SAMPLE VALIDATION & SUBMISSION PROCESS (EXCEL TEMPLATE)

This document is divided into five separate parts (as shown below) and provides instruction on how to upload an XML file into CMDP, identifies items to consider when addressing validation errors within CMDP and highlights the most common reasons why samples are rejected from the State in CMDP.

Part 1: Upload Sample Job Information

Part 2: Review Validations Tab

Part 3: Submit Sample Job

Part 4: Validation Errors from the State

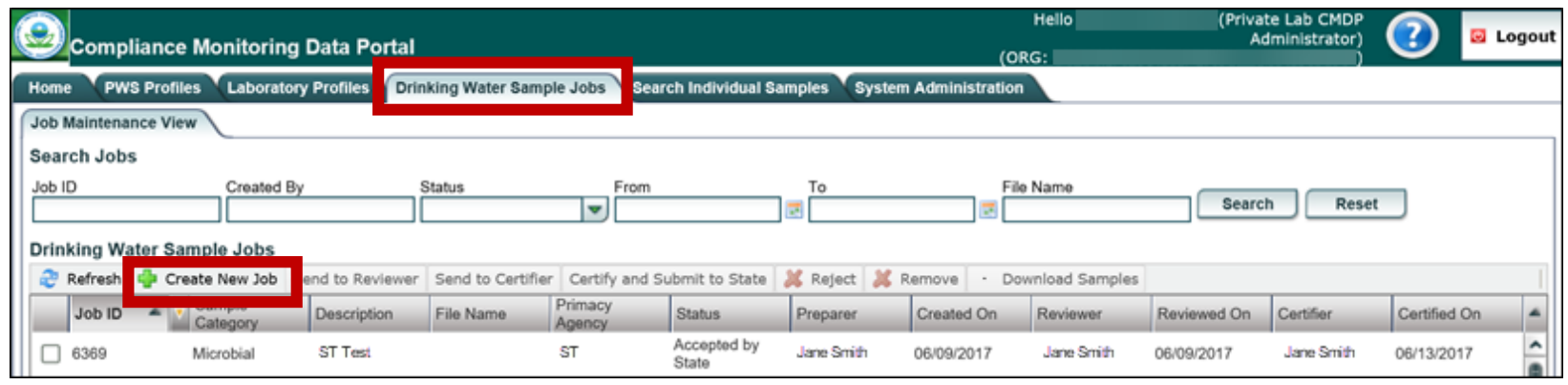
Part 5: Example Scenario of Sample Rejection

Once sample information is entered into the Excel template, you are ready to upload the submission into CMDP as outlined in the steps below.

NOTE: Confirm the appropriate analysis Method is reported and a Sampling Location is entered prior to uploading the data into CMDP as these are state required fields.

Part 1: Upload Sample Job Information

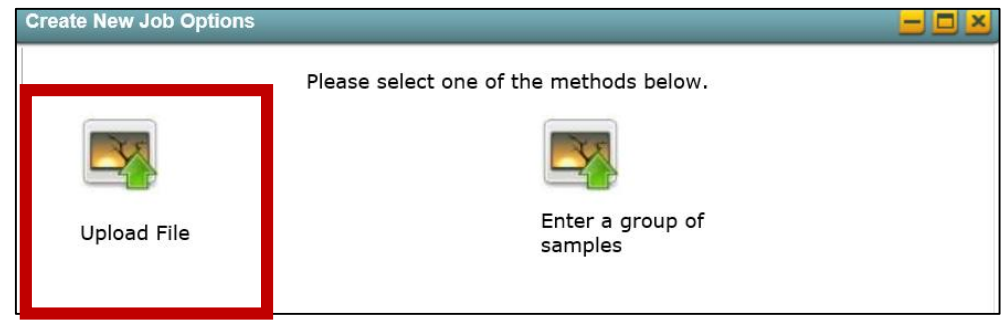
Step 1: To create a new Sample Job, go to the **Drinking Water Sample Jobs** tab and select **Create New Job**.



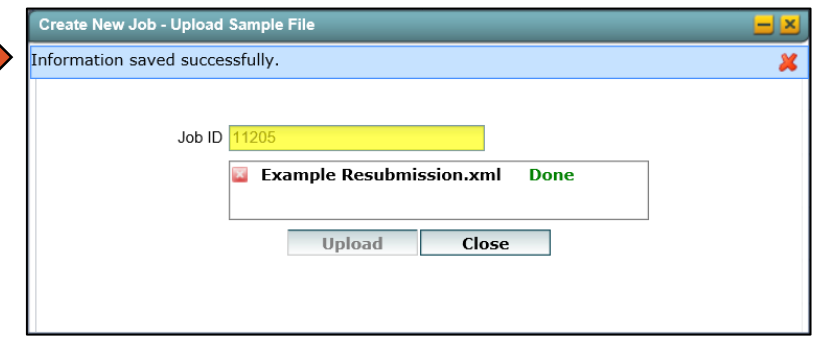
Step 2: From the pop-up window, select the **Upload File** option.

Then, click the **Choose a file to upload…** link to select the XML file. Then, navigate to the appropriate folder where your XML file is located, select it and click **Open**.

Wait until the **Done** icon is displayed (next to the XML file name) before clicking the **Upload** button.

