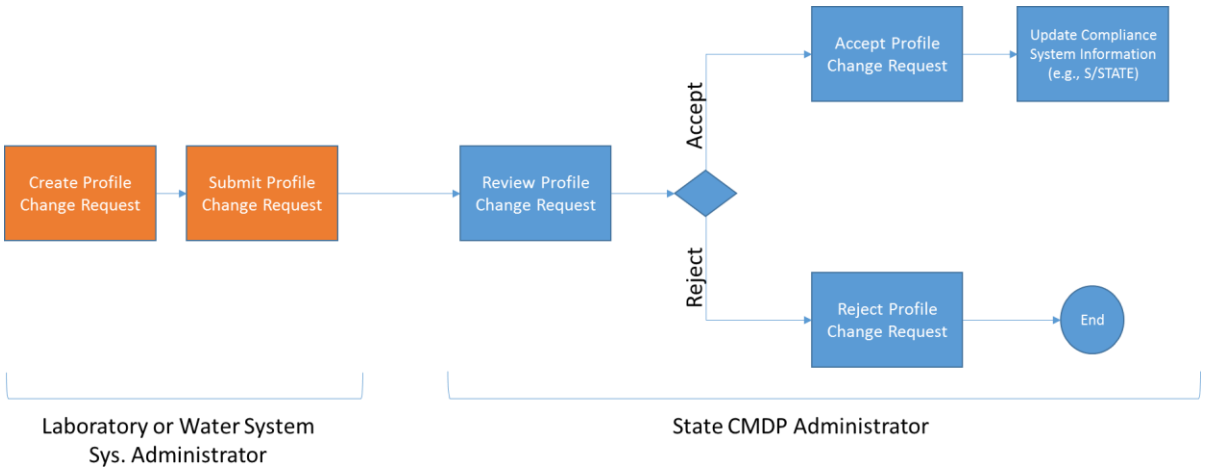


Figure 87 - Profile Change Request Process

Above depicts the Profile Change Request Process (Figure 87).

Profile Change Requests are created and submitted by either Water System Administrators (for Water System Profile Change Requests) or Laboratory System Administrators (for Laboratory Profile Change Requests). The State CMDP Administrator should review the Profile Change Request and determine whether the changes need to be made in his or her compliance system (e.g., SDWIS State).

A Profile Change Request can be in one of the following status categories:

- **Pending**: A pending Profile Change Request is a request created by the Water System Administrator or the Laboratory Administrator that needs to be processed by the State CMDP Administrator.
- **Accepted**: An accepted Profile Change Request is a request that has been received and accepted by the State CMDP Administrator.
- **Rejected**: A rejected Profile Change Request is a request that has been received and rejected by the State CMDP Administrator.

