COMPLIANCE MONITORING DATA PORTAL (CMDP) USER MANUAL

VERSION 1.4.1
April 18, 2018

Prepared for: U.S. EPA
OFFICE OF WATER

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REVISION HISTORY

Version Number	Date of Revision	Description of Changes	Revision Entered By
0.1	04/30/2016	CMDP User Manual.	INDUS
0.2	08/12/2016	CMDP User Manual edits.	Will Bowman (EPA Product Owner)
0.3	08/16/2016	CMDP User Manual edits.	Will Bowman Attain, LLC
0.4	08/28/2016	CMDP User Manual edits.	Attain, LLC
0.5	09/21/2016	CMDP User Manual edits – Operational Sample Types Field Descriptions.	Will Bowman
0.6	09/22/2016	CMDP User Manual edits – review product owner input and changes according to comments.	Attain, LLC
0.7	09/30/2016	CMDP User Manual edits – formatting, edit checks, reference checks.	Attain, LLC
0.8	09/30/2016	Minor edits	Will Bowman
0.9	10/4/2016	Changed URL for CMDP Help Desk; Minor edits to data element tables.	Will Bowman
0.9.1	10/6/2016	"CMDP Help Desk" added to document.	Will Bowman
1.0	10/28/2016	Additional editorial updates and clarifications; added two data elements for residuals. For CMDP version 1.1	Will Bowman and Brianna Knoppow
1.1	12/15/2016	Updates to Chlorine/Chloramine Entering DS, Chlorine/Chloramine in DS, Chlorine Dioxide, and Chlorite web forms.	Will Bowman
1.2	12/5/2017	Updated validation tables, screen shots, added 'sample received date' where relevant, reworded coliform/E.coli validation, minor edits.	Brianna Knoppow
1.2	12/5/2017	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	12/27/2017	Updated figures formatting. Incorporated v1.10 update in which TTHM / HAA5 and Composite Samples are now mapped to XML Sampling.	Brianna Knoppow
1.4	03/03/2018	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 INTRODUCTION

1.1 ABOUT THIS DOCUMENT

The Compliance Monitoring Data Portal (CMDP) User Manual is intended for CMDP State and Private Laboratory Users, Water System Users, State Primacy Agency Users, and Laboratory Information Management System (LIMS) Vendors. It 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

1.1.2 Acronyms and Definitions

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 and* Figure 78 *for details)*
SDWA	Safe Drinking Water Act
SCS	Shared CROMERR Services
UI	User Interface

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

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, to use the application users must have an internet connection established and web browser installed. The following web browsers are recommended: Internet Explorer (IE 9 and above), Firefox, and Chrome. The following screen resolution is recommended: 1366 x 768.

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.

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 two-way data exchange between CMDP and SDWIS-State
- Web Services that support two-way data exchange with primacy agency compliance databases
- A Shared CROMERR Services web application for registration and end-user management.

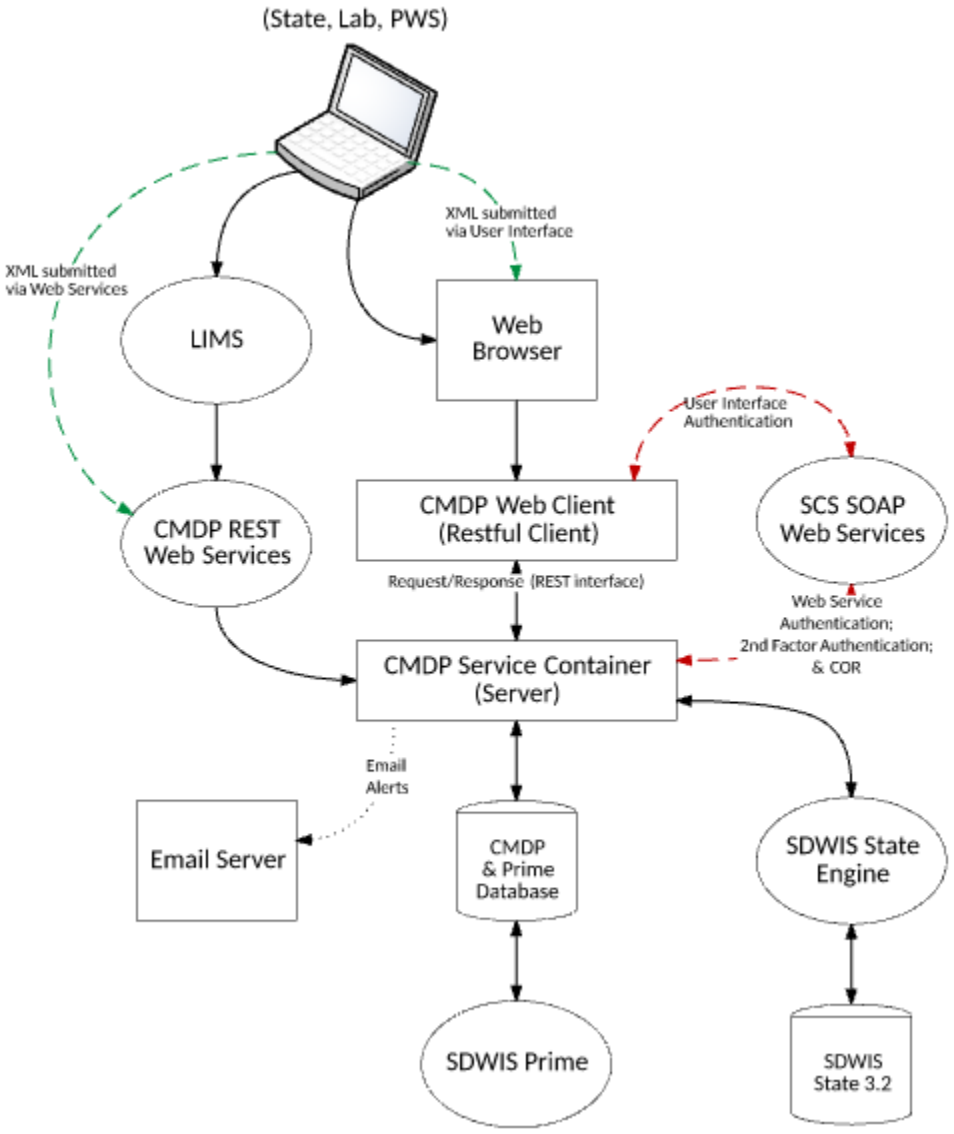


Figure 1 - CMDP Service Components

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 will be 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 , below. 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)

Figure 2 - CMDP Role Hierarchy

Note:

- *In this document, State Laboratory Users and Private Laboratory Users will be referred to as Laboratory Users. As a reminder, State Laboratory Users and Private Laboratory Users will 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 will contain a view that may contain sub-tabs. *Three levels of tabs* exist in CMDP. The following is a description of each:

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

Figure 3 - CMDP Module Tabs

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 the read-only view of a subset of inventory and legal entity data elements for each laboratory and water system, and Profile Change Requests may be made by a laboratory or Water System when one of the values of a data element in a 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, workflow, and submittal of electronic reporting of drinking water sample results to state primacy agencies in the form of a sample "Job." Web forms have been created for the following categories: microbiological, Chemical/radiological, composite samples, Cryptosporidium, and operational samples.

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

- **System Administration Module**: Through this CMDP module, states will 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.

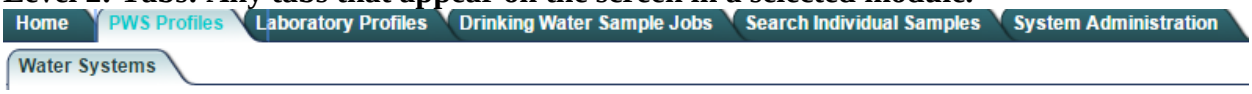


Figure 4 - Level 2 Tabs

For example, under the PWS Profiles Module Tab, a Water Systems Tab that contains the search screen is displayed. (**Error! Reference source not found.**)

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

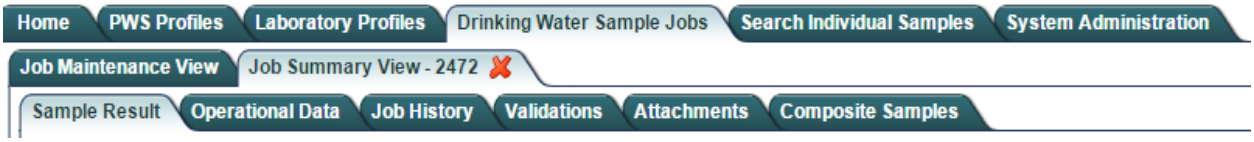


Figure 5 - Level 3 Subtabs

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 the within Laboratory Profiles, the Navigation Pane appears.

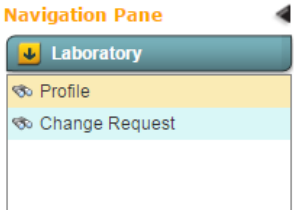


Figure 6 - Navigation Pane

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

2.1.3 Web Application Tables

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

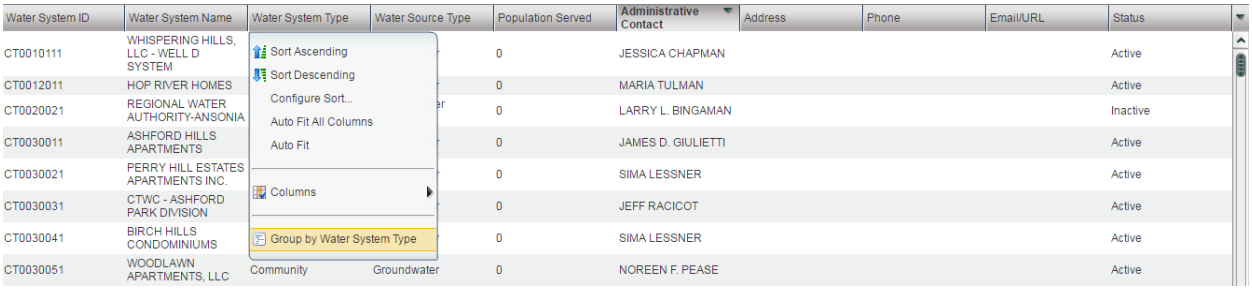


Figure 7- Figure Table Built-In Options

Each table in CMDP has built-in sort/grouping features (Sort Ascending, Sort Descending, etc.). These options will be very useful when looking at a list of samples or water systems. (Figure 7)

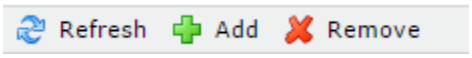


Figure 8 - Table Toolbar with Action Buttons

Some tables may have an associated toolbar featuring action buttons (Add, Remove, etc.). These will be used to add/remove data or to refresh the table's contents. (Figure 8)

Note:

- *After clicking the Add button, the user can double click on a row within a table to start entering data. To change data already entered within a row, double-click a row to make it editable.*

2.1.4 Login Page

Once you are ready to log in to the CMDP application with your SCS credentials, you will be 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.)

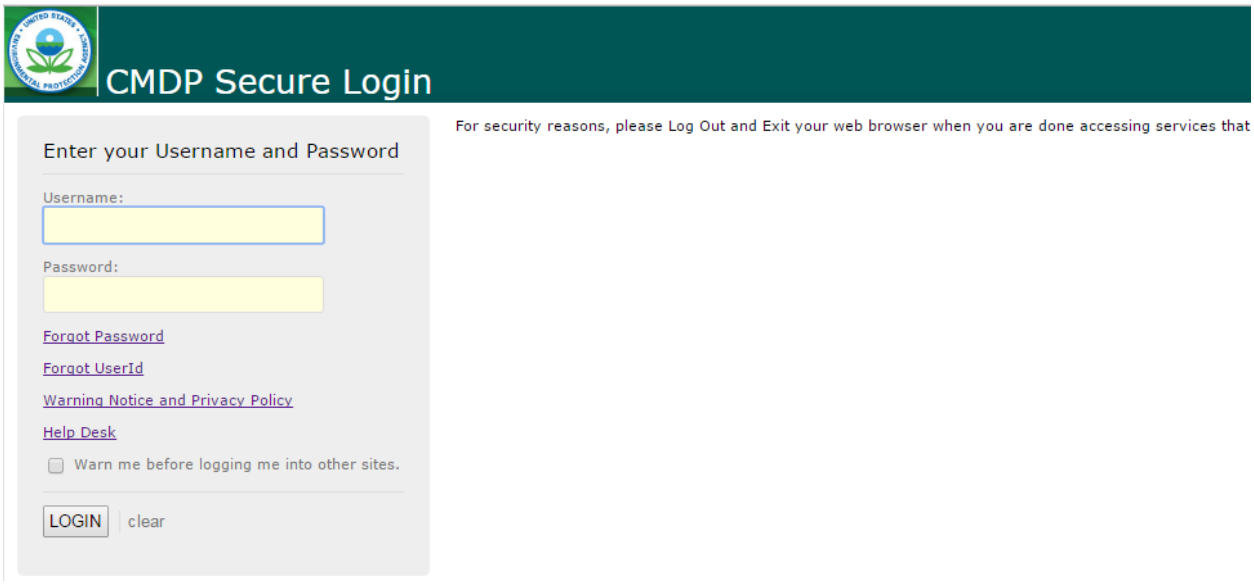


Figure 9 - Login Page

3 HOME MODULE (HOME PAGE)

The Home Module appears as the first page (home page) that the user will see by default once successfully logged in to the application. This system module will allow 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 will comprise two tables: Submissions Received and Profile Change Requests.

3.1 ACCESS TO HOME PAGE/SELECT A WORKING ORGANIZATION

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

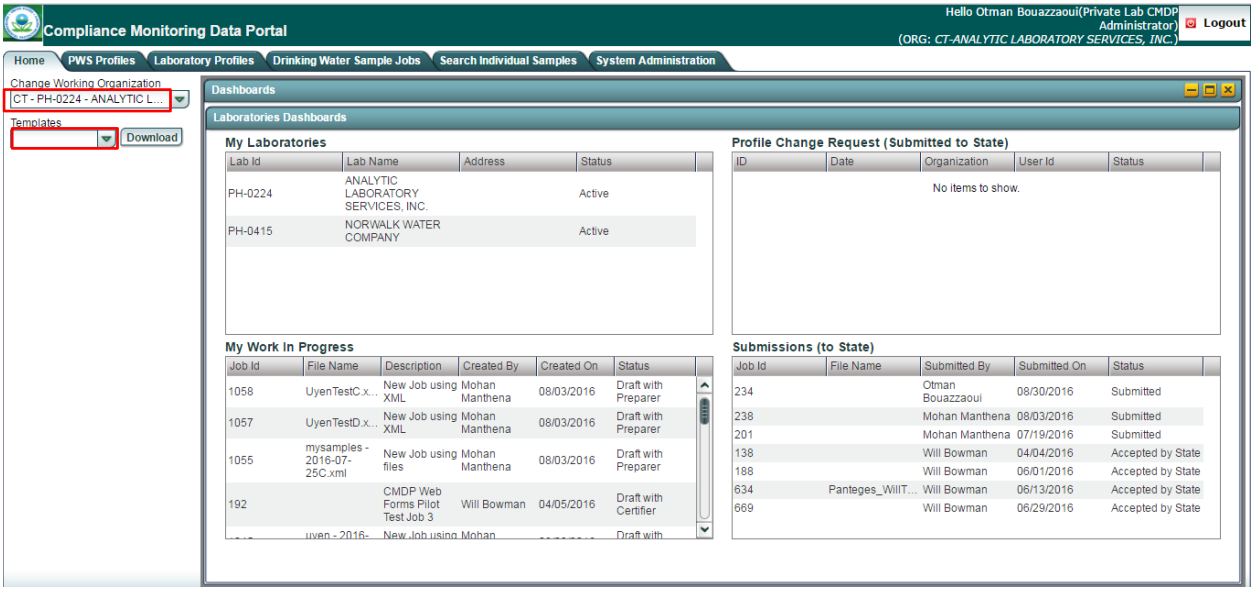


Figure 10 - View of the Home Page: Laboratory Users

Users who are associated with multiple organizations (e.g., a multi-state lab) will be 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:

- *All users will be able to locate their login ID, role, and the working organization associated with their account. This information will be displayed on the top right corner of the Home Page and will be available throughout the web session. (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, will direct you to the CMDP Help Desk website, where you can browse a help guide for CMDP.*

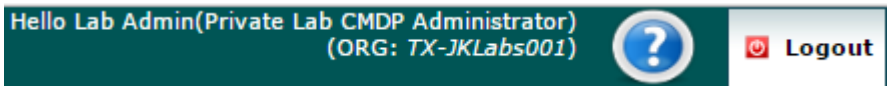


Figure 11 - Login Information

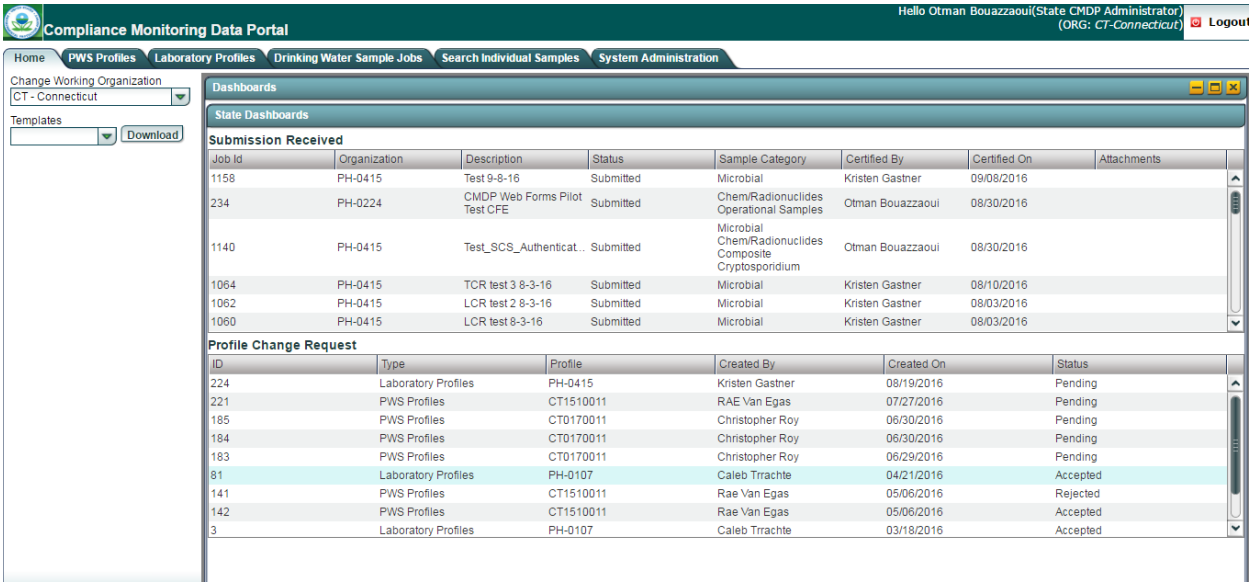


Figure 12 - View of the Home Page: State Users

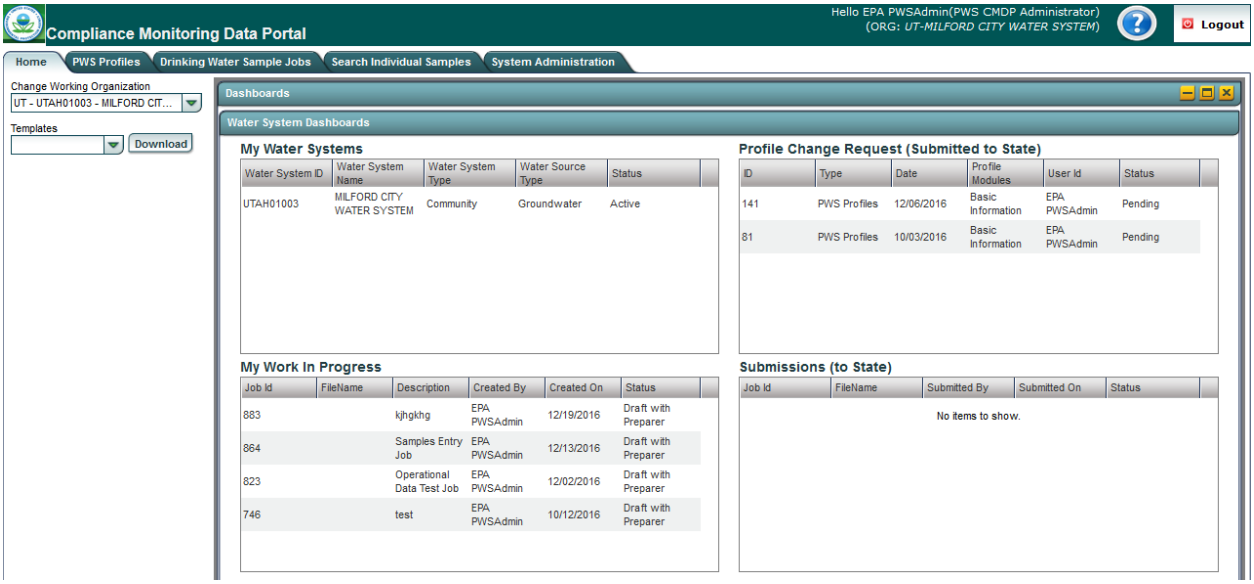


Figure 13 - View of the Home Page: Water System Users

CMDP users can download the CMDP Templates (MS Excel format) from the Home Page. Two main files are made 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.