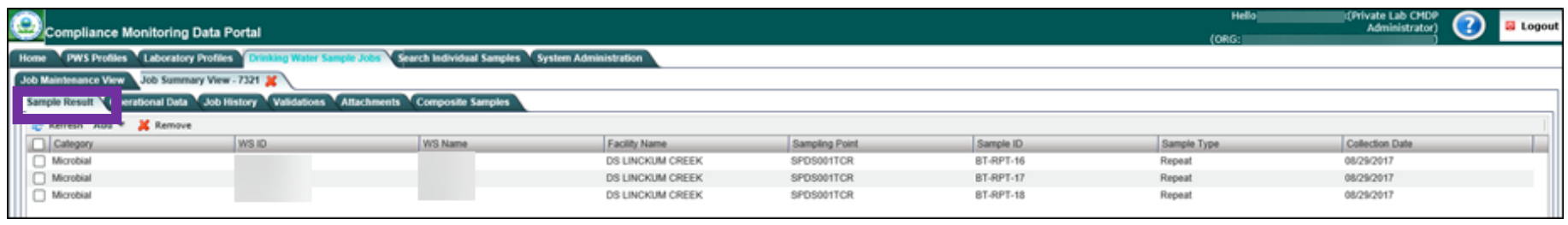


A message stating **Information saved successfully** will appear at the top of the dialog box and a **Job ID** will be listed within the field. (This number is automatically assigned by CMDP.)



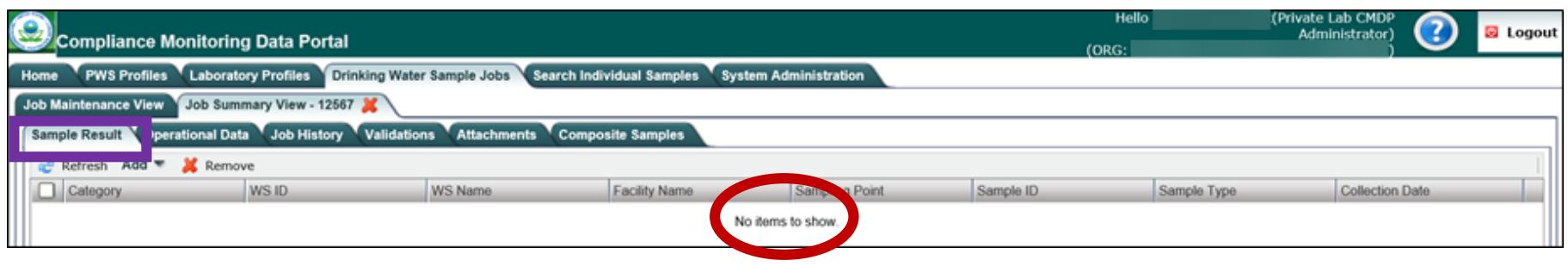
Step 3: Click the **Close** button. Check the **Sample Result** sub-tab to **confirm that all sample submissions were uploaded successfully**. If the data was uploaded successfully, each sample submission will be displayed under the **Sample Result** sub-tab (screen shot below). If all submissions are listed, proceed to Part 2.

Submission Uploaded Successfully



If a submission is missing (i.e., not listed) from the **Sample Result** sub-tab **OR** if no submissions are listed and the warning "**No items to show**" is displayed (screen shot below) , this indicates a significant field or fields (e.g., Sample ID, WS ID, Analyte [Code-Name], etc.) were left blank in the Excel template.

Submission Uploaded Unsuccessfully



NOTE: If the **Sample Category** column (on the Job Maintenance View tab) is blank, this also indicates that data were unsuccessfully uploaded.

In either case, the user will need to remove the submission from CMDP by returning to the **Job Maintenance View** tab. Select the **Job ID** and click **Remove** to delete the Sample Job. The user will have to go back to the Excel template, fix the error, and then re-create the XML file.

Part 2: Review Validations Tab

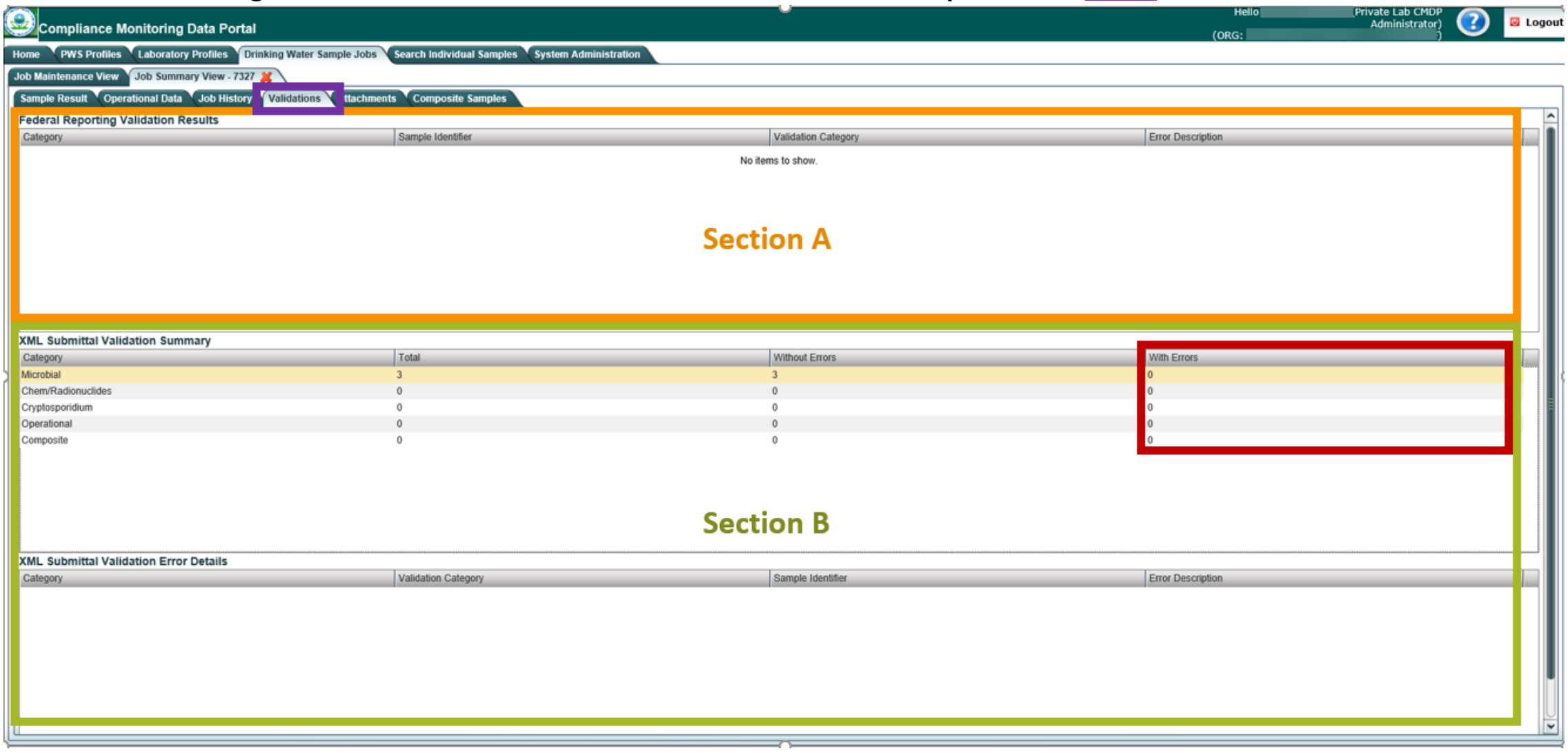
Step 1: After the user has uploaded the XML submission into CMDP successfully, check for validation errors under the **Validations** tab. This is a very important step because addressing errors listed here will reduce the number of submission rejections issued by the state.