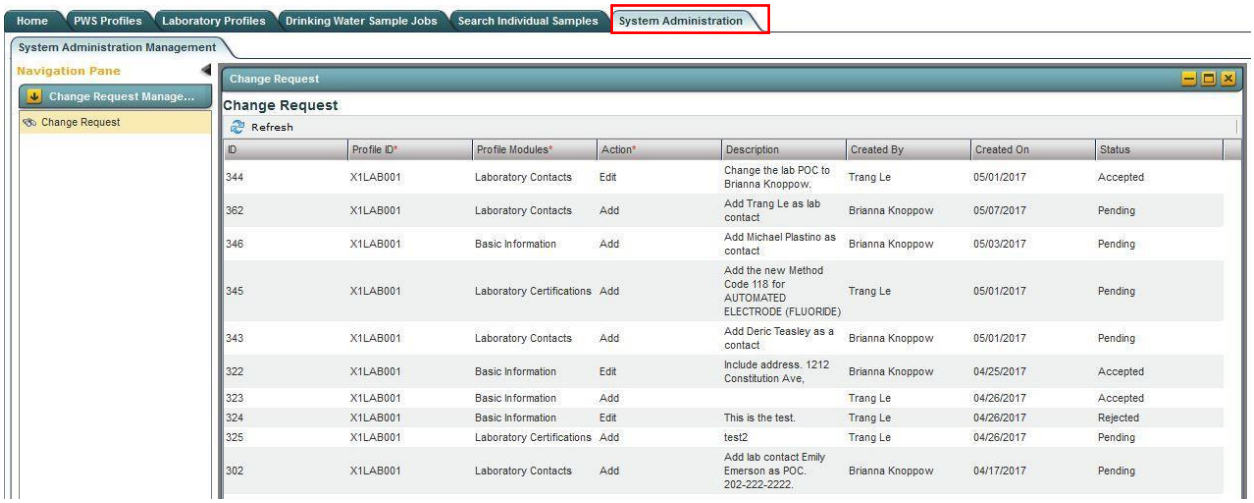


Figure 88 - Manage Profile Change Requests

6) Click the "**System Administration**" tab.
7) Click "**Change Request**" on the left Navigation Pane to view the Change Requests.
8) Double-click on a Change Request result to update the status (e.g., Pending, Accepted, or Rejected).

Notes:

- *Only State Administrator Profiles are authorized to update Change Requests. PWS Profiles and Lab Profiles are not authorized to view the "System Administration" tab.*
- *Once a Profile Change Request is received by the CMDP State Administrator, it is important to modify the data in the state's compliance system (e.g., SDWIS State) according to the information provided in the request. Once that step is performed, the CMDP State Administrator can accept the request and the corresponding submitter will see the status of their request updated to Accepted..*

8.1.2 Authorizations

- Only CMDP State Administrators will have access to manage Profile Change Requests.

8.1.3 Data Elements

Group	Description	R/O/CR	Validations	Additional Designations
Water System or Laboratory Change Request	Elements related to Laboratory or Water System Profile Change Requests		None	

Code	Label	Description	R/O/ CR	Format	Validations	Additional Designations
SYS-1	ID	Unique ID assigned to the Change Request	-	Read-only	-	-
SYS-2	Profile ID	ID of the entity related to the Change Request	-	Read-only	-	-
SYS-3	Profile Modules	Section of the Profile related to the Change Request	-	Read-only List of values for PWS Profiles: Basic Information, Other Contacts, Facilities, Sampling Points List of Values for Lab Profiles: Basic Information, Other Contacts, Certifications		-
SYS-4	Action	Action related to the Change Request	-	Read-only	-	-
SYS-5	Description	Comment field related to the Change Request	-	Read-only	-	-
SYS-6	Created By	User who created the Change Request	-	Read-only	-	-
SYS-7	Created On	Date on which the Change Request was created	-	Read-only	-	-
SYS-8	Status	Status of the Change Request	R	List	List of values: Pending, Accepted, Rejected	-

Appendix: Running Release Notes

CMDP 1.23 - CY20R3 Production Release Notes

Enhancements and fixes made to CMDP in release 1.23 in the CMDP Pre-Production environment are listed below.

Note:

- Excel template users, please refer to the sections on Fixes and Known Issues below for specific details on updates to the CMDP templates and to Appendix A for information on the version numbers for the templates.
- No change were made to the DSE in this release. The current version of the DSE is 1.22.

Enhancements

Method/Analyte Pairing

- Added 10 Method/Analyte Pairings to the database and the Sample Results template. See Appendix B. Users can now use these additional Method/Analyte Pairings when reporting sample results and searching for individual samples:
    - On the Search Individual Samples feature when searching for samples, users should be able to view and filter results by selecting the new Method/Analyte pairings.
    - When entering a sample result through the Sample Result Template, users should be able to view and select the new Method/Analyte pairings.
    - When entering a sample result through the Sample Result Web Form, users should be able to view and select the new Method/Analyte pairings.