Note:

- *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.*

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 will allow 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 will allow 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 will 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 will allow users to quickly view the water systems with which they are associated.

3.4.1 Authorizations

- This table will 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 the user is associated with	-	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 will allow users to view a list of all laboratories that users have access to.

3.5.1 Authorizations

- This table will 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 the user is associated with	-	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 will list all Change Requests submitted by the organization (laboratory or PWS) to the state.

3.6.1 Authorizations

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

3.7.1 Authorizations

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

3.8.1 Authorizations

- This table will 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, 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 (Drinking Water Sample Jobs) 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

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

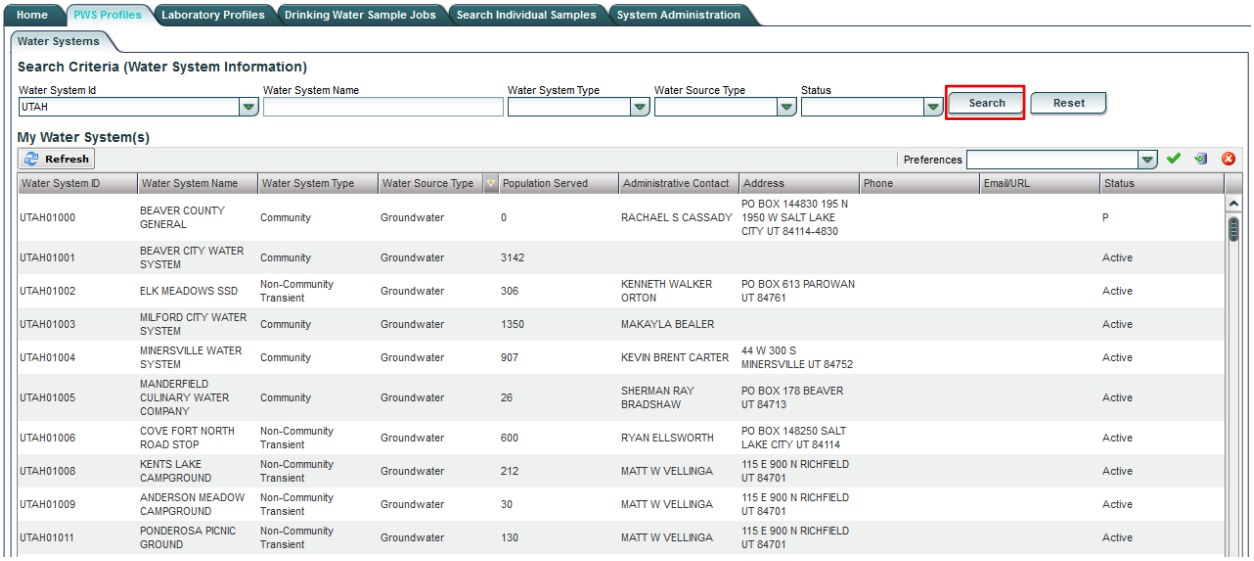


Figure 14 - Water System Search View

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 Administrative 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.

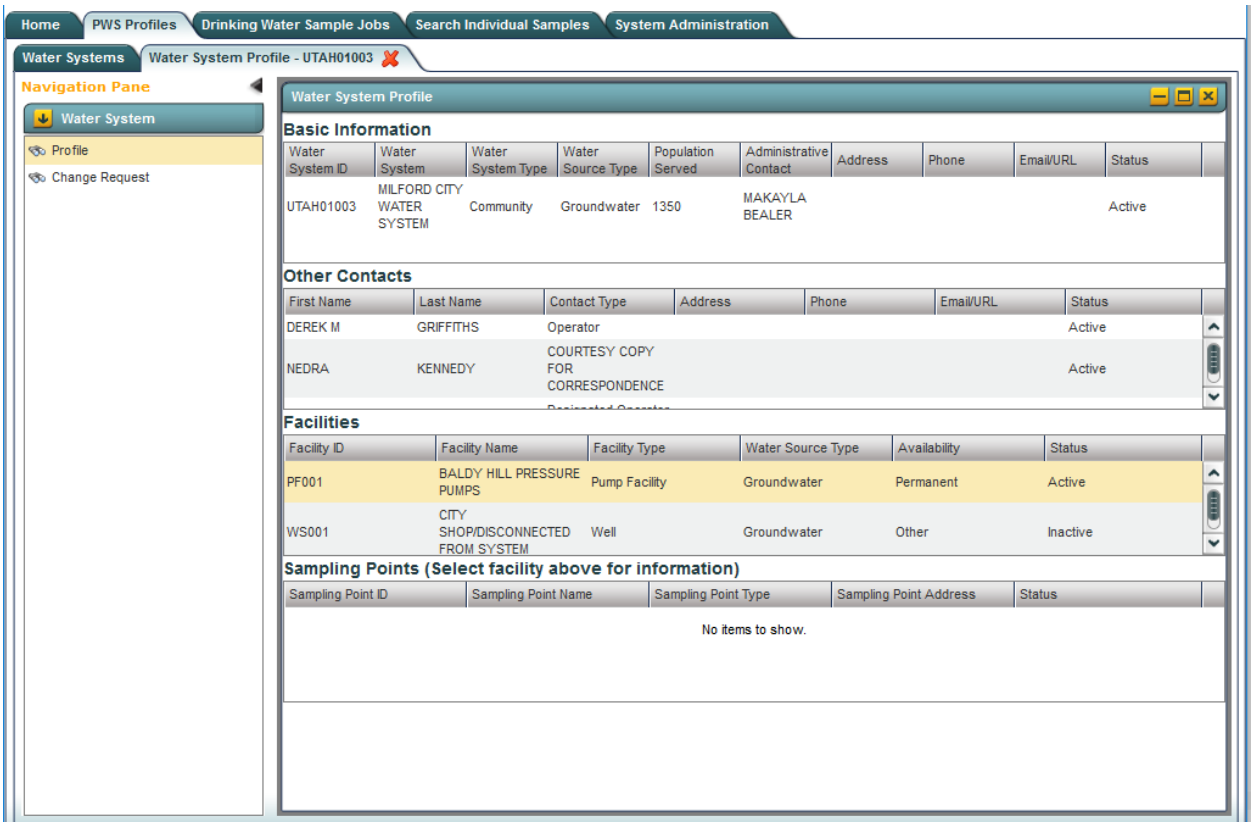


Figure 15 - Water System Profile View

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)
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.*

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.)

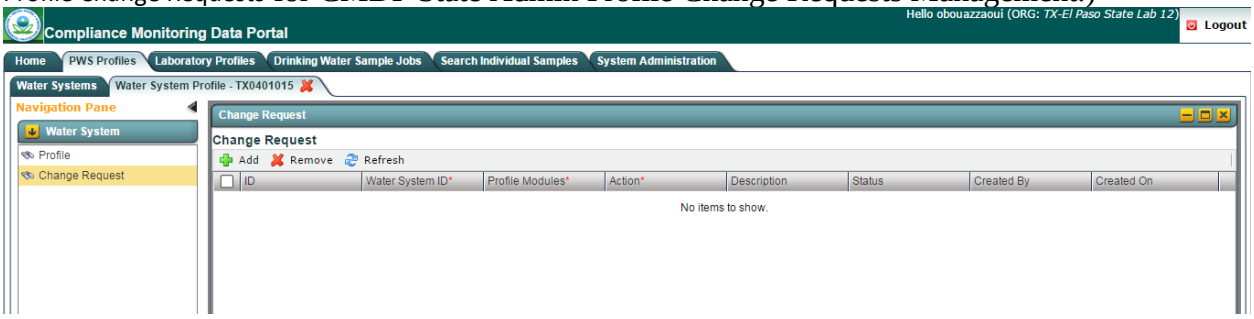


Figure 16 - Water System Profile Change Requests View

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)

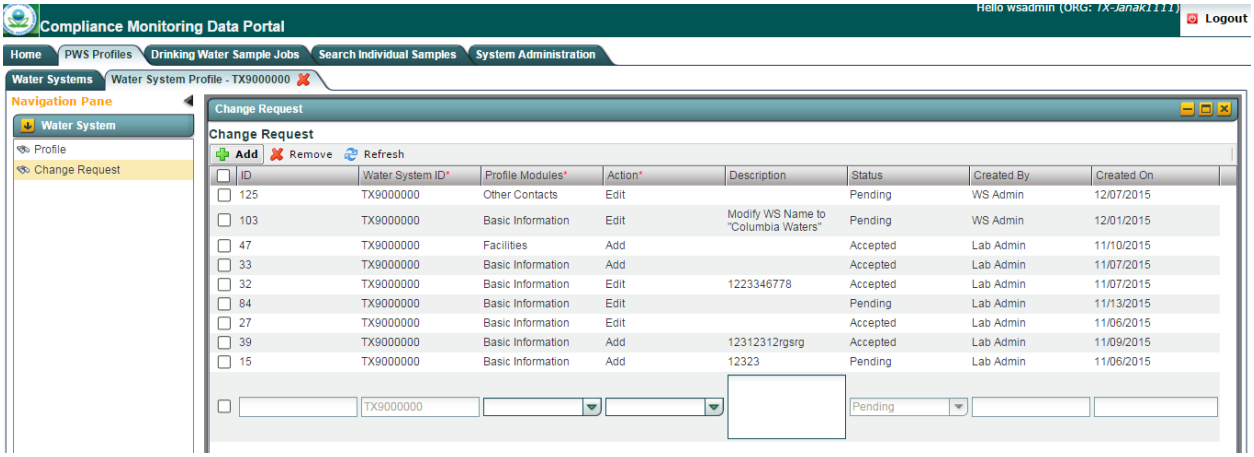


Figure 17 - New Water System Profile Change Request

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.

Notes:

- *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

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

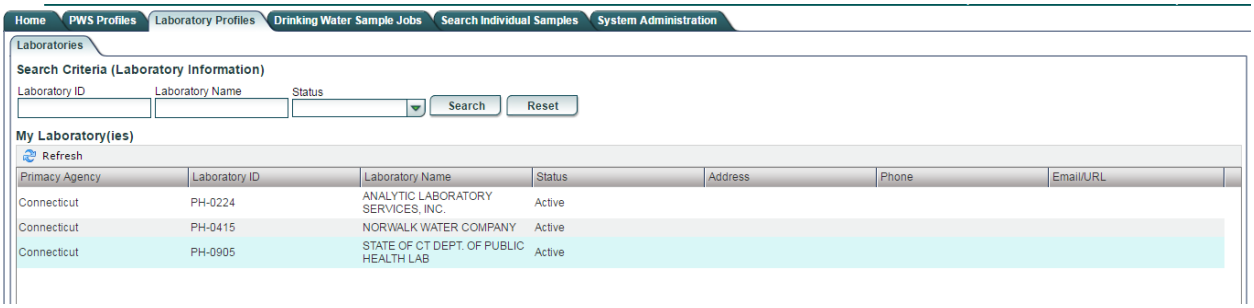


Figure 18 - Laboratory Search View

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 certification 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

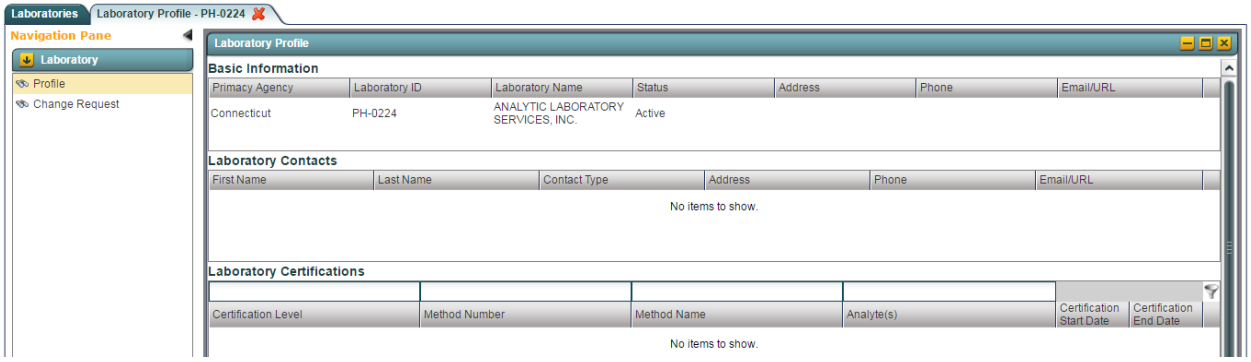


Figure 19 - Laboratory Profile View

1) Click on the **"Laboratory Profiles"** tab. (Figure 18)
2) Select a laboratory from the results table below the search criteria. (Figure 18)
3) A new tab will be opened and will display the Laboratory Profile. (Figure 19)
4) To close a Laboratory Profile, click "**X**" on the selected tab.
5) To return to the Search Laboratory View (Figure 18), click the "**Laboratories**" tab.

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).

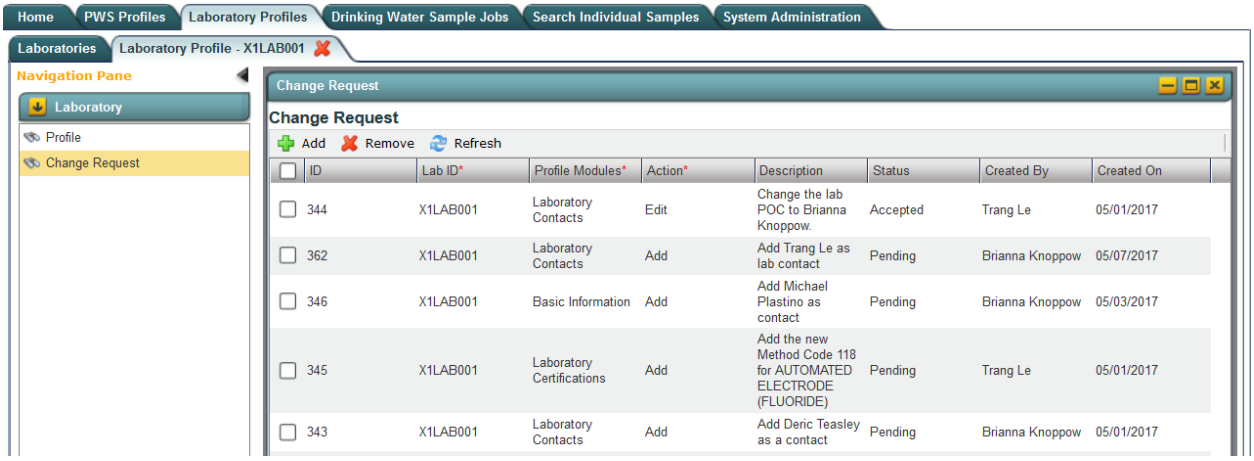


Figure 20 - Laboratory Change Requests View

1) Click on the "**Laboratory Profiles**" tab. (Figure 18)
2) Select a laboratory from the search page.
3) Detailed Profiles of each laboratory selected will be opened in a separate tab. (Figure 19)
4) Click "**Change Request**" on the left Navigation Pane to view the Change Request list page.
5) Click the "**Add**" button to add a new Change Request. (Figure 20)

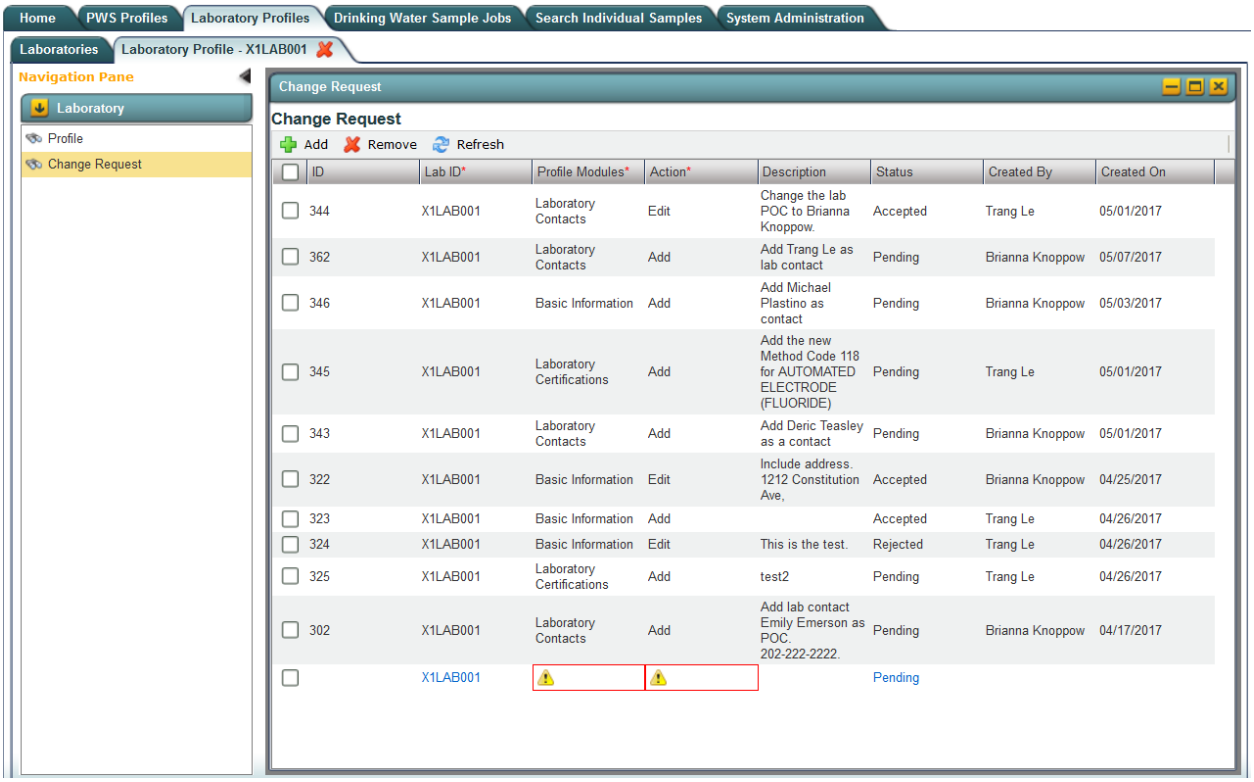


Figure 21 - New Laboratory Change Request

6) A new row will be added to the grid for the user to enter a Change Request.
7) Select a record by clicking on the check box.
8) Click "**Remove**" to remove the selected Change Request.
9) Click "**Refresh**" to fetch data from the server.

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 as web forms for one of the following sample types in two Sample Categories: Sample Result and Operational Data.

Sample Result Category – Sample Types

1. Microbiological
2. Chemicals/Radionuclides
3. Cryptosporidium
4. Composites

Operational Data Category – Sample Types

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:

- For version 1.10 of 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

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/

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.

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

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.