- If the "No items to show" notification is displayed in **Section A**, AND the numbers listed under the **With Errors** column all equal "0" shown in **Section B**,

this indicates that no validation errors were identified within the uploaded XML information (see screen shot below).

If no validation errors are listed under this tab, the user can submit the sample/results to the state.

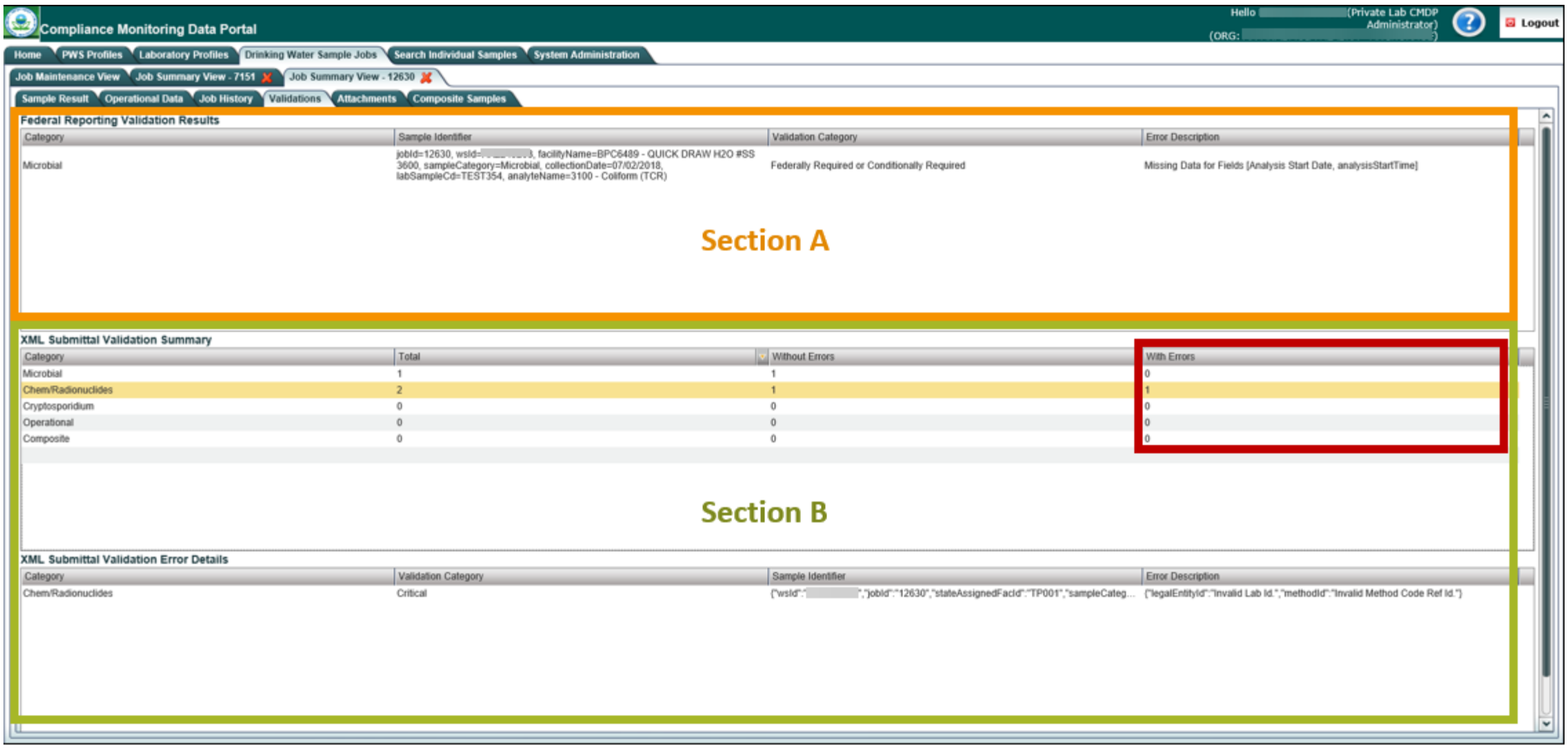
For guidance on how to submit this information to the state, proceed to Part 3 of this document.