Sample Result Reporting

- Added Unit of Measure "L/mg-M" on the Chemical/Radionuclide sample entry pages on the CMDP user interface and to the Chemical/Radionuclide sample entry tab in the Sample Result template
- Added the ability to report the Person Performing Analysis for sample results and field results (microbial, chemical/radiological, and cryptosporidium)
    - Can be reported using the following methods:
        - Direct sample entry using the CMDP user interface
        - Sample upload using the Sample Result template
        - Batch upload using the web services
    - Field element is optional
    - Field element is limited to 100 characters
    - The SampleResults.xsd file has been updated and posted to the CMDP Help Center.

XML Upload and Web Services

- Added the ability for all Operational Data to be downloaded from CMDP using web services
    - Functionality has not been incorporated into the DSE.
    - Downloaded XML file is not intended to be used with SDWIS XMLSampling, but does allow the primacy agency to obtain all raw operational data from CMDP.

- To retrieve Operational Data via web service, the user would:
  - Use a Rest Service API Client utility of their choosing:
  - Submit "GET" request to the following URL:
    - https://cmdpprep.epa.gov/cmdp-webservice/api/sample/sampleData/?
    - Using basic authentication
    - Username and password of the CMDP State Administrator
    - Replace the <?> in the URL above with the job number being retrieved

Fixes

CDMP Credentials

- Fixed an issue where if a user had multiple roles with multiple partners, they would receive an "Insufficient Permissions" error when trying to log into CMDP after switching primary roles in SCS, reactivating roles in SCS, or adding a new role in SCS. This should allow a user to seamlessly switch from role to role in SCS without receiving the "Insufficient Permissions" error or requiring separate accounts for each partner. This will also allow users to activate/reactivate roles without receiving the error. **Note:** if a user does not have an active role associated with an active organization in their SCS account, this will still trigger an "Insufficient Permissions" error when they try to log-in to CMDP.

Sample Reporting

- Fixed an issue where when entering a confirmation sample, the "Related Original Sample Collected" drop down list was empty.
- Fixed the issue where Collection Time reported as 00:00 via the Sample Result template was not displaying properly in CMDP.

Sample Result Reporting

- Fixed the issue where the analyzing Lab drop down list was repeating, beginning with the 75th lab in the list, and not displaying all labs in the list if the list contained more than 75 records.
- All required combinations of Collection Date and Time, Received Date, Analysis Start Date and Time, and Analysis Completed Date and Time can be reported using this release including:
  - reporting Analysis Start Date and Time and Analysis Completed Date and Time for a result using all reporting methods, including the direct data entry using the MDP user interface;
  - reporting the same dates and times for Collection Date and Time, Analysis Start Date and Time, and Analysis Completed Date and Time (in the case of field results reported as chem/rad results).

User Interface

- Fixed the issue with the CMDP user interface where a user was not able to copy and paste an entire Water System (WS) ID into the WS selection drop down. The user previously had to partially enter the

WS ID and then select the desired WS from the list or paste the WS ID in the field and delete the last digit and then selected the desired WS for the selection to work properly.

- The user is now able to paste an entire WS ID number into the drop down and CMDP will clear out the WS facility and sample point values if previously entered and reload the WS facility list with values for the newly selected WS.
- The change was made to the following pages:
  - PWS Tab
    - Water System ID search,
  - Drinking Water Sample Jobs tab
    - Data entry pages for sample types(Chem Rad, Micro , Crypto)
      - Water System ID search
  - Search Individual Samples
    - Search Samples
    - Search Operational Data

- Fixed the issue where the sort on the Job ID field was inconsistent. For example, if a list had less than 75 records, no sort was applied, but if the list had 75 or greater records it would sort by Job ID in descending order.
  - Job lists are now sorted by Job ID in descending order by default, regardless of record count.