Table 2 - Job Status Definitions

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

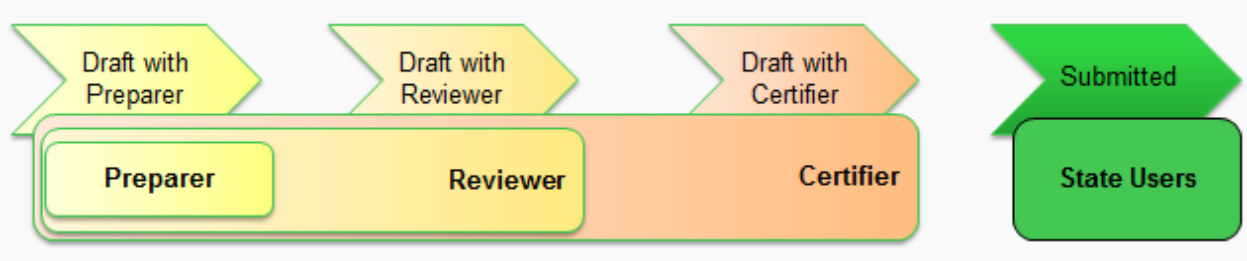


Figure 22 - Job Submission Workflow

- **Lab/PWS Preparer**: Create a Job and add samples, attachments

- **Lab/PWS Reviewer**: Review content of a Job, modify if needed or return to Preparer, and send to Certifier

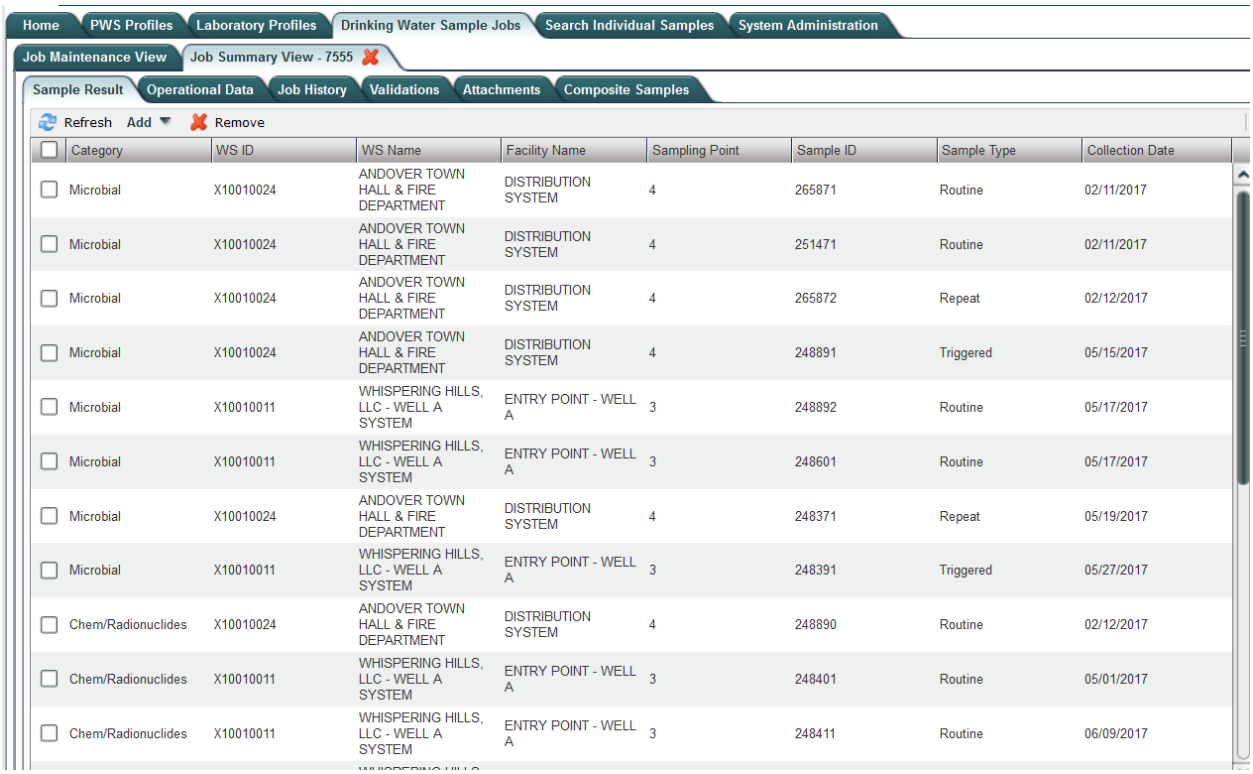
- **Lab/PWS Certifier**: Review content of a Job, modify if needed or return to Preparer or Reviewer, certify, and submit to State

- **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

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



Category	WS ID	WS Name	Facility Name	Sampling Point	Sample ID	Sample Type	Collection Date
Microbial	X10010024	ANDOVER TOWN HALL & FIRE DEPARTMENT	DISTRIBUTION SYSTEM	4	265871	Routine	02/11/2017
Microbial	X10010024	ANDOVER TOWN HALL & FIRE DEPARTMENT	DISTRIBUTION SYSTEM	4	251471	Routine	02/11/2017
Microbial	X10010024	ANDOVER TOWN HALL & FIRE DEPARTMENT	DISTRIBUTION SYSTEM	4	265872	Repeat	02/12/2017
Microbial	X10010024	ANDOVER TOWN HALL & FIRE DEPARTMENT	DISTRIBUTION SYSTEM	4	248891	Triggered	05/15/2017
Microbial	X10010011	WHISPERING HILLS, LLC - WELL A SYSTEM	ENTRY POINT - WELL A	3	248892	Routine	05/17/2017
Microbial	X10010011	WHISPERING HILLS, LLC - WELL A SYSTEM	ENTRY POINT - WELL A	3	248601	Routine	05/17/2017
Microbial	X10010024	ANDOVER TOWN HALL & FIRE DEPARTMENT	DISTRIBUTION SYSTEM	4	248371	Repeat	05/19/2017
Microbial	X10010011	WHISPERING HILLS, LLC - WELL A SYSTEM	ENTRY POINT - WELL A	3	248391	Triggered	05/27/2017
Chem/Radionuclides	X10010024	ANDOVER TOWN HALL & FIRE DEPARTMENT	DISTRIBUTION SYSTEM	4	248890	Routine	02/12/2017
Chem/Radionuclides	X10010011	WHISPERING HILLS, LLC - WELL A SYSTEM	ENTRY POINT - WELL A	3	248401	Routine	05/01/2017
Chem/Radionuclides	X10010011	WHISPERING HILLS, LLC - WELL A SYSTEM	ENTRY POINT - WELL A	3	248411	Routine	06/09/2017

Figure 23 - Search Jobs

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.

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	Reviewer	ID of user who reviewed the Job	-	-	Field contains ID of user who reviewed the Job last or to whom Job was assigned for review	-
DWJ-12	Reviewed On	Date when Job was reviewed	-	-		-
DWJ-13	Certifier	ID of user who certified the Job	-	-	Field contains ID of user who certified the Job or to whom Job was assigned for certification	-
DWJ-14	Certified On	Date when Job was certified	-	-		-

6.2 CREATE A NEW JOB BY ENTERING SAMPLES USING WEB FORMS

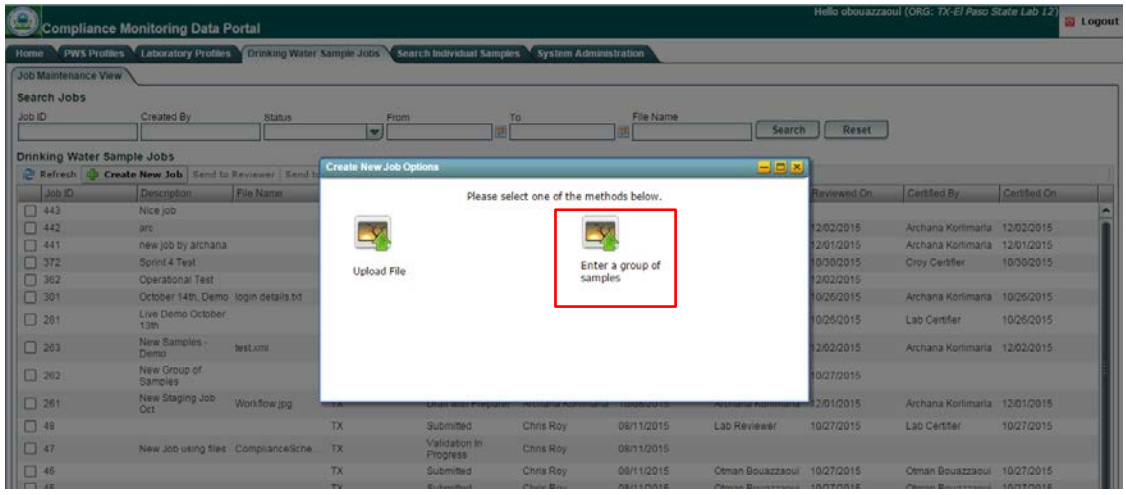


Figure 24 - Create Job - Method Selection

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

2) Select the method "**Enter a group of samples.**"

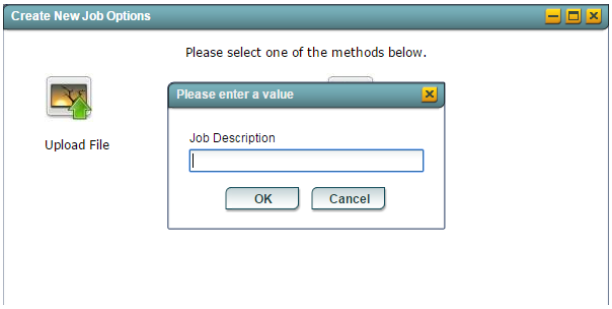


Figure 25 - Enter Job Description

3) Enter a Job description and click "OK." (Figure 25)

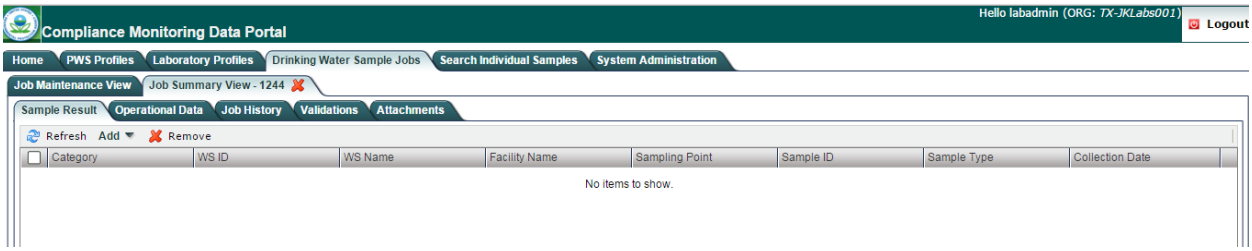


Figure 26 - New Tab for New Job Created

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

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]

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.

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

- 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.

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)

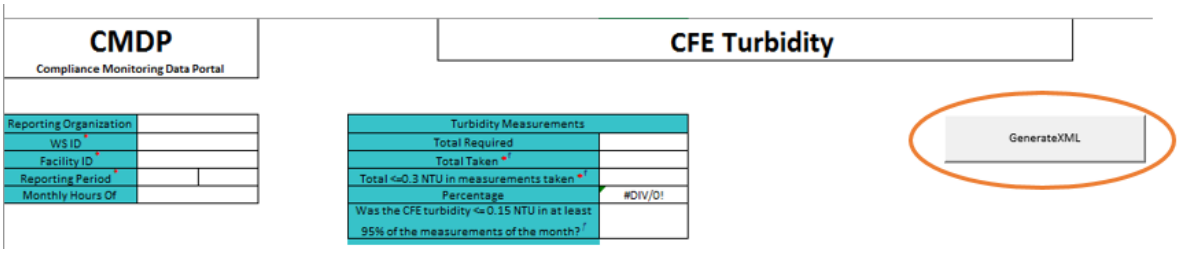
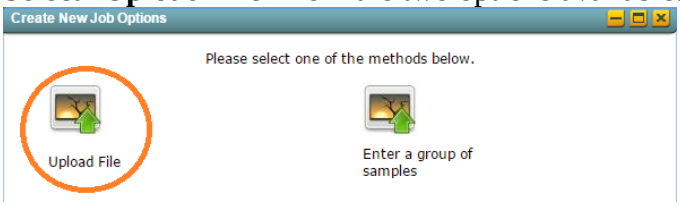


Figure 27 - Generate XML Button in an Operational Sample Template (CFE)

1) Select "**Upload File**" from the two options available.



2) Figure 28)

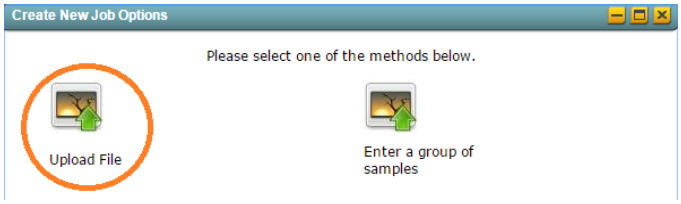
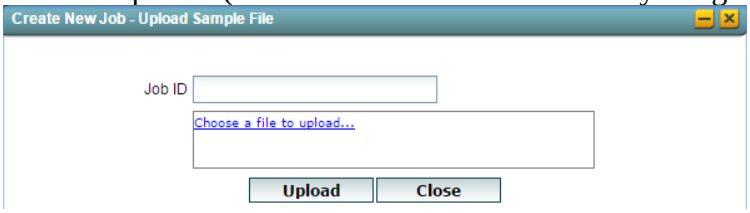


Figure 28 - Method Selection for Sample Reporting Dialog Window

3) 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)



4) Figure 29)

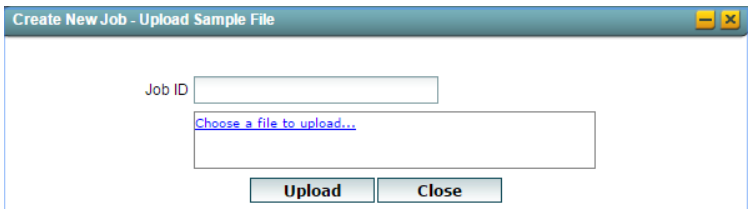


Figure 29 - Upload Dialog Window: Choose a file to upload

5) Wait for the "Done" flag to be displayed then click the Upload button. (Figure 30)

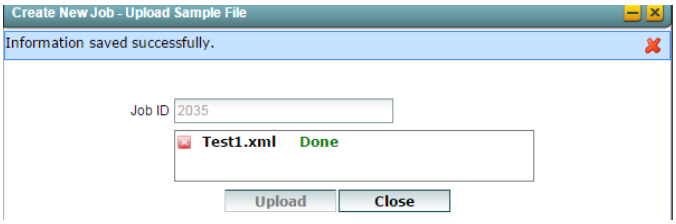


Figure 30 - Upload Dialog Window: "Done" Message

6) A confirmation message will be displayed with the word ("**Done**") in green. Click "**Close**."

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)

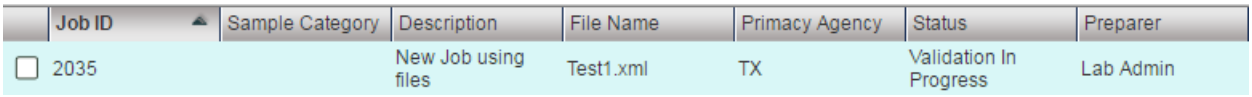


Figure 31 - Most Recent Job Added to Job Maintenance View

7) 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.

Figure 32 - Refresh Button in Toolbar

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	-
DWJ-18	Description	Brief text field for	O	Text	System generated "New Job using files"	-

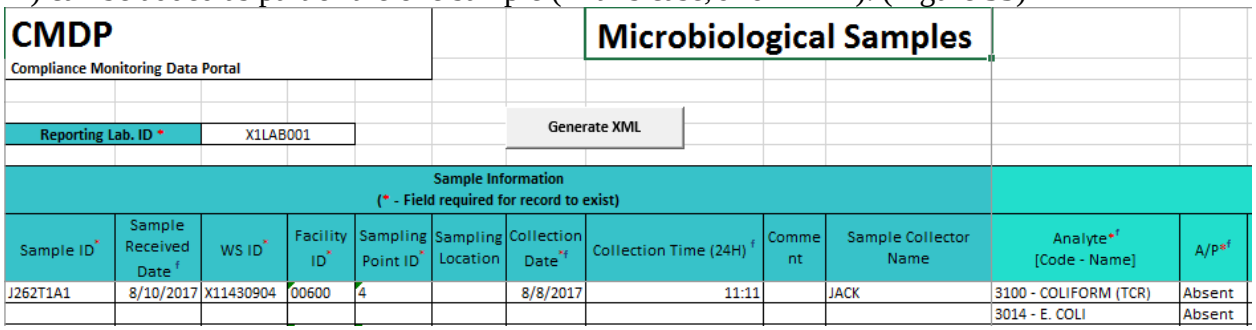
		description of the Job				
DWJ-19	File Name	Source file name used to upload data into CMDP	R	File	Only XML files will be accepted for upload	-

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

1) From the **Drinking Water Sample Jobs** search results list, select a Job by clicking on it. (Figure 34)

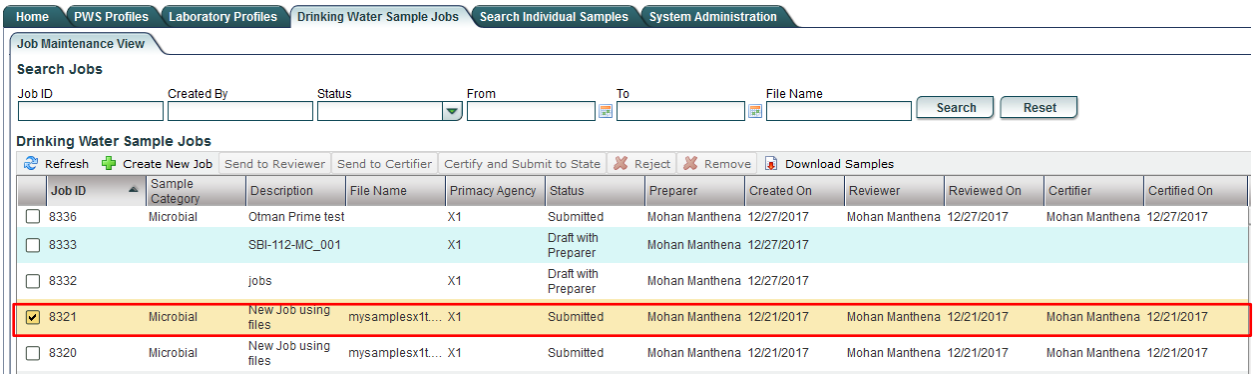


Figure 34 - Open an Existing Job

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

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

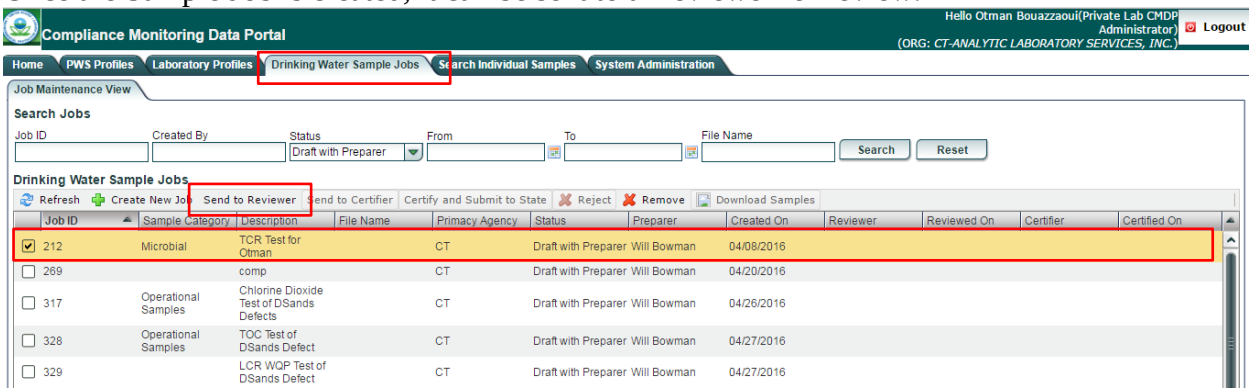


Figure 35 - Send Job to Reviewer (Lab/PWS Users)

1) Click on the check box to the left of a Job with a Status of "**Draft with Preparer**." (Figure 35)
2) Click "**Send to Reviewer**" to send the Job to the Reviewer.

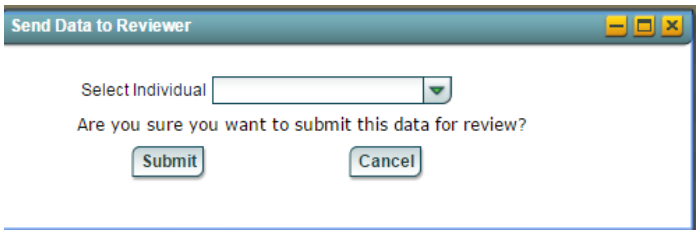


Figure 36 - Select Individual (Lab/PWS Users)

3) Select the individual to whom the Job will be sent. (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.

Notes:

- *A user can click submit (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 fails to select an individual from the pick list, 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 when the Job was reviewed.*
- *If a user selects an individual from the pick list, the "Reviewed By" column will be populated with the selected individual's name. The "Reviewed On" column will remain*

empty until the review is completed, at which time the "Reviewed On" column will display the date of the review.

6.5.1 Authorizations

- All users associated with an organization type laboratory (private or state) or water system can 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

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

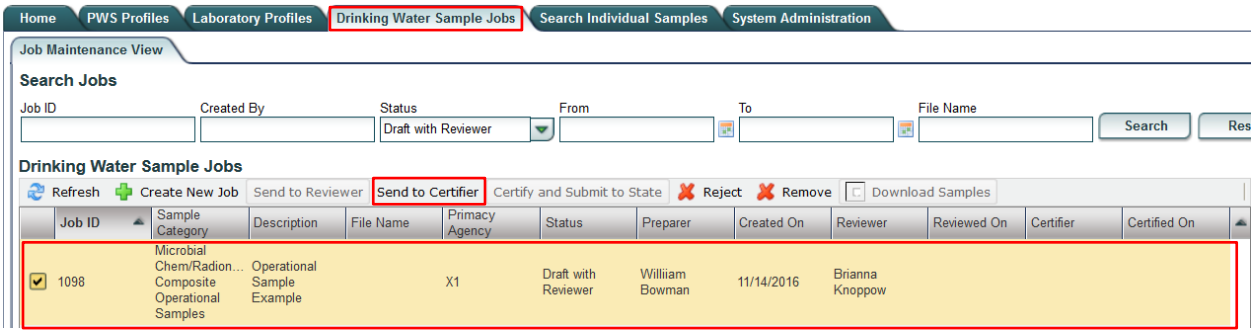


Figure 37 - Send Job to Certifier (Lab/PWS Reviewers)

1) Click on the check box to the left of a Job with a status of "**Draft with Reviewer**."
2) Click on "**Send to Certifier**" to send the Job to the Certifier.