- If one or more messages are displayed within **Section A**, AND/OR the **With Errors** column in **Section B** includes a number of 1 or greater, this indicates that validation errors were identified within the uploaded XML information (see screen shot below).

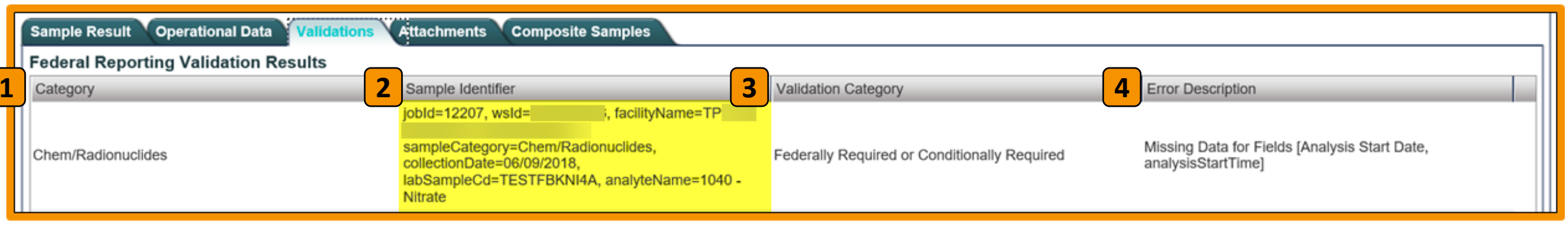
If any validation errors are listed under this tab, the user must make the appropriate corrections prior to submitting the sample/results to the State.

For guidance on how to address the information within Section A refer to page 3, and Section B refer to page 4.



Step 2: The **Federal Reporting Validation Results Table** table contains results of validations checked against fields that are federally required/conditionally required to see if there is a value. If fields are left blank or information is entered incorrectly, they will be listed as errors in this table.

If the user double clicks on an individual row in this table, they will be brought to the specific sample submission.



The information below provides a brief description of each column within **Federal Reporting Validation Results** table and how users can navigate through the information.

1 **Category:** This column lists the type of sample group as it relates to the specific sample with an error. The categories listed can include Microbial, Chem/Radionuclides or Cryptosporidium.

2 **Sample Identifier:** This column provides details on the sample that contains the Federal reporting error(s). The information merely identifies the sample, it does not describe the error. For instance, the screen shot above (highlighted text under column 2) identifies that an error occurred with the sample job *12207* and this sample job is from *a PWS* with a facility name of *TP*. It is a *Chem/Radionuclide* sample with a collocation date of *06/09/2018*, assigned a lab sample identification number of *TESTFBKNI4A* and the sample analyte is a *1040-Nitrate*. Specifically, the type of information displayed within this section includes the following:

jobId: Job sample identification code assigned by CMDP
wsId: Public Water System identification number
facilityName: Water system facility name entered in CMDP
sampleCategory: Type of sample classification (i.e., Microbial Chem/Radionuclides, Cryptosporidium)
collectionDate: Date sample collected (MM/DD/YY)
labSampleCd: Lab sample identification number
analyteName: Sample analyte(s) code/name

3 **Validation Category:** This column identifies the severity level for the type of error identified (e.g., federally required/conditionally required).

4 **Error Description:** This column describes the specific error that has occurred with the sample submission.

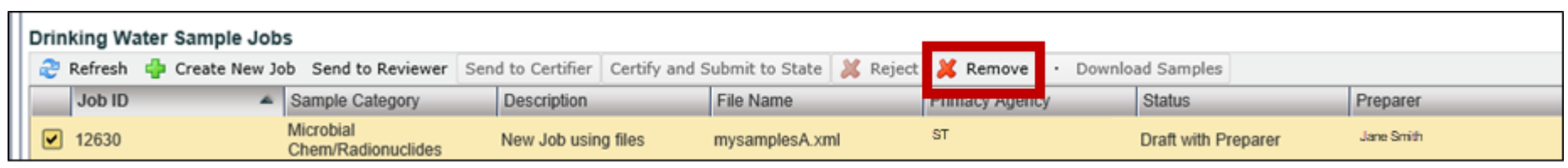
The table below highlights common CMDP error messages as displayed within the **Error Description** column, along with an explanation of the error. This table also highlights the specific fields within the Excel template that could generate the error.
NOTE: This is not an all-inclusive list of every error that can occur. If you run into an error message that is not listed in the table below, please contact the CMDP Transition Team and we will add it to the list.

CMDP Error Message	Explanation of Error	Fields for Labs to Review
Missing Data for Fields [sampleRecievedDt]	No data entered in **Sample Received Date** field.	Add data into **Sample Received Date** field.
Missing Data for Fields [sampleVolume]	No data entered in **Sample Volume** field. *NOTE: Only required for Microbial Samples.*	Add data into **Sample Volume** field.
Missing Data for Fields [Collection Time]	No data entered in **Collection Time (24H)** field.	Add data into **Collection Time (24H)** field.
Missing Data for Fields [Missing Sample Result for E.coli Given Reported TC+ Sample Result]	*E.coli* sample result was not submitted with TC+ sample result.	Add *E.coli* sample result to sample submission.
Missing Data for Fields [Volume Assayed]	No data entered in **Volume Assayed** field.	Add data into **Volume Assayed** field.
Missing Data for Fields [Method]	No data entered in **Method** field.	Add data into **Method** field.
Missing Data for Fields [Analysis Start Date]	No data entered in **Analysis Start Date** field.	Add data into **Analysis Start Date** field.
Missing Data for Fields [analysis StartTime]	No data entered in **Analysis Start Time** field.	Add data into **Analysis Start Time** field.