Known Issues

- When reporting TTHM/HAA5 Operational Data, there are multiple issues related to the Reporting Lab ID field.
  - If the Reporting Lab ID is not populated, CMDP will not be able to generate the XML file for the DSE to download and the DSE process will fail (there will be a "Response error::400-400" error in their DSE log) and sample jobs will stop downloading. If this happens, the CMDP Support Team will need to run a script to populate the Reporting Laboratory ID field. This has been identified as a bug and has been added to the CMDP backlog for prioritization.
  - There is a discrepancy between what is a required field on the user interface and what is required for CMDP to generate the XML file for download by the DSE. On the user interface, when entering TTHM/HAA5 operational data, the field Reporting Laboratory ID is not indicated to be required, and the validation checks do not enforce it to be required, however, if it is not populated, the above-mentioned error will occur. This has been identified as a bug and has been added to the CMDP backlog for prioritization.
  - The Operational Data template indicates the Reporting Laboratory ID as a required field, but the template does not enforce that requirement. This has been identified as a bug and has been added to the CMDP backlog for prioritization.
  - When a user logged in with a laboratory role is entering data, the Reporting Laboratory ID field is prepopulated with their Lab ID, but when the TTHM/HAA5 operational data is being populated by a user with a water system role, the Reporting Lab ID is not prepopulated and must be populated by the user. This is a training issue until the above mentioned issues are addressed.
- Analysis Start and Completion times reported as 00:00 via the Sample Result template for Chemical/Radiological samples are not displaying at all in CMDP. This has been identified as a bug and has been added to the CMDP backlog for prioritization.

Web Browser Compatibility

- The CMDP Application is currently compatible with the following web browsers:
  - Internet Explorer versions 10 and 11 (note that these are currently under a security advisory and should not be used until that security advisory has been lifted)
  - Firefox version 68.0.2 or higher
  - Microsoft Edge version 44.17763.1.0 or higher
  - Google Chrome version 76.0.3809.100 or higher
  - Edge and Chrome: known issues related to the styling for some popups and dialog boxes. These items may appear to be grey/transparent.
- We are currently testing a new user interface theme that will resolve the transparency and poor contrast display issues in Edge and Chrome. This new theme is also being tested for cross-browser compatibility.

Data Synchronization Engine (DSE)

Fixes

- No changes were made to the DSE in this release.

Known Issues

- With DSE 1.22, when a water system is uploaded to CMDP via the DSE, the population and administrative contact information is not loaded. This missing information (pop served and admin contact) will not prevent you from submitting samples, as the facilities and sampling points are accurate and can be used for sample submission. Previous versions of the DSE did successfully migrate population served and administrative contact information and that information is still in CMDP. This has been identified as a bug and has been added to the CMDP backlog for prioritization.
- With DSE 1.22, there is an issue when trying to migrate Operational Data from CMDP into SDWIS State. When SDWIS XMLSampling attempts to process the <jobOpsamples_(job_id).xml> file placed into the XMLSampling inbox by the DSE, it will fail. No record of the attempt will be displayed in the XMLSampling job list.
  - Currently there is no workaround. This has been identified as a bug and has been added to the CMDP backlog for prioritization.
  - This issue prevents the ability to migrate the following MDBP Summaries into SDWIS State from CMDP:
    - 95PT - Combined Filter Effluent 95% Turbidity
    - MAXT - Combined Filter Effluent Maximum Turbidity
    - EPRD - Entry Point Residual Disinfectant Concentration
    - DSRD - Distribution Residual Disinfectant Concentration
    - MRDL - Chlorine/Chloramine Maximum Residual Disinfectant Level
    - IFT - Individual Filter Effluent Turbidity

Appendix A – Microsoft Excel Template Version Information

The version number for the Sample Results template that corresponds with this release is v2.035, dated April 27, 2020. The version number for the Sample Results template is found on the upper right of the Microbiological sheet, Rows 1-3/Columns U-W as shown below in Figure 1.
The version number for the Operational Data template that corresponds with this release is v2.0.21, dated December 30, 2019, which is the same as the one released with CMDP 1.22. The version number for the Operational Data Template is found on the upper right of the CFE Turbidity sheet, Rows 1-3/Columns U-W as shown below in Figure 2.