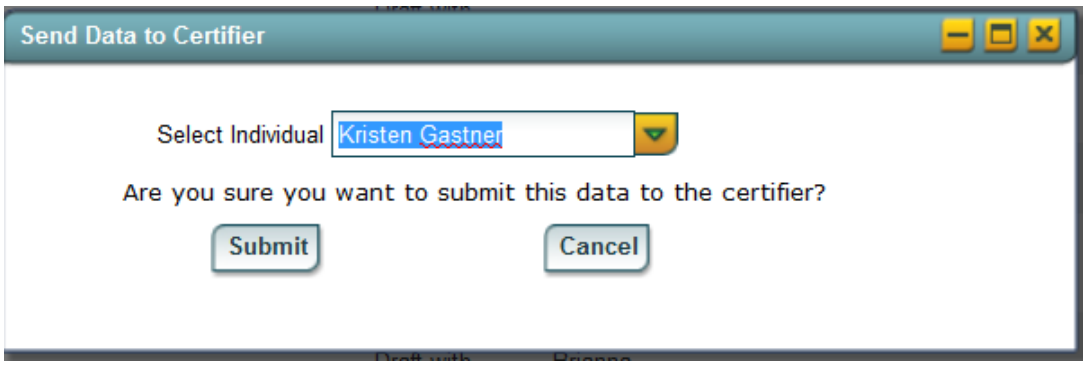


Figure 38 - Select Certifier (Lab/PWS Reviewers)

3) Select the individual to whom the Job will be sent. (Figure 38)
4) Click "**Yes**" to submit the Job for certification. The status will be updated "**Draft with Certifier**."
5) A confirmation message will be displayed. Click "**OK**" to close the window.

Notes:

- *A user can click submit (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 fails to select an individual from the pick list, the "Certified By" and "Certified 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 "Certified By" and "Certified On" columns will display the Certifier's name and the date when the Job was reviewed.*
- *If a user selects an individual from the pick list, the Certifier Column will be populated with the selected individual's name. The "Certified On" column will remain empty until the review is completed, at which time the "Certified On" column will display the date of the review.*

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 Job has been received and reviewed by the Certifier, he or she can electronically sign the Job and submit it to the primacy agency.

Note:

- *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.*

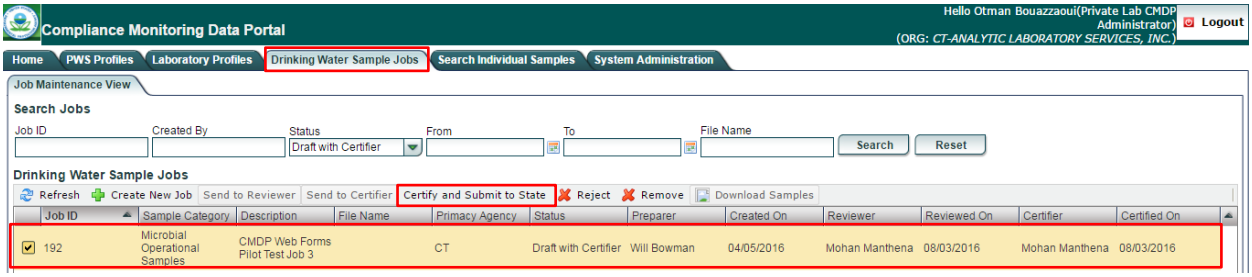


Figure 39 - Certify and Submit Job to State

1) Click on the check box to the left of a Job with a status of "**Draft with Certifier**." (Figure 39)
2) Click "**Certify and Submit to State**" to certify and submit the Job to the state.

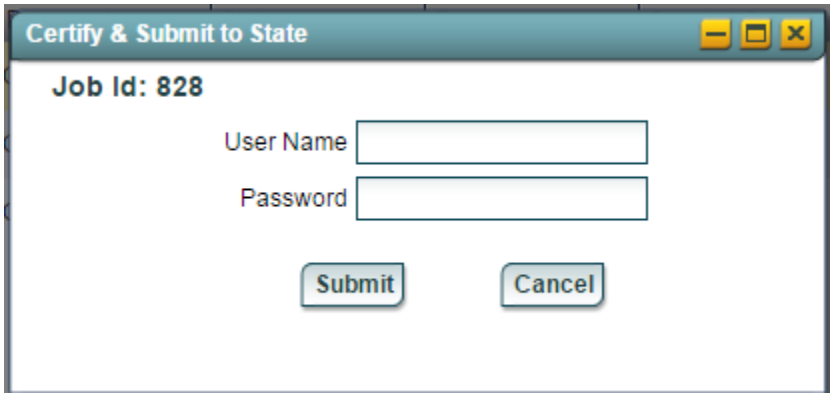


Figure 40 – Login Request to Submit to State

3) Enter User Name and Password and click "**Submit**." (Figure 40)

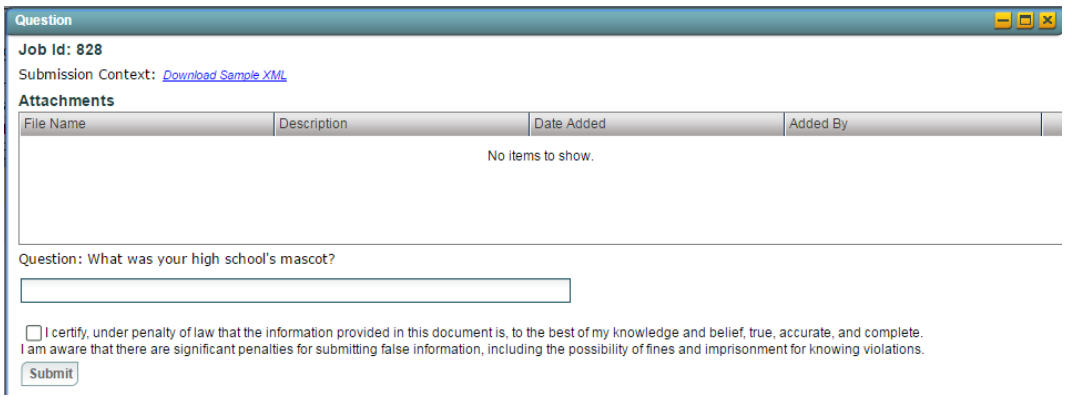


Figure 41 - Certification Ceremony - 2nd Level Authentication

4) Answer the challenge question displayed, check the certification statement, and then click "**Submit**." (Figure 41). The challenge questions are established in SCS during registration for a Private Lab or PWS Certifier role.
5) A confirmation message will be displayed. Click "**OK**" to close the window. The Job Status in the Maintenance View will be updated to "**Submitted**."

Notes:

- *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.*

6.7.1 Authorizations

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

6.7.2 Data Elements

None.

6.8 REJECT A JOB

A user (Reviewer/Certifier) can reject a draft Sample Job and may provide a reason for doing so (Job created in error, Job contains invalid data, etc.) in CMDP.

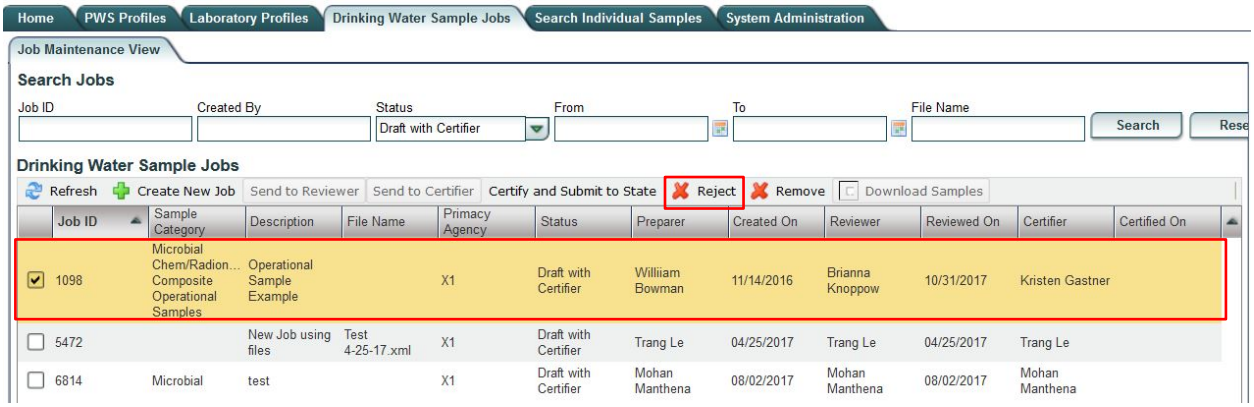


Figure 42 - Reject a Job

1) Only Jobs with the "**Draft with Reviewer**" and "**Draft with Certifier**" statuses can be rejected.
2) Click on the check box of the Job to be rejected.
3) Click the "**Reject**" from the toolbar to reject the selected record.

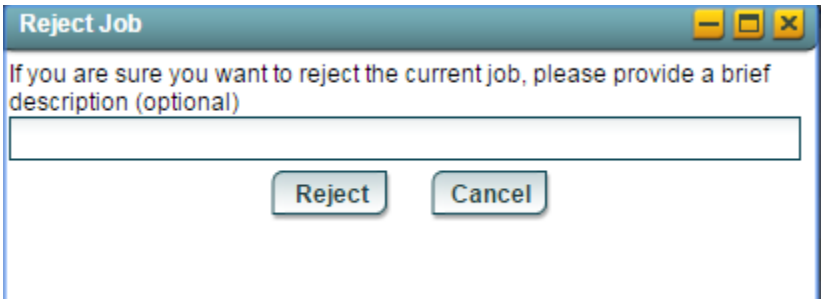


Figure 43 - Reject a Job - Confirmation

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

Notes:

- *Once rejected, the Job Status will be updated to "Draft with Preparer."*
- *The rejection reason provided will be recorded in the Job History as a comment input.*

6.8.1 Authorizations

- Only users with Reviewer and Certifier roles associated with organization type laboratory (private or state) or water system should be able to 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

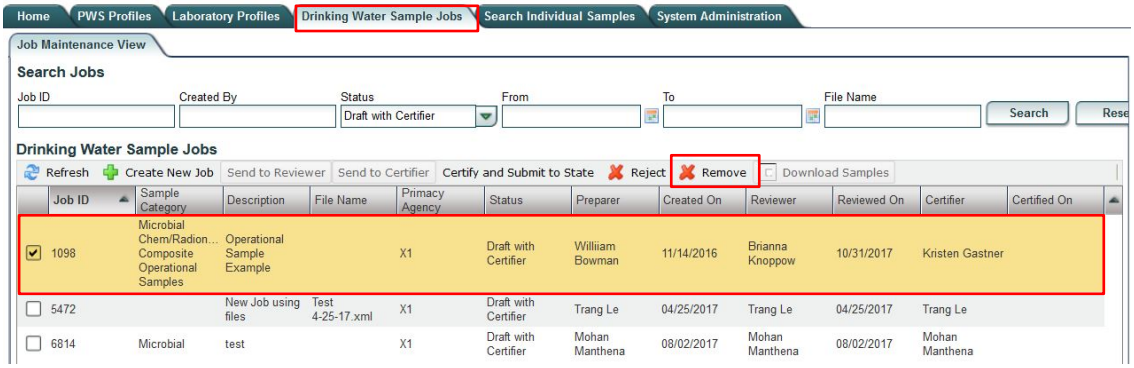


Figure 44 - Remove a Job

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 of the Job to be removed. (Figure 44)
3) Click "**Remove**" to remove the selected record.
4) Click "**Yes**" to confirm removing the selected record.

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 migrated to the State's database, the Job 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.

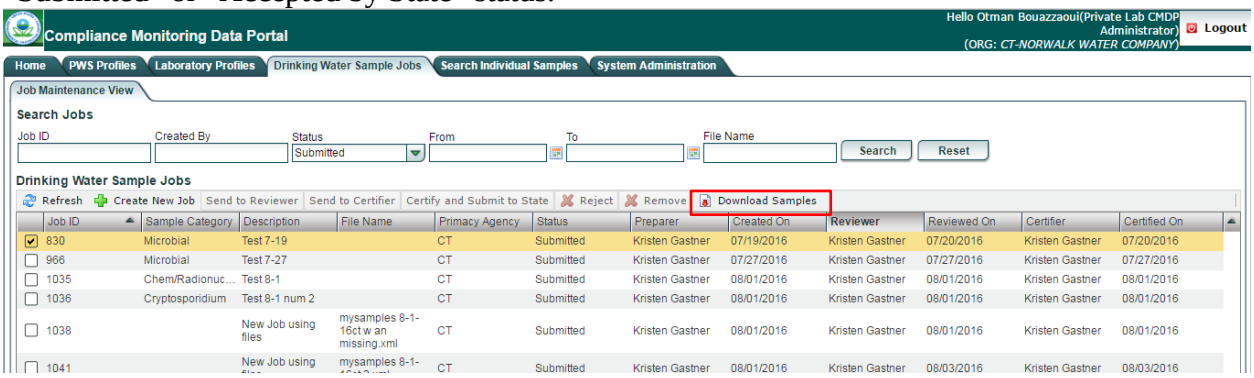
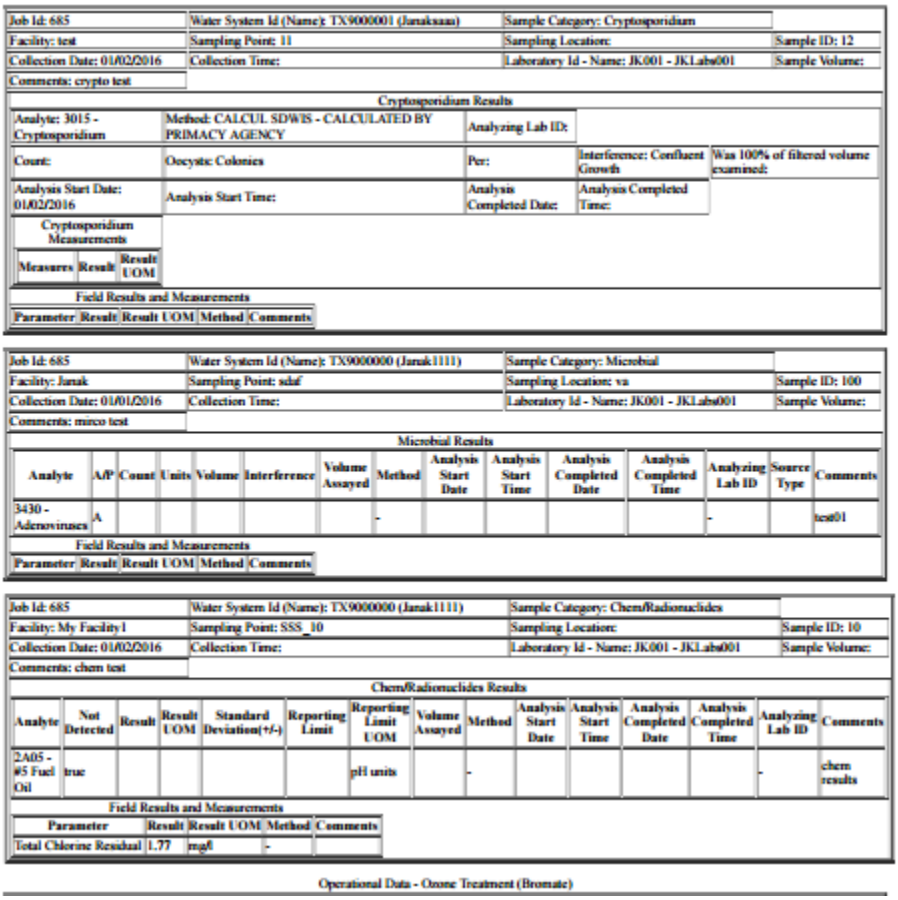


Figure 45 - Job Maintenance View: Download Samples button

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.

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.*



Job Id: 685	Water System Id (Name): TX9000001 (Janakxaaa)	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:	Oocyste: 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 (Janak1111)	Sample Category: Microbial	
Facility: Janak	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 (Janak1111)	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

6.11.1 Authorizations

- Available to all users once the Job has been certified and 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 two Sample Categories: Sample Result and Operational Data.

Sample Result Category – Sample Types

1. Microbiological
2. Chemicals/Radionuclides
3. Cryptosporidium (a microbiological sample type with a discrete web form)
4. Composites

Operational Data Category – Sample Types

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:

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

- For version 1.10 of 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 Chemicals/Radionuclides web form or templates.

- Users also 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, 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

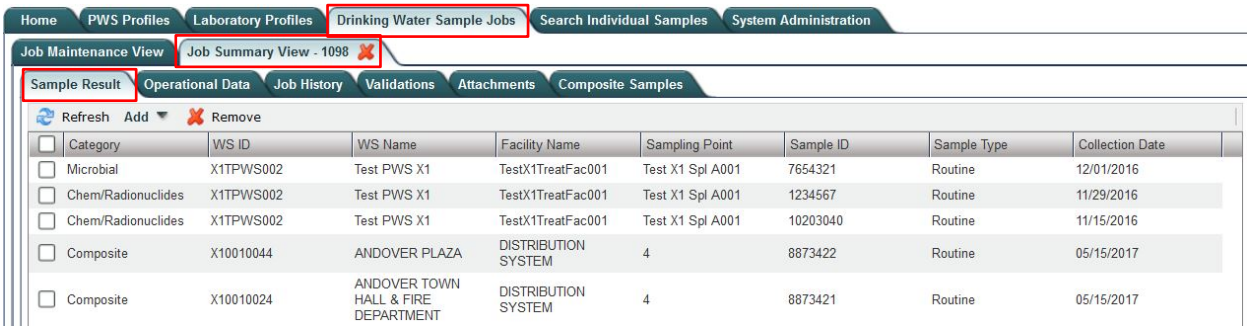


Figure 47 - Sample Results Table

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.

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

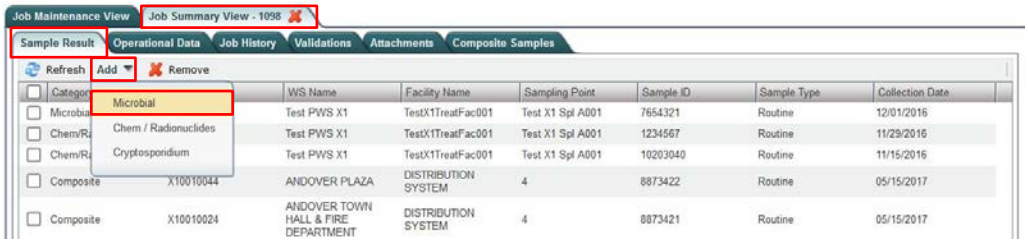


Figure 48 - Add a Sample to a Job

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 "**Microbial**," "**Chem/Radionuclides**," or "**Cryptosporidium**" from the dropdown list. (Figure 48)
4) A new window will open with the corresponding Sample Result data entry screen.

6.12.3 Add a Microbiological Sample to a Job

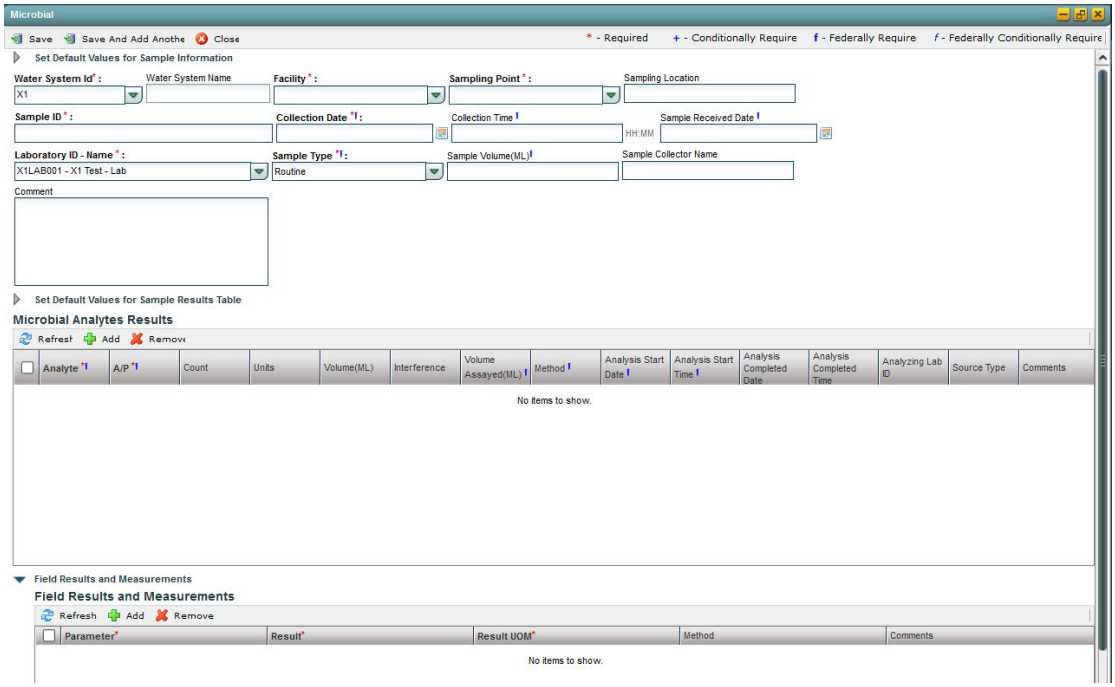


Figure 49 - Add a Microbiological Sample to Job

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 metadata information for Microbiological Sample in the Sample Information area of the web form. All fields marked with an asterisk (*) are required. (Figure 49)

5) If the Sample Type selected from the pick list is a Repeat sample, populate the Repeat Location and select the Related Original Sample Collected. (Figure 50)

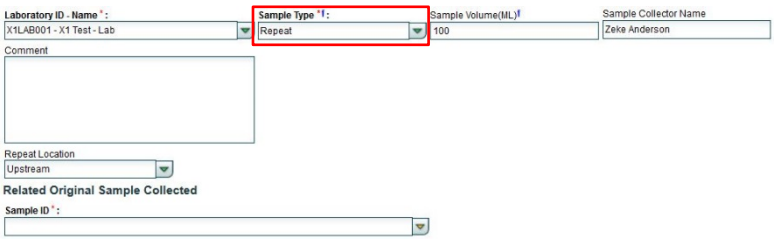


Figure 50 - Repeat Sample

6) Under the "**Microbiological Analytes Results**" grid, click "**Add**" to add microbiological analytes results. All fields marked with an asterisk (*) are required. (Figure 49)
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.