If additional errors appear on the Validations tab, within Section B, refer to Step 4, next page.

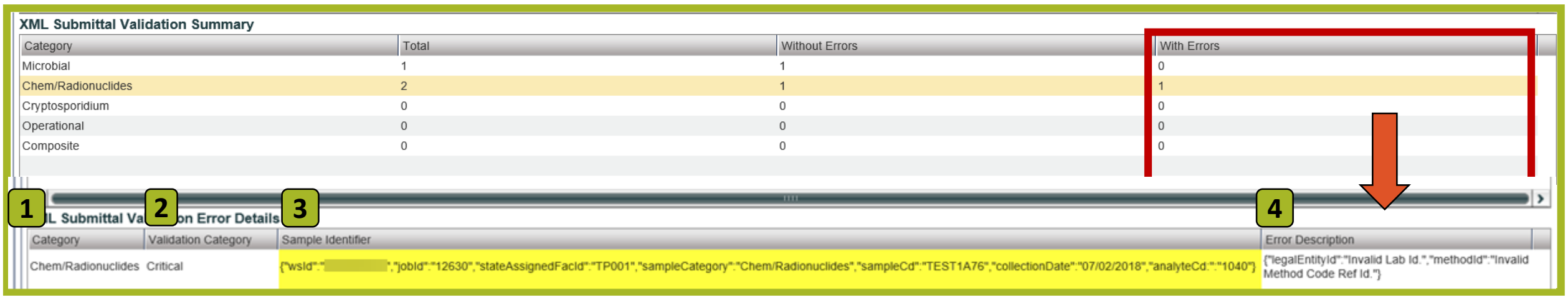
If no additional errors appear on the Validations tab, complete Step 3 below then proceed to Part 3, page 5.

Step 3: Once the user has reviewed all the validation errors listed within this section, make note of all errors *and* then **delete the Sample Job** from CMDP. To delete the Sample Job, click the **Remove** button located under the Drinking Water Sample Jobs menu (screen shot below). **Then make the appropriate edits to the Excel template and re-upload the corrected submission** into CMDP by following the process outlined in Part 1.



Section B: XML Submittal Validation Summary and Error Details

Step 4: Check the **XML Submittal Validation Summary** table, specifically the **With Errors** column (e.g., number of records with errors identified). If there are errors, a number of 1 or greater will be listed in the **With Errors** column.
Click on the individual row to display the error message in the **XML Submittal Validation Error Details** table. Errors displayed in this table include invalid data entries and missing software required fields for each sample.



XML Submittal Validation Summary

Category	Total	Without Errors	With Errors
Microbial	1	1	0
Chem/Radionuclides	2	1	1
Cryptosporidium	0	0	0
Operational	0	0	0
Composite	0	0	0

1 2 3 4

XML Submittal Validation Error Details

Category	Validation Category	Sample Identifier	Error Description
Chem/Radionuclides	Critical	{"wsId":"[redacted]","jobId":"12630","stateAssignedFacId":"TP001","sampleCategory":"Chem/Radionuclides","sampleCd":"TEST1A76","collectionDate":"07/02/2018","analyteCd.":"1040"}	{"legalEntityId":"Invalid Lab Id.","methodId":"Invalid Method Code Ref Id."}

The information below provides a brief description of each column within **XML Submittal Validation Error Details** table and how users can navigate through the information.

1 **Category:** This column lists the type of sample group as it relates to the specific sample with an error. The categories listed can include Microbial, Chem/Radionuclides, or Cryptosporidium.

2 **Validation Category:** This column identifies the severity level for the type of error identified (e.g., Critical).

3 **Sample Identifier:** This column provides details on the specific sample that contains the XML errors. The information merely identifies the sample, it does not describe the error. For instance, the screen shot above (highlighted text under column 3) identifies that an error occurred with the sample from the PWS and the sample job is 12630 with a facility code of TP001. It is a Chem/Radionuclide sample with an assigned lab sample identification number of TEST1A76 collected on 07/02/2018, and the sample analyte code is 1040. Specifically, the type of information displayed within this section includes the following:

wsId: Public Water System identification number
jobId: Job sample identification code assigned by CMDP
stateAssignedFacId: Water system facility code entered in CMDP
sampleCategory: Type of sample classification (i.e., Microbial, Chem/Radionuclides, Cryptosporidium)
sampleCd: Lab sample identification number
collectionDate: Date sample collected (MM/DD/YY)
analyteCd: Sample analyte(s) code/name

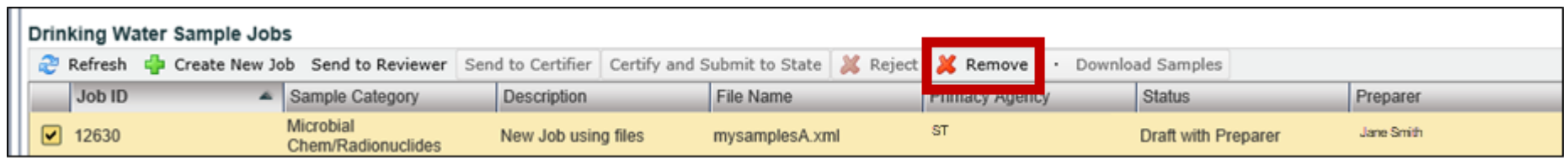
4 **Error Description:** This column describes the specific error that has occurred with the sample submission. If the user double clicks on an individual row, they will NOT be brought to the specific sample submission.