Figure 1 – Sample Results Template Versioning Information

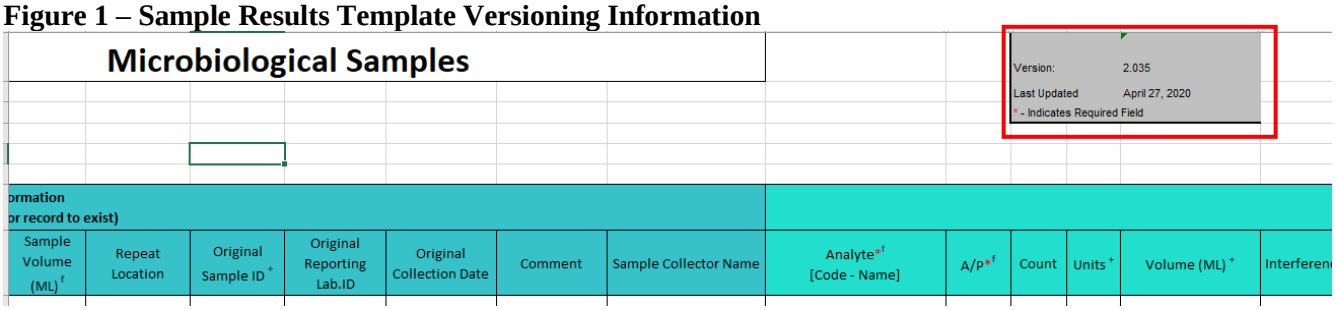
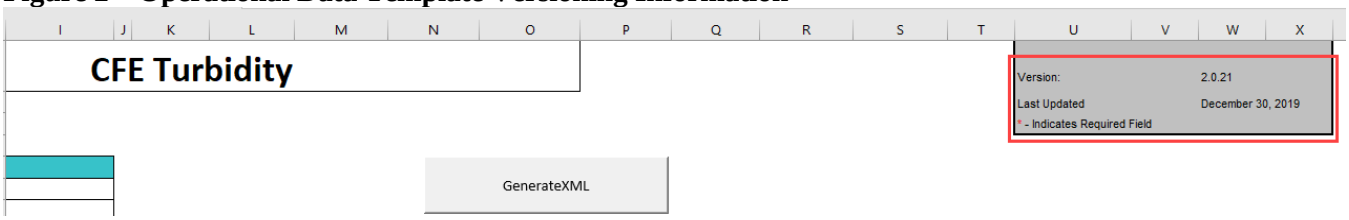


Figure 2 – Operational Data Template Versioning Information



Appendix B. – Method/Analyte Pairing Updates

The following Method/Analyte pairings were added or restored to the CMDP Production database and were added to the Sample Results template as part of this release. The version number for the Sample Results template is Version 2.035.

Method Code	Method Name	Analyte Code	Analyte Name	Analyte Type
Colisure	COLISURE REAGENT	3000	COLIFORM (PRE-TCR)	ORGANISM
9222B	MEMBRANE FILTER	3000	COLIFORM (PRE-TCR)	ORGANISM
9223B	COLILERT	3000	COLIFORM (PRE-TCR)	ORGANISM
EPA 537	EPA 537	2801	PERFLUOROBUTANESULFONIC ACID (PFBS)	ORGANIC CHEMICAL
EPA 537	EPA 537	2802	PERFLUOROHEPTANOIC ACID (PFHPA)	ORGANIC CHEMICAL
EPA 537	EPA 537	2803	PERFLUOROHEXANE SULFONIC ACID (PFHXS)	ORGANIC CHEMICAL
EPA 537	EPA 537	2804	PERFLUORONONANOIC ACID (PFNA)	ORGANIC CHEMICAL
EPA 537	EPA 537	2805	PERFLUOROCTANE SULFONIC ACID (PFOS)	ORGANIC CHEMICAL
EPA 537	EPA 537	2806	PERFLUOROCTANOIC ACID (PFOA)	ORGANIC CHEMICAL
HACH 10200	CHROMOTROPIC ACID	1040	NITRATE	INORGANIC CHEMICAL

The version number for the Sample Results template is found on the upper right of the Microbiological sheet, Row 1/Column U-W as shown below in Figure 2.

Figure 2 – Sample Results Template Versioning Information