6.12.3.1 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.

6.12.3.2 DATA ELEMENTS

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	Alphanumeric		-

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)		**Federally required**
MIC-7.1	Sample Received Date	Date on which lab received sample	R	Date MM/DD /YYYY	Collection Date ≤ Sample Received Date ≤ Analysis Start Date	**Federally required**
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 required for analysis	O	List	List of values: 100ml 200ml 300ml 400ml 500ml 1 liter	**Federally required**
MIC-11	Repeat Location	Location of the repeat sample (mainly used for TC)	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"	-

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	Format	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	*[Bacteria count in the sample]*	O	Numeric 1-9999999 (7,0)	Disable field if MIC-15=Absent	-
MIC-17	Units	Method/Unit used to measure count	O	List	List of values: Colonies Tubes Most probable number Disable field if MIC-15=Absent	-
MIC-18	Volume	Volume of the sample taken at the sampling point	O	-	List of values: 1 ml 5 ml 10 ml 100 ml 400 ml	-

					500 ml 1 liter 100 liter 10 Gal 100 Gal 400 Gal Disable field if MIC-15=Absent	
MIC-19	Interference	Factors potentially interfering with analysis	O	List	List of values: Confluent Growth Turbid Culture – no gas Too Numerous to Count Disable field if MIC-15=Absent	-
MIC-20	Volume Assayed	Volume of the sample analyzed by the laboratory	O	List	List of values: 100ml 200ml 300ml 400ml 500ml 1 liter MIC-20 must be less than or equal to MIC-18	**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 or equal to MIC-6 (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	O	List	List of values: List of all laboratories within the Primacy Agency	-

		reporting laboratory)				
MIC-27	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-28	Comments	Text input 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
MIC-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	-
MIC-30	Result	Measured value	R	Numeric 0 – 999999.999999999 (6,9)	None	-
MIC-31	Result UOM	Unit of measure	R	List	List of values: Mg/l Fahrenheit Celsius MTU pH Applicable UOM for parameter selected	-
MIC-32	Method	Analytical method used	O	List	List of values: Applicable methods for parameter selected	-
MIC-32	Comments	Text field for additional comments	O	Text	-	-

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

6.12.4 Add a Chemicals/Radionuclides Sample to a Job

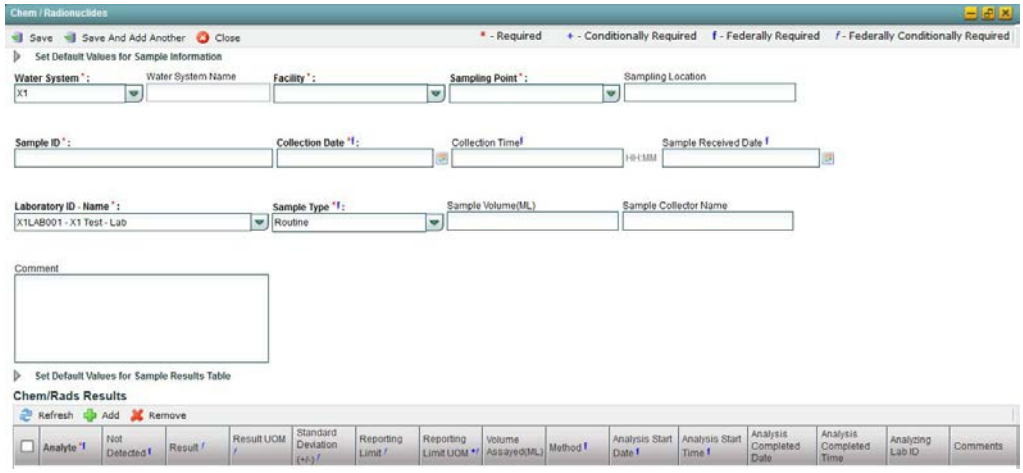


Figure 51 - Add a Chemicals/Radionuclides Sample

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 **"Sample Result"** tab, Click "**Add**," then select **"Chemicals / Radionuclides"** from the dropdown list. (Figure 48)
4) Enter metadata 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)

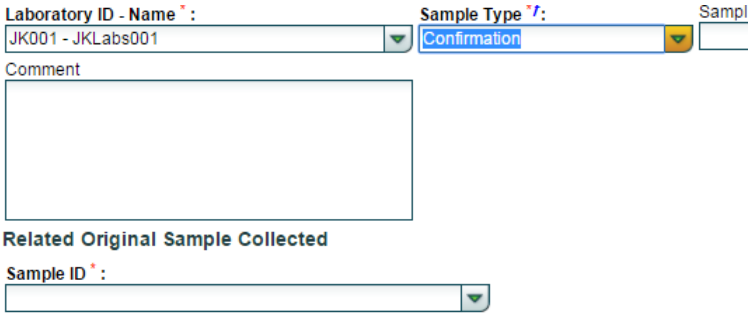


Figure 52 - Confirmation Sample

Note:

- *If entering a confirmation sample, additional information needs to be recorded: Repeat Location (for repeat only) and the original Sample ID. Up to one hundred (100) samples collected in the water system will be displayed in the list. (Figure 52)*

5) Under **"Chemicals/Radionuclides Results"** grid, click "**Add**" to add Chemicals/Radionuclides results. (Figure 51)
6) Under "**Field Results and Measurements**" grid, click "**Add**" to add field results and measurements. (Figure 51)
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.

6.12.4.1 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.

6.12.4.2 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 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	-
CHR-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 CHR-1	-
CHR-2	Facility	Water system facility related to the sample	R	List [ID – Name]	List of values: Facilities within the water system selected	-

CHR-3	Sampling Point	Sampling points related to the sample	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	Alphanumeric	-	-
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)		**Federally required**
CHR-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**
CHR-10	Laboratory ID – Name	Reporting laboratory	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	Sample volume required for analysis	O	List	List of values: 100ml 200ml 300ml 400ml 500ml 1 liter	**Federally required**
CHR-13.1	Repeat Location	Location of the repeat sample	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	Related original sample 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 subject to analysis	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 contaminants	R	Checkbox	Checked: Not Detected Unchecked: Detected	**Federally required**
CHR-16	Result	Measured value	O	Numeric 0 - 999999.999999999 (6,9)	Disable CHR-16 if CHR-15 is Not Detected (Checked) Display result in bold red if analyte MCL is exceeded	**Federally Conditionally Required if CHR-15 is Detected (checked)**
CHR-17	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 Disable CHR-17 if CHR-15 is Not Detected (Checked)	**Federally Conditionally Required if CHR-15 is Detected (checked)**
CHR-18	Standard Deviation (+/-)	Standard deviation associated with the	O	Numeric 0 to 9999999.99 (7,2)		**Federally Conditionally Required if CHR-15 is**

		analytical method				**Detected (checked)**
CHR-19	Reporting Limit	The smallest measured concentration of a substance that can be reliably measured by using a given analytical method	O	Numeric 0 - 999999.999999999 (6,9)		**Federally Conditionally Required if CHR-15 is Detected (checked)**
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 Conditionally Required if CHR-15 is Detected (checked)**
CHR-21	Volume Assayed	Portion of the volume that was subject to analysis	O	List	List of values: 100ml 200ml 300ml 400ml 500ml 1 liter	-
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)	**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	
CHR-26.1	Analyzing Lab	Laboratory that performed the analysis (if different that reporting laboratory)	O			-
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: 1013 – Free Chlorine Residual 1996 – Temperature 1012 – Total Chlorine Residual 0100 – Turbidity 1925 – pH	-
CHR-30	Result	Measured value	R	Numeric 0 – 999999.999999999 (6,9)	None	-
CHR-31	UOM	Unit of measure	R	List	List of values: Mg/l Fahrenheit Celsius MTU pH Applicable UOM for parameter selected	-
CHR-32	Method	Analytical method used	O	List	List of values: Applicable methods for parameter selected	-
CHR-34	Comments	Text field for additional comments	O	Text	-	-

6.12.5 Add a Cryptosporidium Sample to a Job

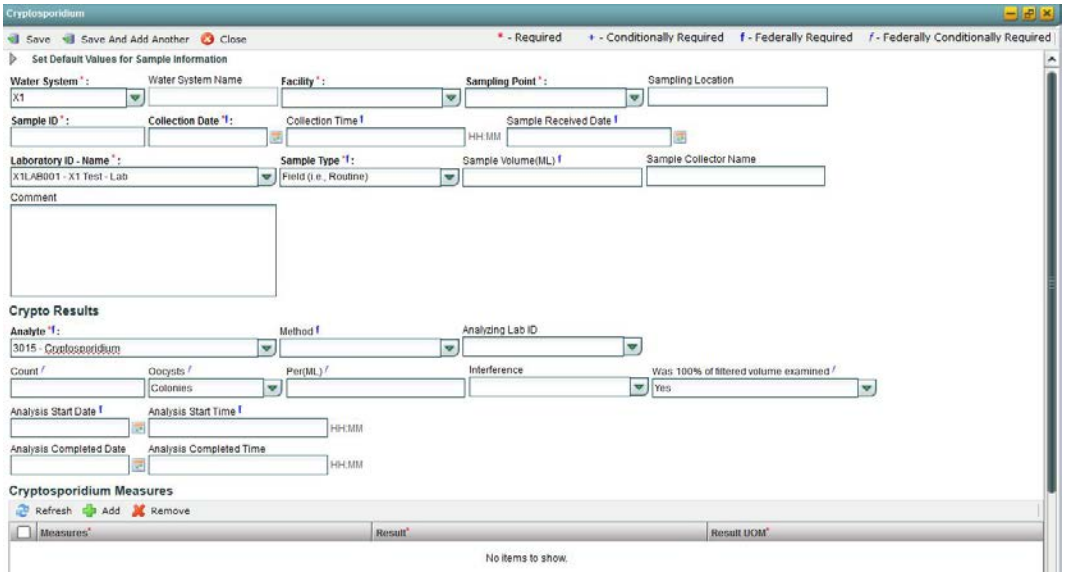


Figure 53 - Add a Cryptosporidium Sample

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)
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.

6.12.5.1 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.

6.12.5.2 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	Alphanumeric	-	-
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)	-	**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	List	List of values: 100ml 200ml 300ml 400ml 500ml 1 liter	**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-16	Count	Number of oocysts counted	O	Numeric 0 to 9999999 (7,0)	-	**Federally conditionally required**
CRY-18	Oocysts	Unit used to count oocysts	O	List	List of values: Colonies Tubes Most probable Number	**Federally conditionally required**
CRY-19	Per	Volume	O	List	List of values: 1 ml 5 ml 10 ml 100 ml	**Federally conditionally required**

					400 ml 500 ml	
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)	**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	-
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	R	List	List of values: Percent filtered volume analyzed Number of oocysts Calculated number of oocysts per volume	-

		cryptosporidium samples			Volume assayed Volume of resuspended concentrate Volume of resuspended conc. processed	
CRY-30	Result	Measured value	R	Numeric 0 – 999999.999999 (6,9)	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)	None	-
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-34	Comments	Text field for additional comments	O	Text	-	-

6.12.6 Add a Composite Sample to a Job

User will be able to add/edit/remove composite samples to a Job by using a web form applicable to composite samples.

6.12.6.1 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.

6.12.6.2 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	Alphanumeric	-	-
CS-2	Composite Date	Date when sample is composited	R	Date MM/DD/YYY	-	-
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	Alphanumeric	-	-
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/YY/DDDD	-	-

CS-13	Collection Time	Exact time when the sample was collected	O	Time HH:MM (24)	-	-
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	O	Numeric 0 to 999999.999999999 (6,9)	Disable CS-19 if CS-18 is Not Detected (Checked) Display result in bold red if analyte MCL is exceeded	-
CS-20	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 Disable if CS-18 is Not Detected (Checked)	-

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 substance that can be reliably measured by using a given analytical method	O	Numeric 0 to 9999999.999999999 (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)	-	-
CS-28	Analysis Completed Date	Date when analysis was completed	O	Date MM/DD/YYYY	-	-
CS-29	Analysis Completed Time	Time when analysis was completed	O	Time HH:MM (24h)	-	-
CS-30	Analyzing Lab ID	Laboratory that conducted the analysis	O	List	-	-

CS-31	Comments	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 (metadata) prevents repetitive data entry by auto-populating the sample information fields for any additional sample results you are reporting, with the same values that you selected for your initial sample results.

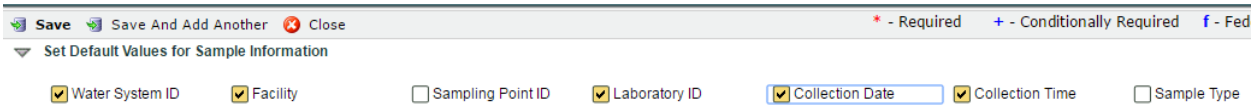


Figure 54 - Set Default Values for Sample Information

1) Check the boxes for which data element values need to be carried over to the next sample to be entered. (Figure 54)
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 sample information entered for the previous sample will be auto-populated with the default values established by the user in Step 1.

6.12.7.1 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.

6.12.7.2 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	-	-
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)

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.

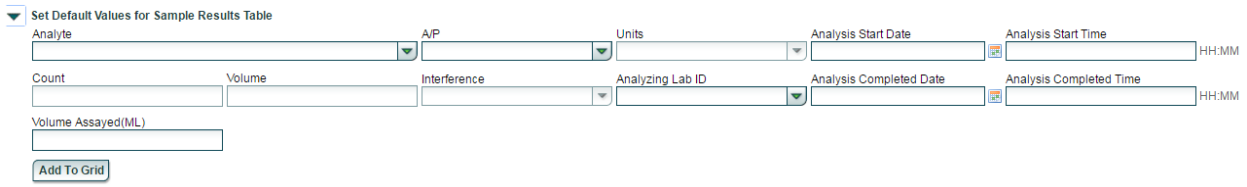


Figure 55 - Set Default Values for Sample Results Table (Microbiological)

1) Populate the fields with values to be added as a group to the results table. (Figure 55)
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 next sample.

6.12.8.1 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.

6.12.8.2 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 1-9999999 (7,0)	-	-
DV-11	Units	Unit used to measure count	O	List	List of values: Colonies Tubes Most probable number	-
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)	-	-
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)	-	-

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 56. Setting default values will help users enter multiple results at once to avoid repetitive data entry actions.

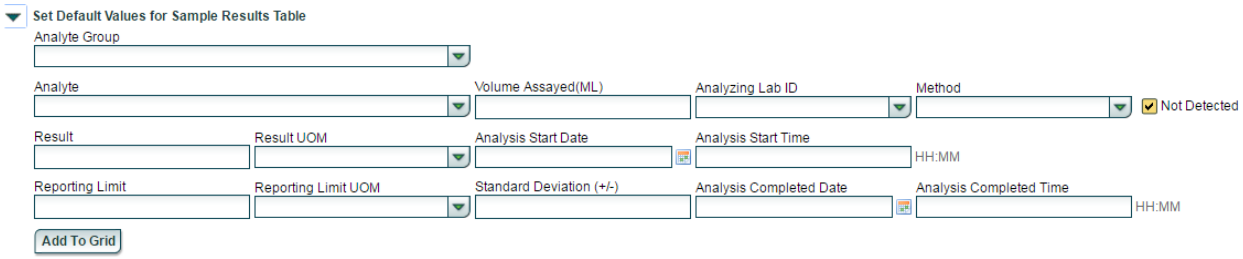


Figure 56 - Set Default Values for Sample Results (Chem/Radionuclides)

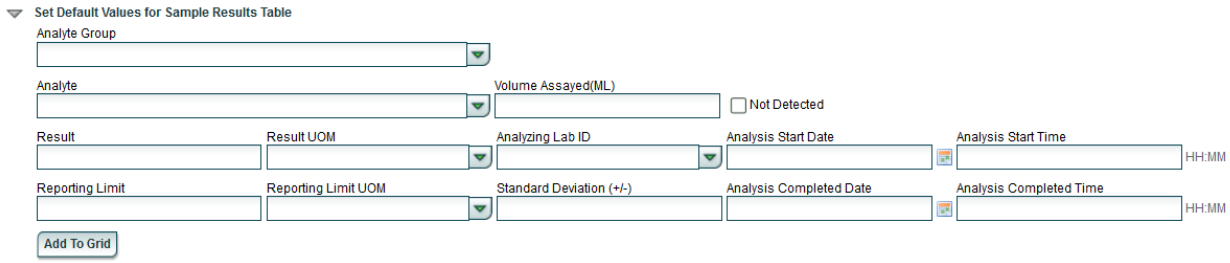


Figure 57 - Set Default Values for Sample Results (Composite)

1) Populate the fields to be added as a group to the results table. (Figure 57)
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 next sample web form.

6.12.9.1 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.

6.12.9.2 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	-

					Please refer to Analytes List	
DV-21	Method	Analytical method used by 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 laboratory	O	List	List of values: 100ml 200ml 300ml 400ml 500ml 1 liter	-
DV-24	Result	Measured value	O	Numeric -9999.9999 to 999.9999 (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 concentration (or amount) of analyte, that can be reported by the laboratory	O	Numeric 0 to 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)	-	-
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)	-	-
DV-32	Analyzing laboratory	Laboratory that conducted the sample analysis	O	List	List of all laboratories within the Primacy Agency	-

6.12.10 Access the Operational Sample Types Table

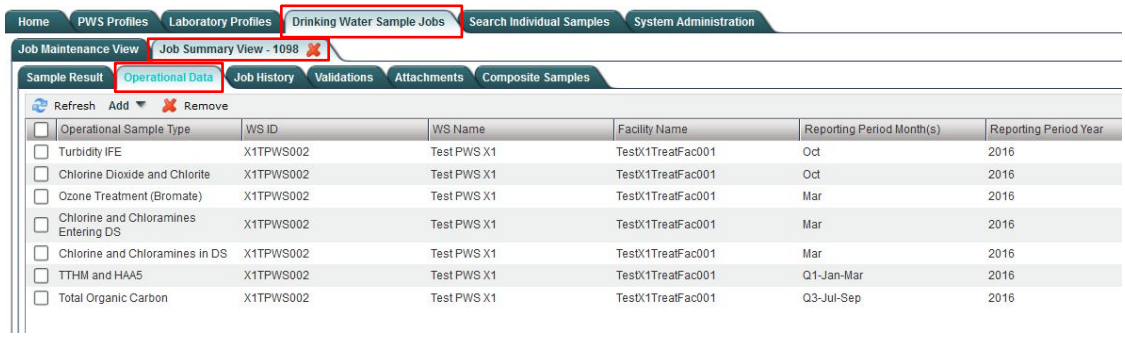


Figure 58 - Operational Sample Types Table

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. (Figure 58)

6.12.11 Add Operational Sample Types to a Job

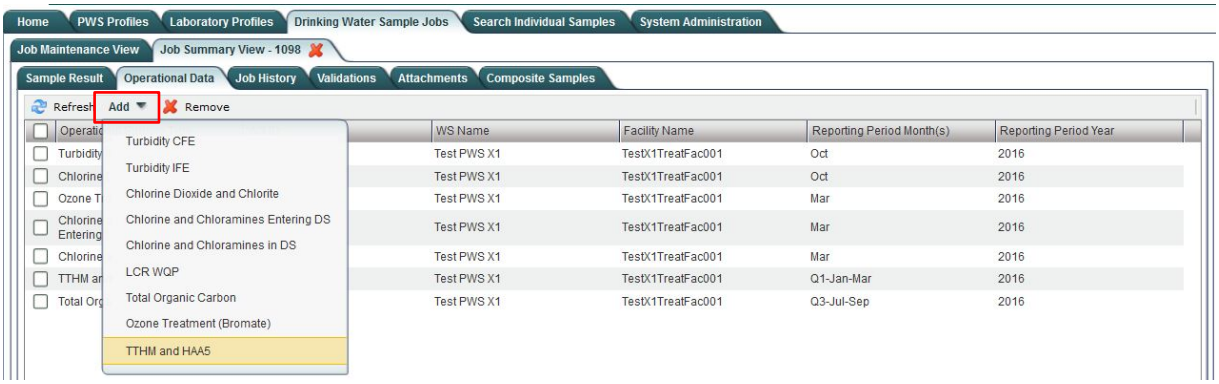


Figure 59 - Operational Sample Types List

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 59)
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.