The table below highlights the common CMDP error messages as displayed within the **Error Description** column, along with an explanation of the error. This table also highlights the specific fields within the Excel template that could generate the error.

NOTE: This is not an all-inclusive list of every error that can occur. If you run into an error message that is not listed in the table below, please contact the CMDP Transition Team and we will add it to the list.

CMDP Error Description	Description of Error	Fields for Labs to Review
{"collectionDate"."Date is not a valid date in the required format."}	No data entered in **Collection Date** field or data entered incorrectly.	Add data into **Collection Date** field or correct data to match the MM/DD/YY format.
{sampleRecievedDt":"Sample Received Date must be after Collected Date."}	The sample has to be collected before it is received by the laboratory.	Confirm the **Sample Received Date** is *a date occurring AFTER* the **Collection Date**.
{"facSamplingPointId"."Invalid Facility Sampling Point Id."}	The Sampling Point ID entered is not associated to the water system or is not associated to the Facility ID entered.	Confirm the Sample Point IDs are associated to the correct water system and are for the correct contaminant submitted.
{"facilityId":"Invalid Facility Id."}	**Facility ID** entered is not associated to the water system or is entered incorrectly.	Review the **Facility ID** field for the water system.
{"legalEntityId": "Invalid Lab Id."}	The lab ID code entered in the **Reporting Lab ID** or **Analyzing Lab ID** field is not correct.	Confirm the **Reporting Lab ID** or **Analyzing Lab ID** listed in the template is entered correctly and confirm the lab is certified in Virginia.
{"methodId":"Invalid Method Code Ref Id."}	Method code entered in **Method** field is not compatible with entered analyte.	Review the **Method** field to confirm it is appropriate compared to the analyte submitted.
{originalSampleId":"Original Sample Id is required when Sample Type is Repeat, Triggered, or Confirmation."}	When the **sample type** is listed as **Repeat, Triggered, or Confirmation** it must be associated to original Total Coliform present (TC+) or Chem sample that caused the sample to be collected.	Confirm the **Sample Type** entered. If indeed entry is a repeat, triggered or confirmation sample, the **Original Sample ID** field must contain the Sample ID for the original positive sample.
{"SampleExists":"Sample already exists"}	Sample submission has previously been uploaded into CMDP.	If all the information is correct, re-upload the sample with a different **Sample ID** (i.e., from 1184407005 to 1184407005-01).

Step 5: Once the user has reviewed the all validation errors listed within this section, make note of all errors then **delete the Sample Job** from CMDP. To delete the Sample Job, click the **Remove** button located under the Drinking Water Sample Jobs menu (screen shot below). **Then, make the appropriate edits to the Excel template and re-upload the corrected submission** into CMDP by following the process outlined in Part 1.



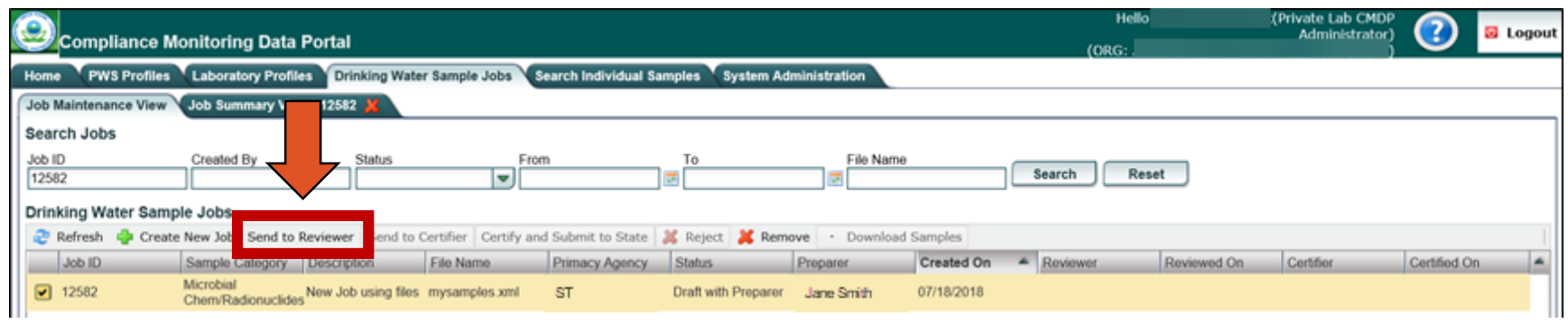
Drinking Water Sample Jobs

Refresh | Create New Job | Send to Reviewer | Send to Certifier | Certify and Submit to State | Reject | Remove | Download Samples

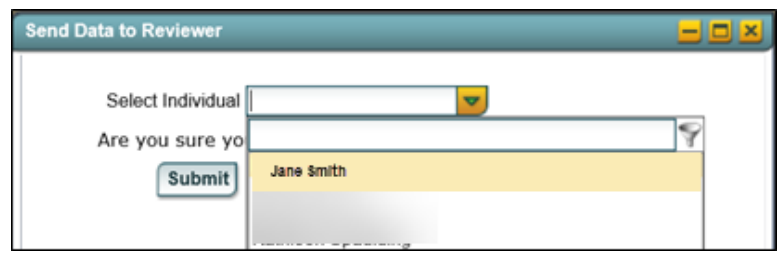
Job ID	Sample Category	Description	File Name	Primacy Agency	Status	Preparer
12630	Microbial Chem/Radionuclides	New Job using files	mysamplesA.xml	ST	Draft with Preparer	Jane Smith

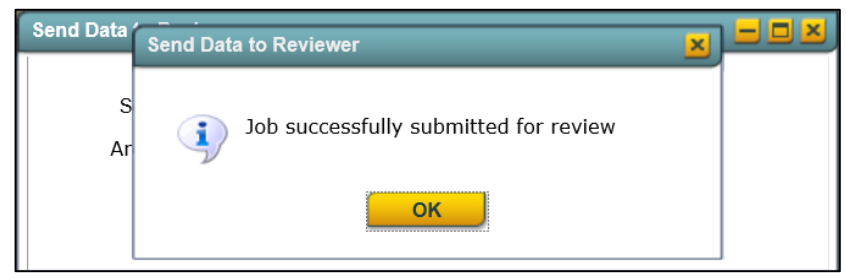
Part 3: Submit Sample Job

Step 1: Once the user confirms that **no errors exist from the Validations tab**, the Sample Job can be submitted to the State.
To submit a sample, go to the **Job Maintenance View** tab, enter the **Job ID** into the search bar and click on the **check box** to select the appropriate job.



Step 2: Click the **Send to Reviewer** button on the Drinking Water Sample Jobs menu.

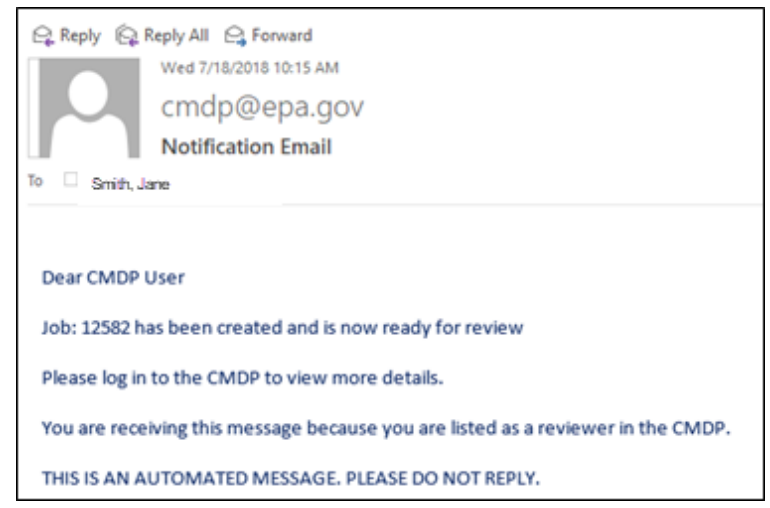




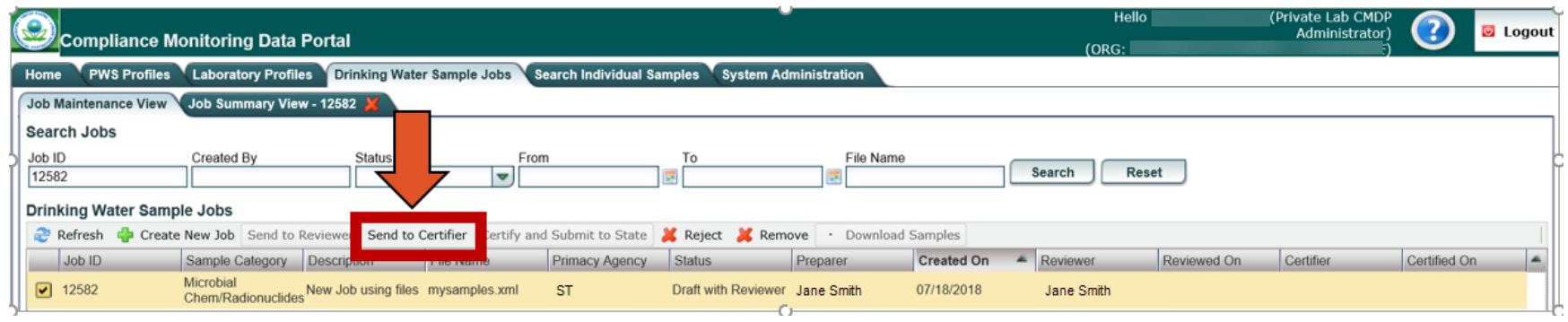
A pop-up will ask you to select the appropriate individual. After the user has selected the reviewer, click the **Submit** button.

Then, a confirmation window will pop up stating the job was successfully submitted for review. Click **OK**.

An email will be sent to the assigned reviewer indicating that a job is ready for review (example screen shot to the right). Note: The email is simply an instant notification. The user does not have do anything with the email or even exit out of CMDP. This convince feature was integrated into CMDP in case there are multiple individuals in different roles within a single organization.



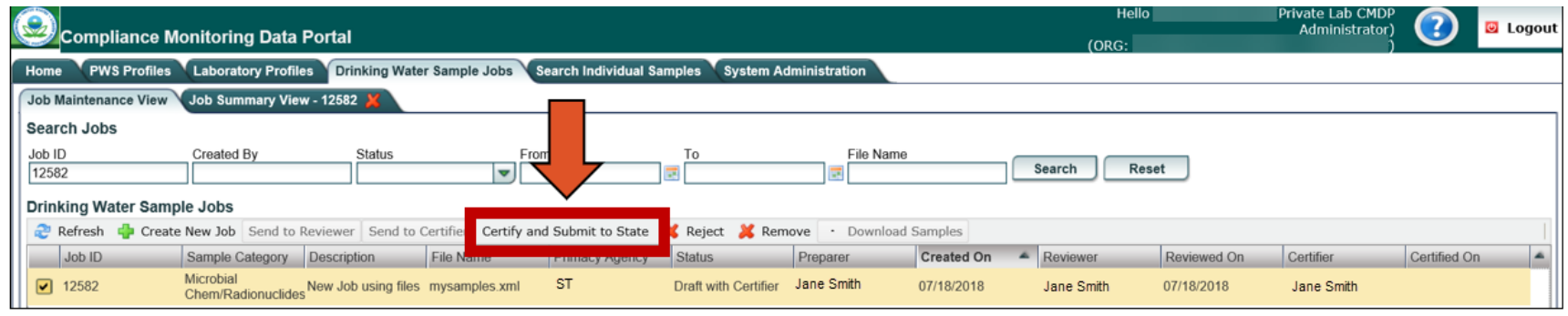
Step 3: Then, the Sample Job should be sent to the certifier by clicking the **Send to Certifier** button.