6.12.12 Add Combined Filter Effluent Turbidity Sample Type to a Job

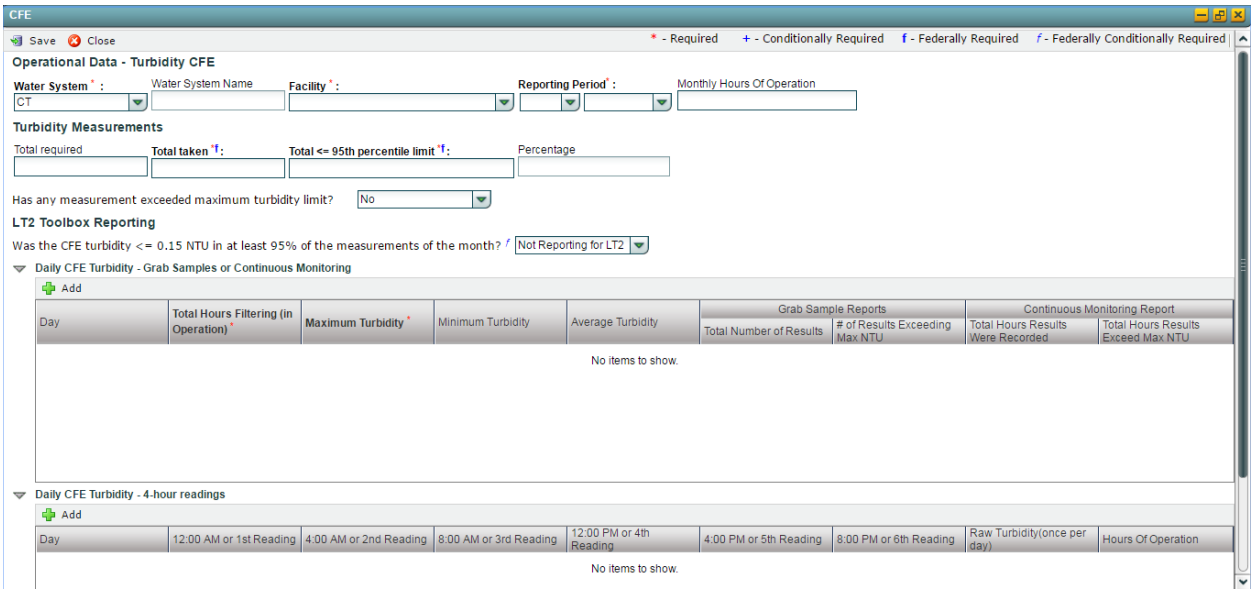


Figure 60 - Turbidity CFE

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 59)
4) Enter metadata information for Turbidity CFE. All fields marked with an asterisk (*) are required. (Figure 60)

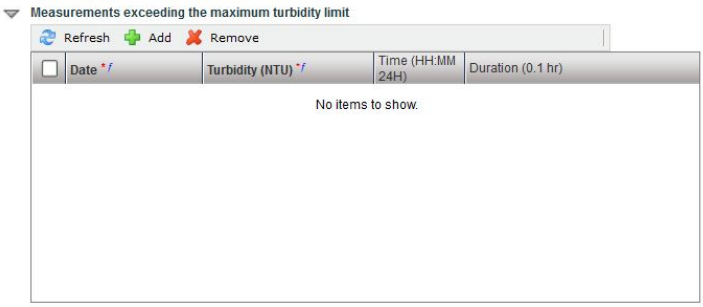


Figure 61 - Measurements Exceeding Turbidity Limit

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 61)
6) In the "**Grab Samples or Continuous Monitoring**" table, click "**Add**" to add daily measurements. All fields marked with an asterisk (*) are required. (Figure 60)
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.*

6.12.12.1 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.

6.12.12.2 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	O	Numeric 0 to 99999	None	-

		measurements required		(5,0)		
CFE-10	Total Taken	Total number of CFE Turbidity measurements taken during the month	R	Numeric 0 to 99999 (5,0)	None	**Federally 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 100 (3,2)	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 measurements 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>>	**Federally conditionally required**

			turbidity measurements taken during the month that exceed 1 NTU or the maximum level set by the State	

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 (2,3)	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 (3,2)	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 (3,2)	None	-
CFE-18	Maximum Turbidity	Highest daily turbidity reading	O	Numeric 0 to 99.999 (2,3)	None	-
CFE-19	Minimum Turbidity	Lowest daily turbidity reading	O	Numeric 0 to 99.999 (2,3)	None	-

CFE-20	Average Turbidity	Average of daily turbidity readings	O	Numeric 0 to 99.999 (2,3)	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 (3,2)	None	-
CFE-24	Continuous Monitoring Report – Total Hours Results Exceed Max NTU	Total number of hours during continuous monitoring in which the maximum NTU was exceeded	O	Numeric 0 to 999.99 (3,2)	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 (2,3)	None	-
	4:00 AM or 2nd Reading	Second of 6 daily 4-hour readings	O	Numeric 99.999 (2,3)	None	-
	8:00 AM or 3rd Reading	Third of 6 daily 4-hour readings	O	Numeric 99.999 (2,3)	None	-

	12:00 PM or 4th Reading	Fourth of 6 daily 4-hour readings	O	Numeric 99.999 (2,3)	None	-
	4:00 PM or 5th Reading	Fifth of 6 daily 4-hour readings	O	Numeric 99.999 (2,3)	None	-
	8:00 PM or 6th Reading	Sixth of 6 daily 4-hour readings	O	Numeric 99.999 (2,3)	None	-
	Raw Turbidity (once per day)	Daily measured turbidity value, before treatment	O	Numeric 99.999 (2,3)	None	-
	Hours of Operation	Total number of hours each day that the water system was in operation	O	Numeric 999.99 (3,2)	None	-

6.12.13 Add Turbidity Individual Filter Effluent Events Sample Type

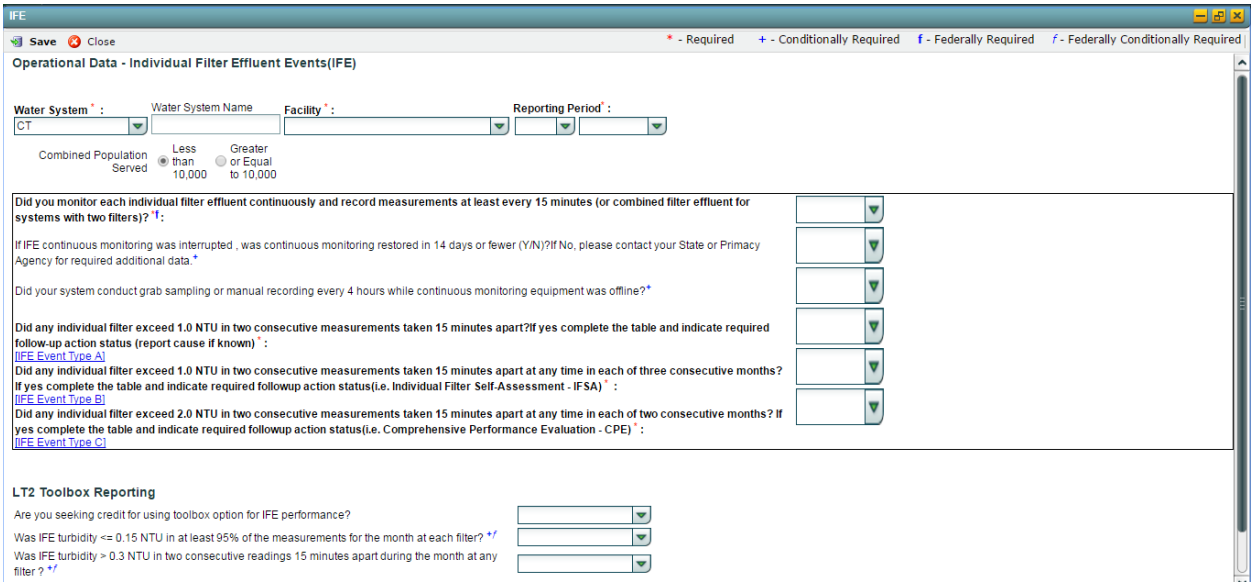


Figure 62 - Turbidity IFE

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 59)
4) Enter metadata information for Turbidity IFE. All fields marked with an asterisk (*) are required. (Figure 62)

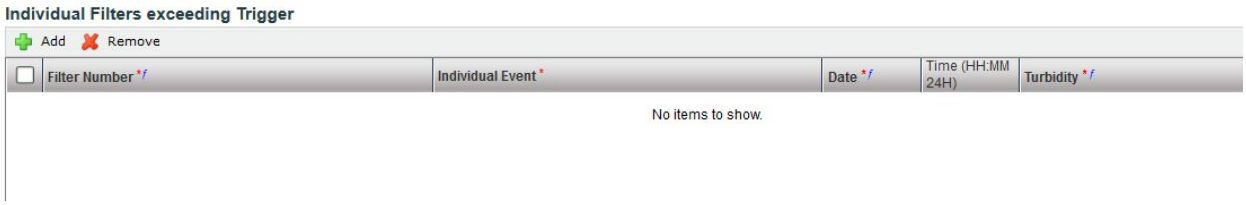


Figure 63 - Individual Filters Exceeding Trigger

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 63)
6) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 60)

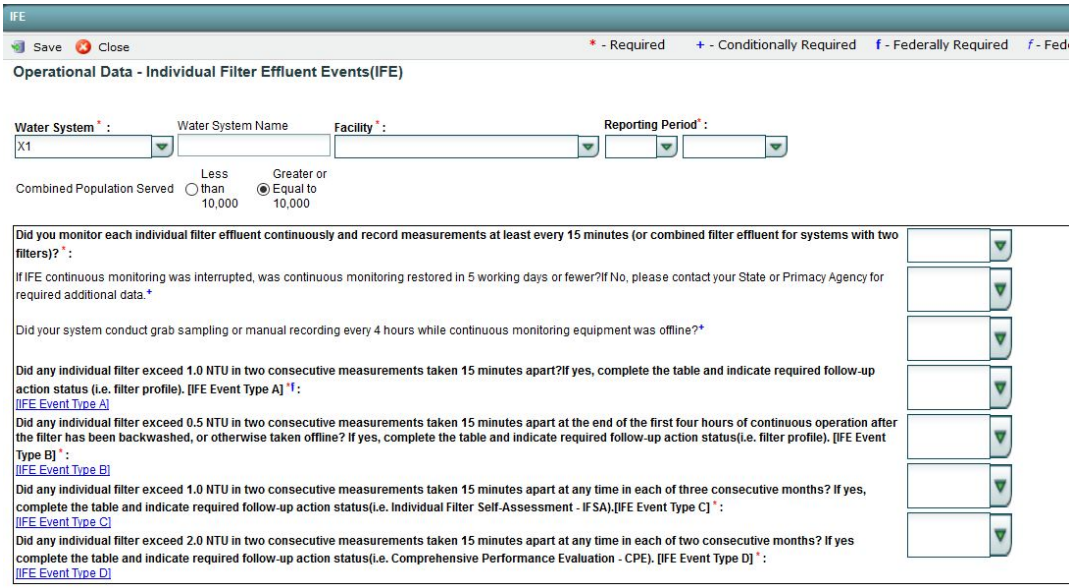


Figure 64 - Turbidity IFE (Population 10,000 or greater)

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 64), *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 65).
- *When an IFE record is saved, users will not be able to modify the reporting period.*

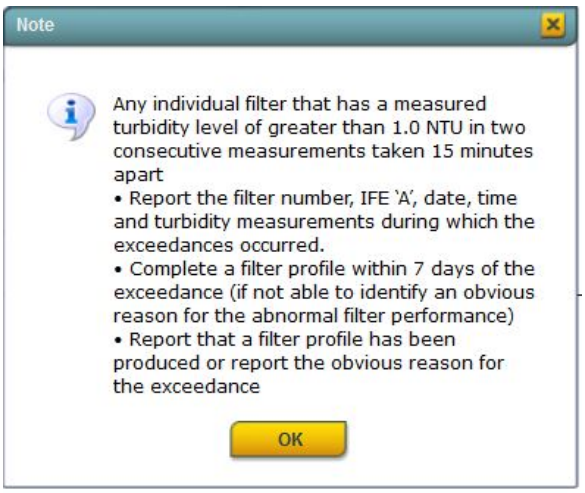


Figure 65 - Event Type A Description

6.12.13.1 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.

6.12.13.2 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	-	Display questions if IF0-6 is greater than or equal to 10,000	-

	a population 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	Alphanumeric	Federally required if: IF0-12 is Yes IF0-13 is Yes IF0-14 is Yes IF1-12 is Yes IF1-13 is Yes	**Federally conditionally required**

					IF1-14 is Yes IF1-15 is Yes	
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 measurement, in NTU, associated with the event type A-D	R	Numeric 0 to 99.999 (2,3)	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

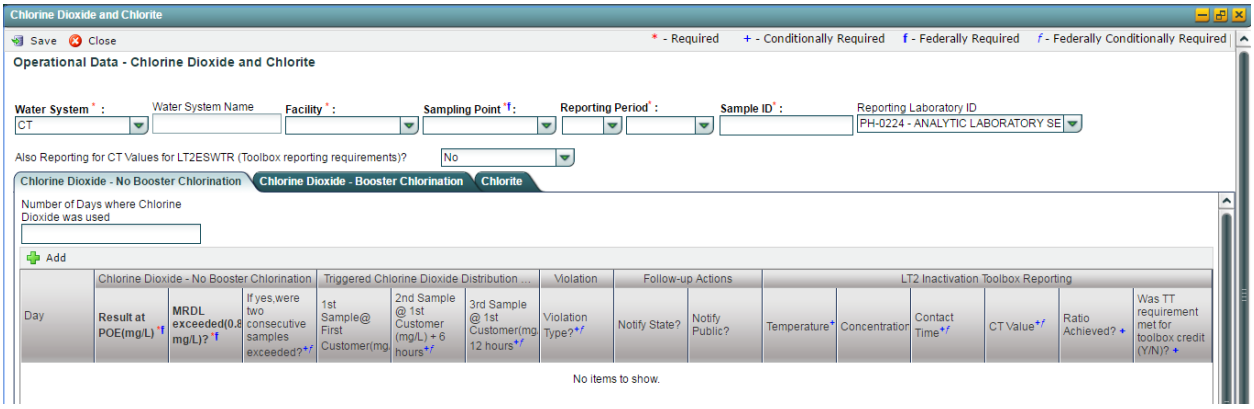


Figure 66 - Chlorine Dioxide and Chlorite

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 59)
4) Enter metadata information for Chlorine Dioxide and Chlorite. All fields marked with an asterisk (*) are required. (Figure 66)

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**."

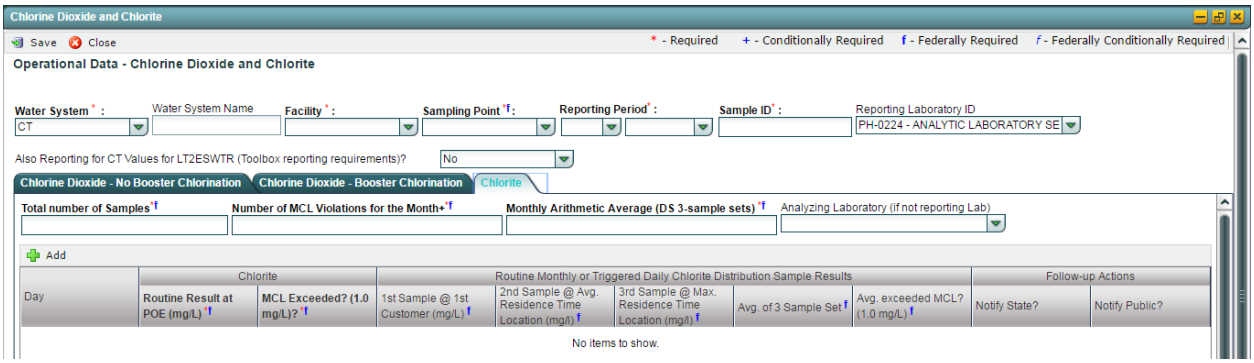


Figure 67 - Chlorite Data Entry Screen

6) The "**Chlorite**" tab can be used to report daily measures for Chlorite. (Figure 67)
7) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 60)

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.*

6.12.14.1 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.

-

6.12.14.2 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	Alphanumeric		Please enter any value; this 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	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	-
CLC-7.1	Reporting Laboratory	Name of analytical laboratory that performed the analysis of any sample results for Chlorine Dioxide and 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	Number of days during the month on which Chlorine	O	Numeric 0 to 99999 (5,0)	None	-

	Dioxide was used	Dioxide was used to disinfect water				
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 (2,3)	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 is greater than 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 (2,3)	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 (2,3)	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 (2,3)	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 conditionally required**

					(Federally required if CLC-10 is Yes)	
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 temperature for CT calculation	CR	Numeric	Required if CLC-7 is Yes (Federally conditionally required if CLC-7 is Yes)	**Federally 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	CR	List	List of values: Yes No Required if CLC-7 is Yes	-

		reported chlorine dioxide reporting			(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 (2,3)	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 No 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 (2,3)	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 (2,3)	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 (2,3)	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 Public?	Whether the PWS notified the public about the MRDL violation	O	List	List of values: 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	CR	List	List of values: Yes No	-

		agency review and approval based on reported chlorine dioxide reporting			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 Samples	Total number of samples taken in the month	R	Numeric 0 to 99999 (5,0)		**Federally required**
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 (2,3)		**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	R	Numeric 0 to 99.999 (2,3)	Display result in bold red if MCL (1.0 mg/L) is exceeded.	**Federally required**

		distribution system.				
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 (2,3)	-	**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 (2,3)	-	**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 (2,3)	-	**Federally required**
CLC-47	Avg. of 3 Sample Set	Average of the routine or triggered distribution three-sample set.	O	Numeric 0 to 99.999 (2,3)	Calculated value: CLC47=(CLC44+CLC45+CLC46)/3 Editable field	**Federally required**
CLC-48	Avg. 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

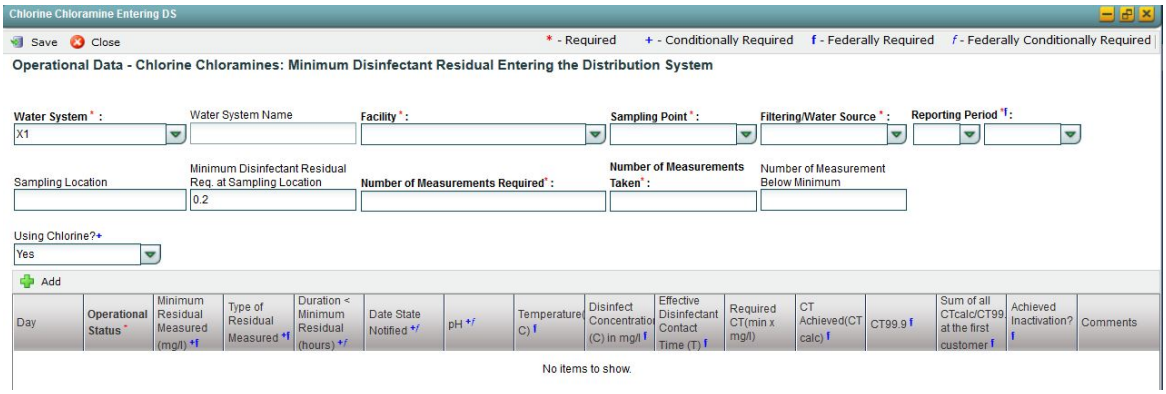


Figure 68 - Chlorine Chloramines Entering the Distribution System (Unfiltered Water)

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 59)
4) Enter metadata information for Chlorine and Chloramines Entering Distribution System. All fields marked with an asterisk (*) are required. (Figure 68)
5) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 60)

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 69)

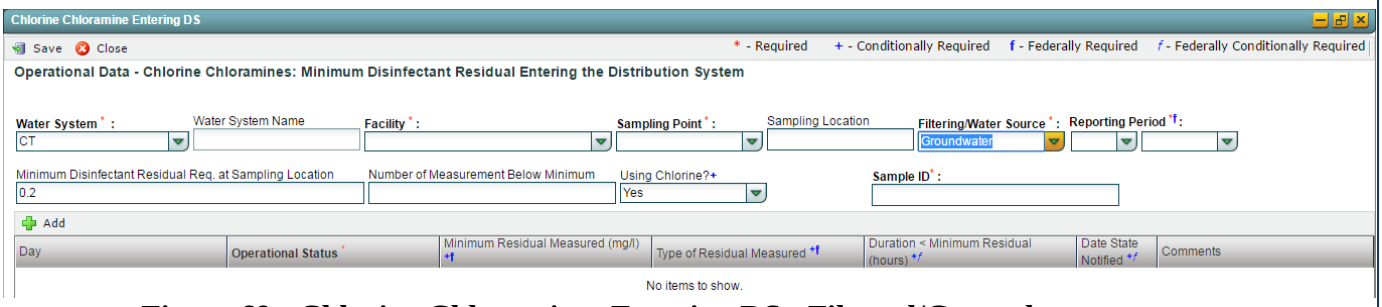


Figure 69 - Chlorine Chloramines Entering DS - Filtered/Groundwater

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.*

6.12.15.1 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

6.12.15.2 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;	N/A	Disabled Field	Disabled field	-

		the name can be the formal, legal, or common name most generally used to refer to the water system			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	Alphanumeric		Please enter any alphanumeric

						value; this field is not used for compliance determination and will be removed from a future version of CMDP.
CED-9	Minimum Disinfectant Residual Req. at Sampling Location	Minimum disinfectant concentration in mg/l per state requirement	O	Numeric 0 to 99.999 (2,3)	Default value is 0.2. Field enabled. Disabled when record is saved	-
CED-10	Number of Measurements Below Minimum	Number of measurements less than the state-required minimum (CED-9)		Numeric 0 to 99999 (5,0)		-
CED-11	Number of Measurements Required	Number of measurements that must be taken in the monitoring period	O	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	Operational Status	Indicates if the facility was operating 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 (2,3)	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 state-required residual.	CR	Numeric 0 to 999.99 (3,2)	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-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 disinfected water	CR	Numeric 0 to 999.9 (3,1)	Required if CED-12 is Yes Disable if CED-16 is Off	**Federally conditionally required if chlorine is used**
CED-22	Temperature	The daily measurement of water temperature in degrees centigrade following each point of disinfection	O	Numeric 0 to 99.9 (2,1)	Disable if CED-16 is Off	**Federally required for unfiltered SW systems**
CED-23	Disinfect. Concentration (C) in mg/L	The daily residual disinfectant concentration in mg/L	O	Numeric 0 to 99.999 (2,3)	Disable if CED-16 is Off	**Federally required for unfiltered SW systems**
CED-24	Effective Disinfectant Contact Time (T)	The disinfectant contact time (in minutes) used for calculating the CT value	O	Numeric 0 to 99.999 (2,3)	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	O	Numeric 0 to 99.999 (2,3)	Disable if CED-16 is Off	-

		state-required CT				
CED-26	CT Achieved (CT calc)	The actual CT value calculated using CED-23 and CED-24	O	Numeric 0 to 99.999 (2,3)	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 (2,3)	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 (2,3)	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 comment 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	R	Numeric 0 to 99.999 (2,3)	Disable if CED-16 is Off	**Federally required**

		Location (mg/l)				
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 (3,2)	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

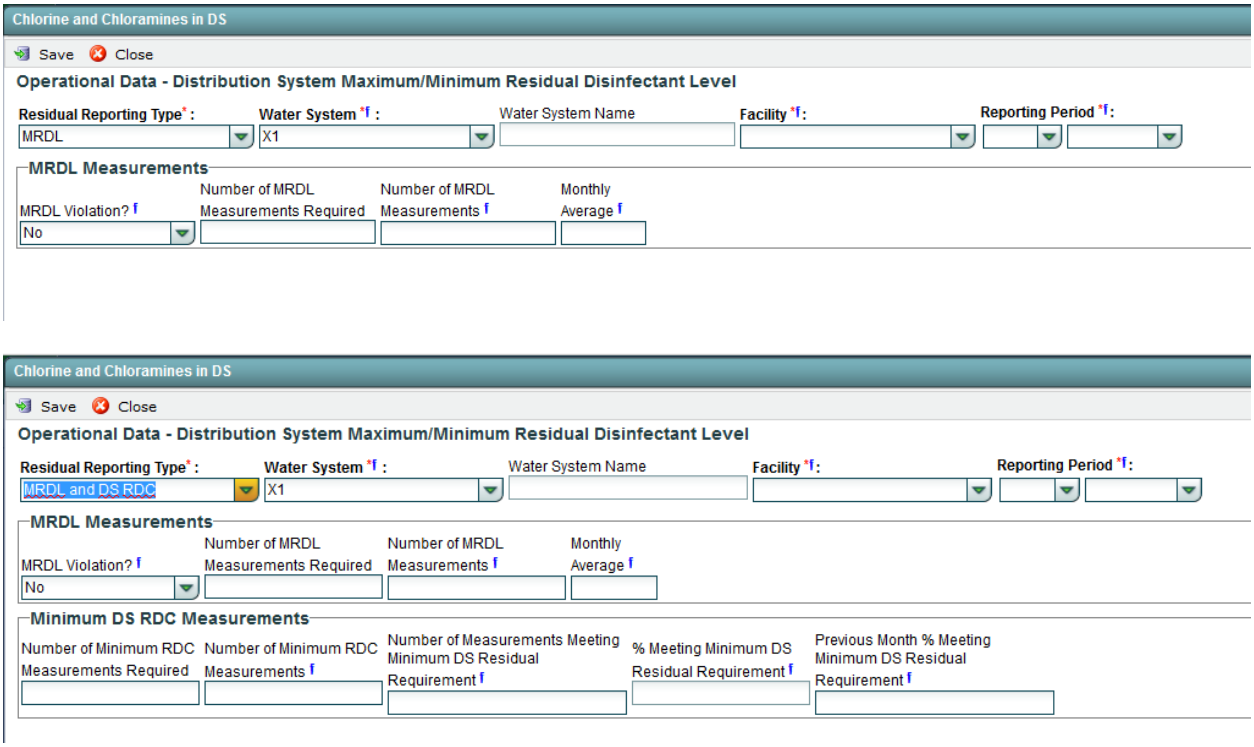


Figure 70 - Chlorine Chloramines in the Distribution System (MRDL)

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 59)
4) Enter metadata information for Chlorine and Chloramines Entering Distribution System. All fields marked with an asterisk (*) are required. (Figure 70)
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.*

6.12.16.1 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

6.12.16.2 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	**Federally required**

					Disabled when record is saved	
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 (2,3)	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 Measurements	Number of Maximum Residual Disinfectant Level measurements taken in the month	O	Numeric 0 to 99999 (5,0)	-	**Federally required**
CID-8.1	Number of MRDL Measurements 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 (2,3)	-	**Federally required**
CID-10	Number of Measurement Meeting Minimum DS Residual Requirement	Number of DS residual measurements with a detected residual	O	Numeric 0 to 99999 (5,0)	CID-10 must be less than or equal to CID-13	**Federally required**
CID-11	% Meeting DS Residual Requirement	Percent of current month's DS residual measurements with a	O	Numeric 0 to 100 (3,3)	Calculated. Equal to Percent(CID-10/CID-13)	**Federally required**

		detected residual				
CID-12	Previous Month % Meeting DS Residual Requirement	Percent of previous month's DS residual measurements with a detected residual	O	Numeric 0 to 100 (3,3)	-	**Federally required**
CID-13	Number of Minimum RDC Measurements	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 Measurements 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

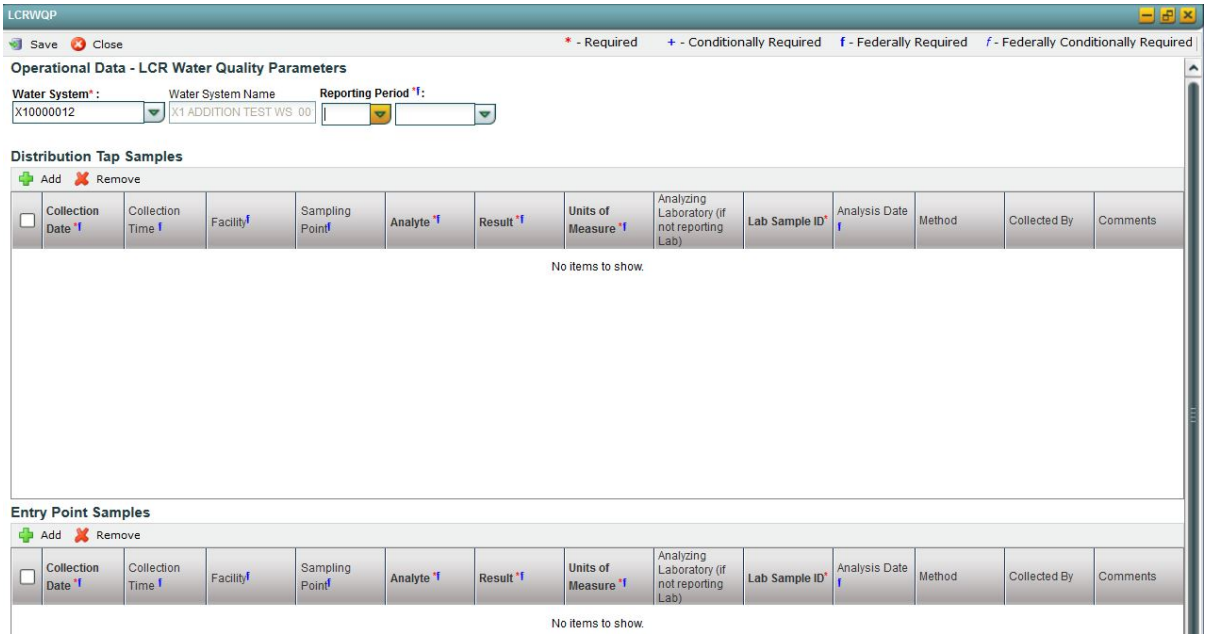


Figure 71 - Lead and Copper Water Quality Parameters

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 59)
4) Enter metadata information for Lead and Copper WQP. All fields marked with an asterisk (*) are required. (Figure 71)
5) Users can either enter distribution tap samples or entry point samples using the tables provided. (Figure 71)
6) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 60)

6.12.17.1 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

Notes:

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

6.12.17.2 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	N/A	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	**Federally required**

					LCR-5 (reporting period)	
LCR-7	Collection Time	Time when sample was collected	R	Time HH:MM (24h)		**Federally required**
LCR-8.1	Facility	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 Point ID	ID number of the Sampling Point	O	List	List of values: All sampling points in facility selected in LCR-8.1	**Federally required**
LCR-9	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-10	Result	Result measured	R	Numeric		**Federally required**
LCR-11	Units of Measure	Unit of measure	R	List	List of values: MG/L uG/L pH Unit Degree Celsius uMHO/cm	**Federally required**
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	Alphanumeric	-	-

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)		**Federally required**
LCR-20	Facility ID - Sampling Point ID	Facility related and sampling point related to facility	R	List	List of values: List of all facilities in water system selected in LCR-1	**Federally required**
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 (4,4)	-	**Federally required**
LCR-23	Units of Measure	Unit of measure	R	List	List of values: MG/L uG/L	**Federally required**

					pH Unit Degree Celsius uMHO/cm	
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	Alphanumeric	-	-
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

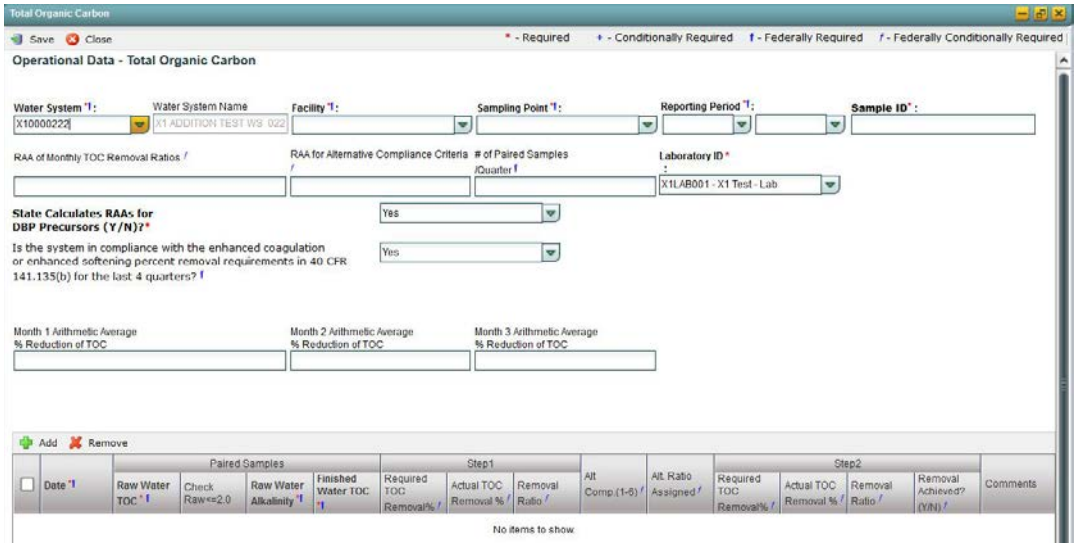


Figure 72 - Total Organic Carbon

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 59)
4) Enter metadata information for Total Organic Carbon. All fields marked with an asterisk (*) are required. (Figure 72)
5) Click "**Save**" to add the sample type to the Drinking Water Sample Job. (Figure 60)

6.12.18.1 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.

Note:

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

6.12.18.2 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	N/A	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	Alphanumeric	-	-
TOC-12	Monthly Arithmetic Average % Reduction of TOC	Average of the percent reduction for each paired TOC sample	-	Numeric 0 to 999.99 (3,2)	Monthly average is recorded for the month and reported for the quarter. Federally conditionally required if the state chooses NOT to perform the calculation.	**Federally conditionally required**
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 (3,2)	-	**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 (3,2)	-	**Federally conditionally required**
TOC-10	# of Paired Samples/Quarter	Number of paired TOC samples collected during the last quarter	-	Numeric 0 to 99999 (5,0)	-	**Federally required**
TOC-11	Is the system in compliance 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 (3,2)	-	-
TOC-11.2	Month 2 Arithmetic Average % Reduction of TOC	Calculated TOC percent removal for the second month of the reporting period	O	Numeric (3,2)	-	-
TOC-11.3	Month 3 Arithmetic Average % Reduction of TOC	Calculated TOC percent removal for the third month of the reporting period	O	Numeric (3,2)	-	-

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 (3,2)	-	**Federally required**
TOC-16	Check Raw<=2.0	Whether the raw water TOC measurement was <=2.0	R	Numeric 0 to 999.99 (3,2)	-	**Federally required**
TOC-17	Raw Water Alkalinity	Value of alkalinity in mg/L, before treatment	O	Numeric 0 to 999.99 (3,2)	-	-
TOC-18	Finished Water TOC	Treated water TOC, in mg/L	R	Numeric 0 to 999.99 (3,2)	-	**Federally required**
Step 1						
TOC-19	Required TOC Removal %	Step 1	O	Numeric 0 to 100 (3,3)	-	**Federally conditionally required**
TOC-20	Actual TOC Removal %	Step 1	O	Numeric 0 to 100 (3,3)	-	**Federally conditionally required**
TOC-21	Removal Ratio	Step 1	O	Numeric	Calculated TOC-19/TOC-20	**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 (3,2)	-	**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: TOC-26 = 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	-	-

6.12.19 Add Ozone Treatment (Bromate) Sample Type

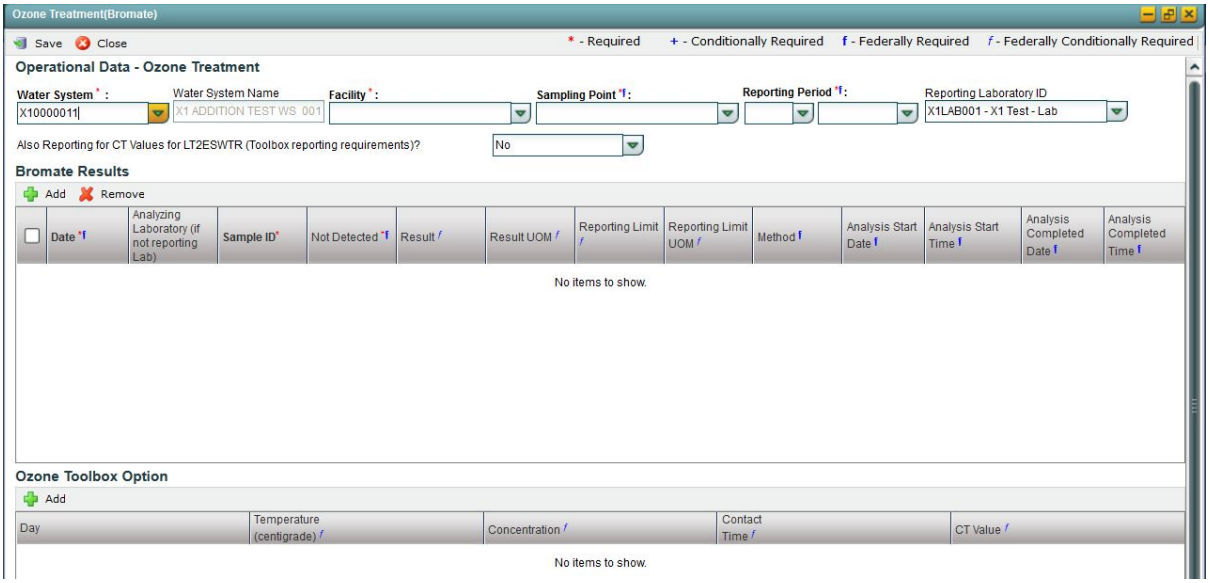


Figure 73 - Ozone Treatment (Bromate)

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 59)
4) Enter metadata information for Ozone Treatment (Bromate). All fields marked with an asterisk (*) are required. (Figure 73)
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 73)

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.*

6.12.19.1 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.

6.12.19.2 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 the sample analysis	O	List	List of values: List of laboratories within the Primacy Agency	-
OTB-12	Sample ID	Assigned ID	O	Alphanumeric	-	-
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 (2,3)	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 (2,3)	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	**Federally conditionally required**

					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)	
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/YYYY	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	-
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	-

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 (2,1)	None	-
OTB-23	Concentration	Concentration of chlorine dioxide for CT calculation expressed in mg/L.	O	Numeric 0 to 99.999 (2,3)	None	-
OTB-24	Contact Time	Time (T, in minutes) concentration is measured for CT calculation	O	Numeric 0 to 99.999 (2,3)	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 (2,3)	None	-

6.12.20 Add TTHM and HAA5 Sample Type

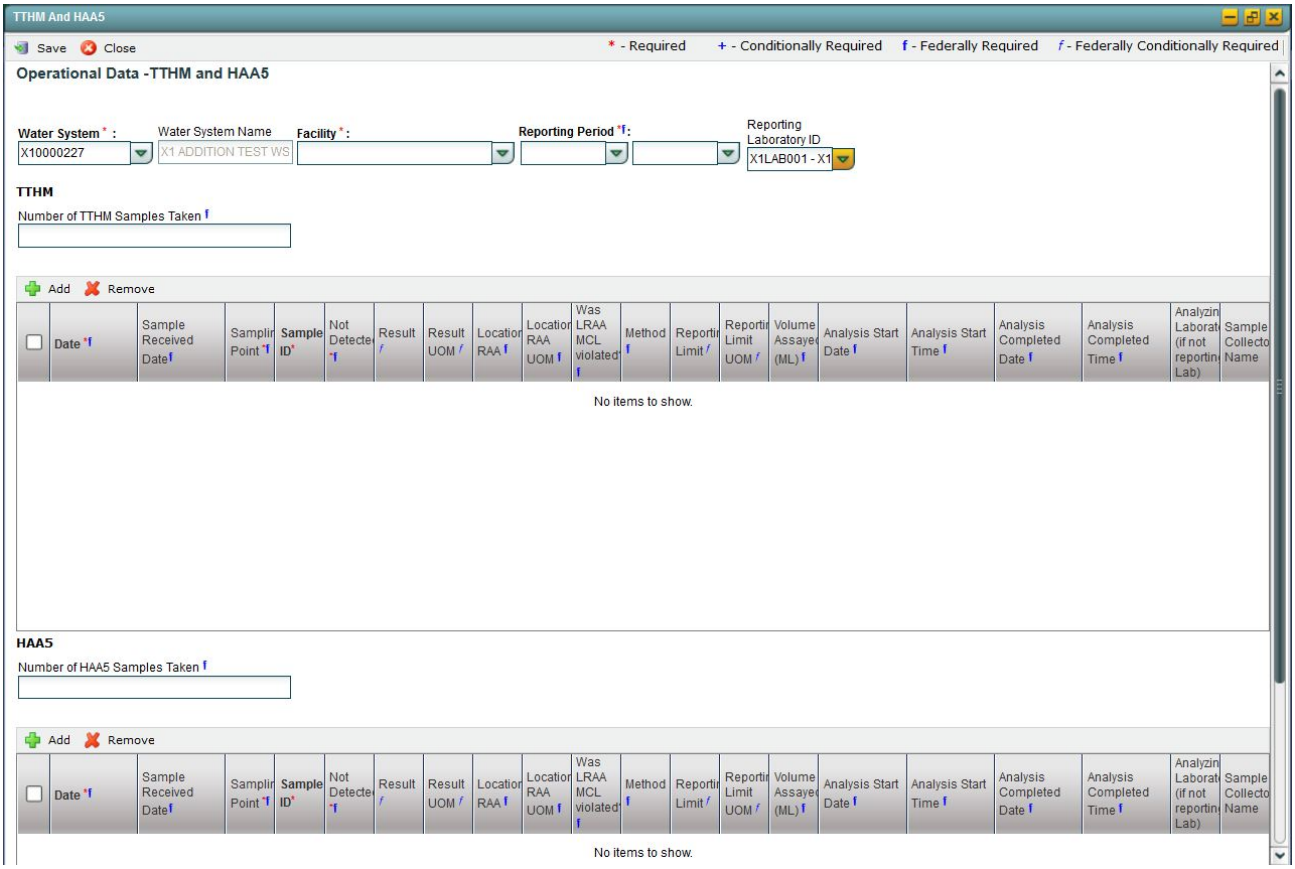


Figure 74 - TTHM and HAA5

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 59)
4) Enter metadata information for TTHM and HAA5. All fields marked with an asterisk (*) are required. (Figure 74)
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 60)

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.

6.12.20.2 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 Locational RAA	TTHM locational running annual average	O	Numeric 0 to 99.999 (2,3)	-	**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	Alphanumeric	-	-
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): Yes No	**Federally required**

					Not detected if true/Yes	
TTH -15	Result	Measure value	CR	Numeric 0 to 99.999 (2,3)	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 (2,3)	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	**Federally conditionally required**

					true/Yes (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	Alphanumeric		

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 Locational RAA	Locational running annual average for HAA5	O	Numeric 0 to 99.999 (2,3)	-	**Federally required**
TTH -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/YY YY	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 ID	Assigned ID	O	Alphanumeric	-	-
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 (2,3)	Disable if TTH-26 is true/Yes (not detected) (Federally conditionally 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 conditionally required if analyte detected:	**Federally conditionally required**

					TTH-26 is not true/Yes)	
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 (2,3)	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 conditionally 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	**Federally required**

					date) and greater than or equal to TTH-32 (Analysis Start Date)	
TTH -34	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	Alphanumeric		

6.13 JOB HISTORY

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

- Job Status change (Sent to Reviewer, Sent to Certifier, Submitted, Rejected)
- Add/Edit/Remove samples
- Field level modifications in samples

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 75)

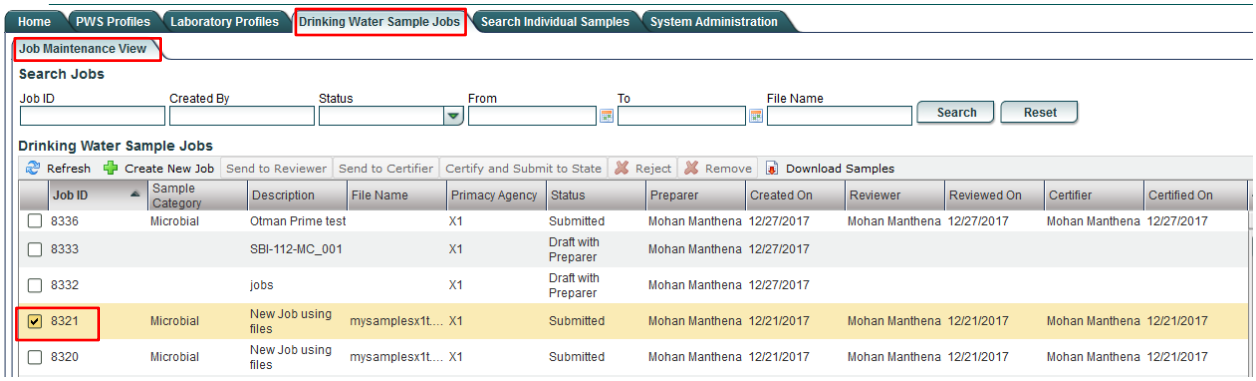


Figure 75 -Job Maintenance View

2) Select a Job from the "**Job Maintenance View**" (Figure 75) to view **Sample Result** Job details in a new tab (Figure 76).

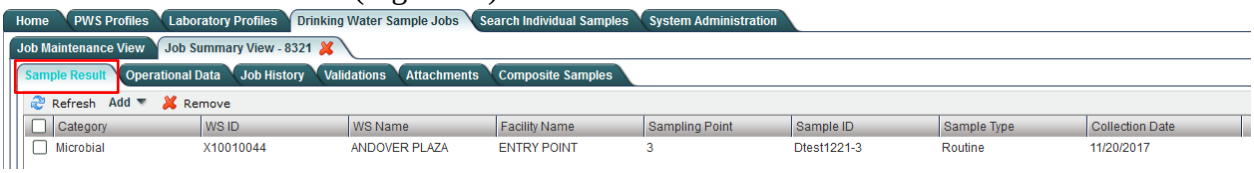


Figure 76 - Sample Result

3) Click the "**Job History**" tab to view the history details of the Job selected (Figure 77).

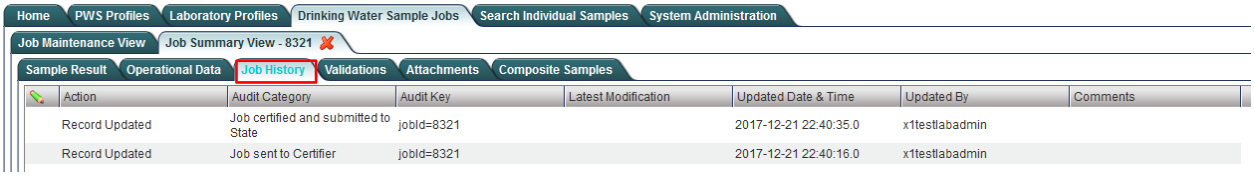


Figure 77 - Job History (All Users)

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."*

6.14 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 that are federally required or federally conditionally required to see if there is a value (Figure 78). 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 79). 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.

Bottom Table - XML Submittal Validation Error Details: This table contains details of the errors found in the XML Submittal Validation Summary (Figure 80). 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.

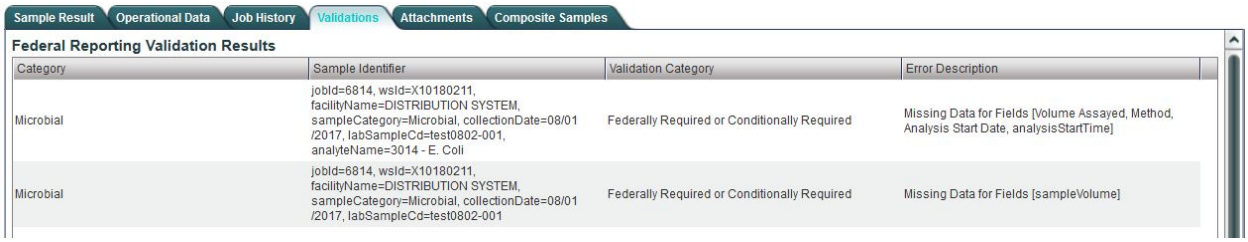


Figure 78 - Federal Reporting Validation Results table

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 78)
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.
5) LIMS and Templates submissions validations are shown in Figure 79:

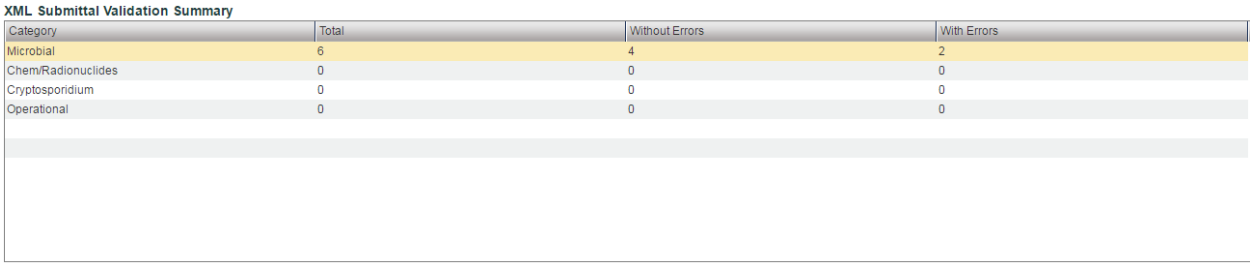


Figure 79 - Validations Table for XML Submittal

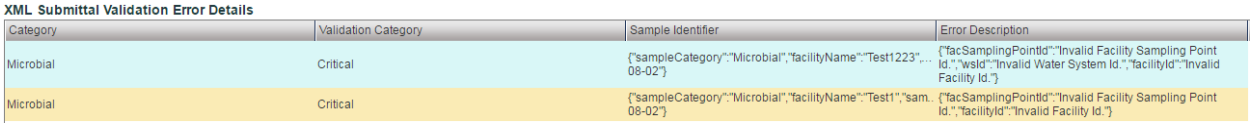


Figure 80 - Validations Table for XML Submittal Error Details

a. Use the XML Submittal Validation Summary to evaluate the number of samples that have errors in them (Figure 79).

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 80)

Note:

- *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	-	-	-	-
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.

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
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	Yes	Yes	Yes	Yes – for null values only

	appear in the user interface				

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

Table 3 **- CMDP Validation Matrix**

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
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 81)

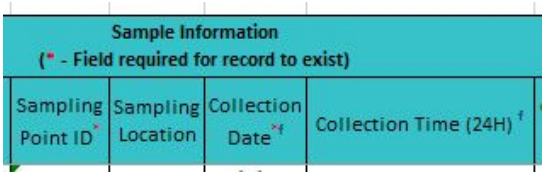


Figure 81 - Sample Information (Partial) from Microbiological Template

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

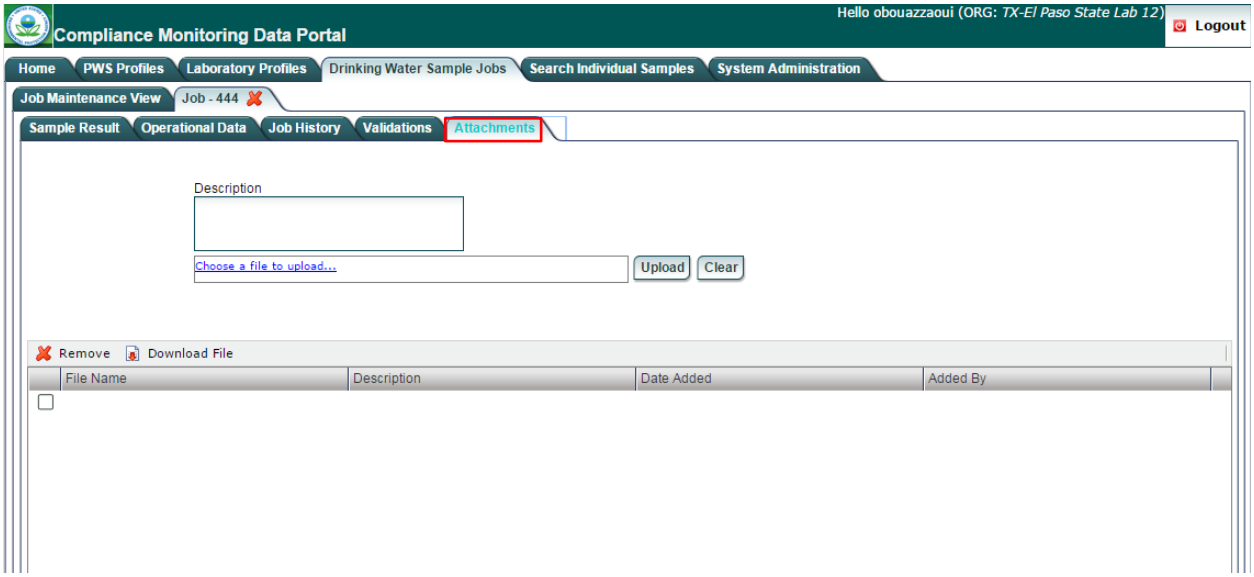


Figure 82 - Job Attachments

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. (Figure 82)
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:

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

To download an attachment

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

Note:

- *Attachments cannot exceed 5 MB each.*

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 as an 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	Brief text describing the 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	Brief text describing the 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	-	-	Auto-populated (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.).

7.1 SEARCH SAMPLES

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

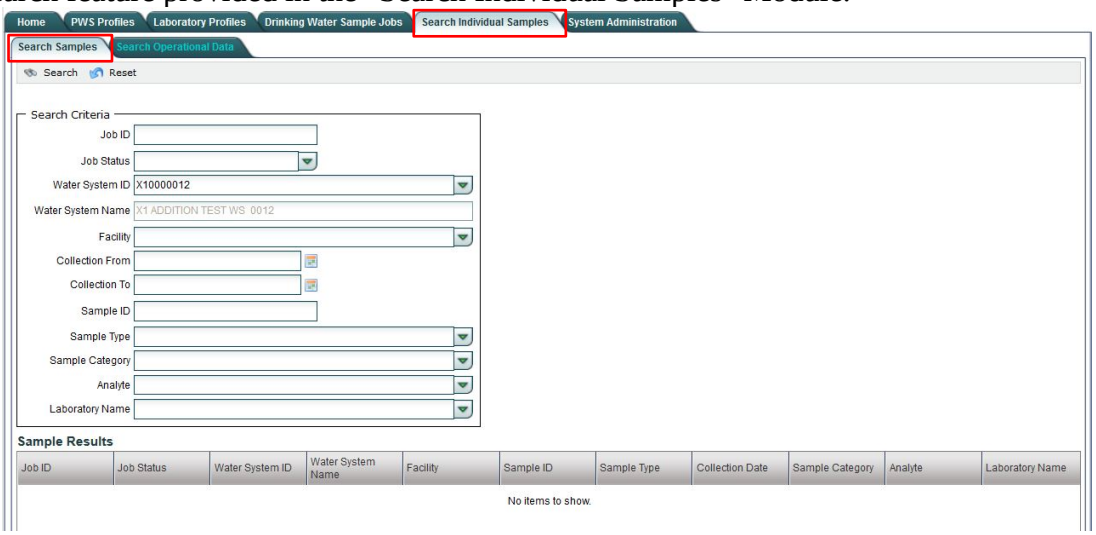


Figure 83 - Search Individual Samples (Microbiological/Chemicals/Radionuclides/Cryptosporidium)

1) Click the "**Search Individual Samples**" tab. (Figure 83)
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.
4) Click on a Job result to view Job details.
5) To reset search parameters/filters, click the "**Reset**" button.
6) To get back to the search page, click the "**Search Samples**" tab.

Note:

- *Multiple sample screens can be opened simultaneously. 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]	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-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.

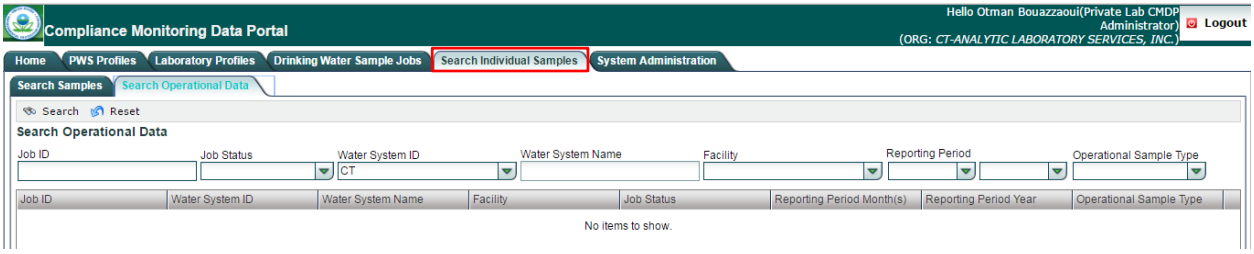


Figure 84 - Search Operational Sample Types

1) Click the **"Search Individual Samples"** tab. (Figure 84)
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 Job result to view detailed Job results.
5) To reset search parameters/filters, click the "**Reset**" button.
6) To get back to the search page, click the "**Search Samples**" tab.
7) Multiple Job results can be opened at once by selecting multiple Jobs from the search list.

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.,	O	List	List of values: Validation in Progress	-

		Draft with Preparer)			Draft with Preparer Draft with Reviewer Draft with Certifier Submitted Accepted by State Validation Failed	
SIS-26	Monitoring Period Month(s)	Month(s) of the 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

The following depicts the Profile Change Request Process (Figure 85).

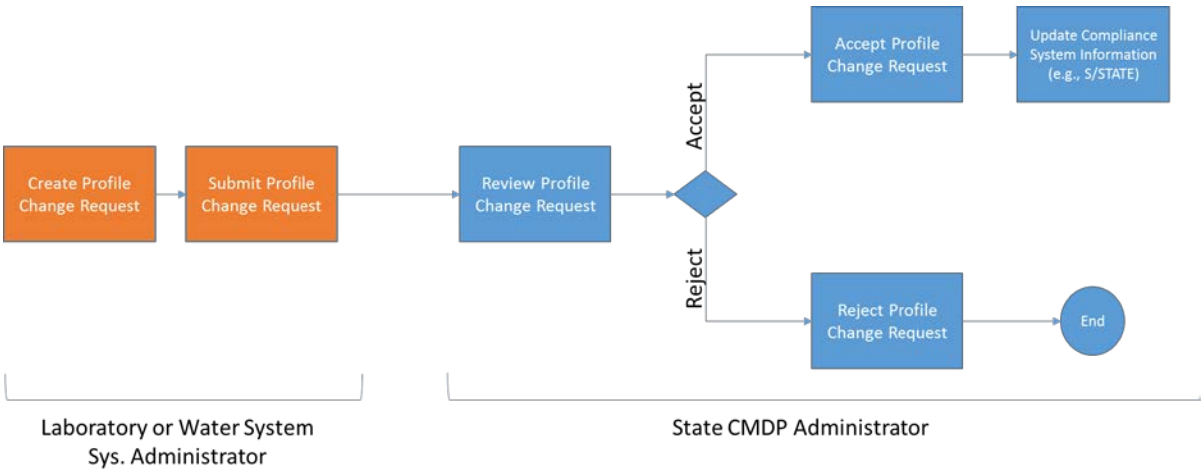


Figure 85 - Profile Change Request Process

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 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.

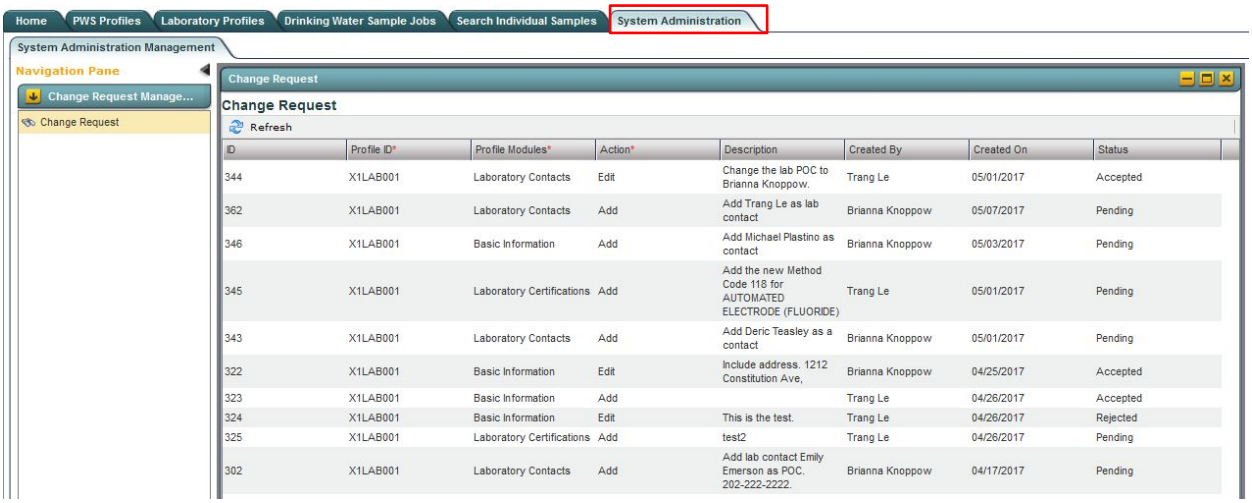


Figure 86 - Manage Profile Change Requests

1) Click the "**System Administration**" tab.
2) Click "**Change Request**" on the left Navigation Pane to view the Change Requests.
3) 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 be notified.*

8.1.2 Authorizations

- Only CMDP State Administrators will have access to managing 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	-	-
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	-