A confirmation window will pop-up stating the job was successfully submitted to the certifier.

An email will be sent to the assigned certifier's email indicating that a job is ready for the final evaluation.

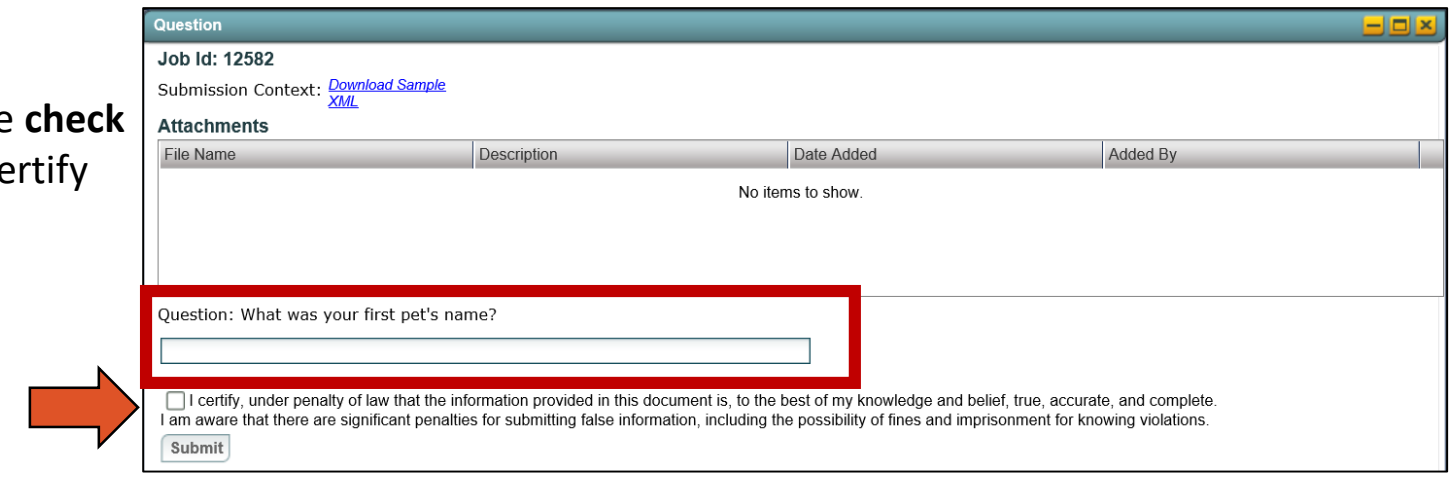
Step 4: When the certifier or Lab System Administrator is prepared to submit the Sample Job, click the **Certify and Submit to State** button.



Then, enter your **username** and **password**.

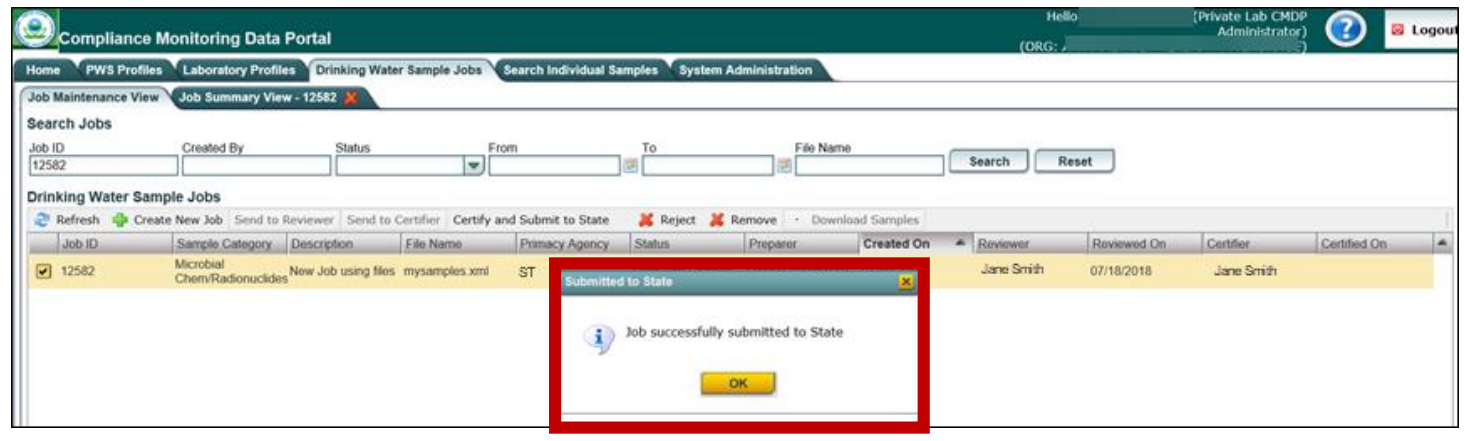
The user will be asked a security question and must click the **check box** (indicated by red arrow in screen shot to the right) to certify the information provided was true and accurate.

Click the **Submit** button.



A final confirmation window will pop up. Click the **OK** button to complete the submission process.

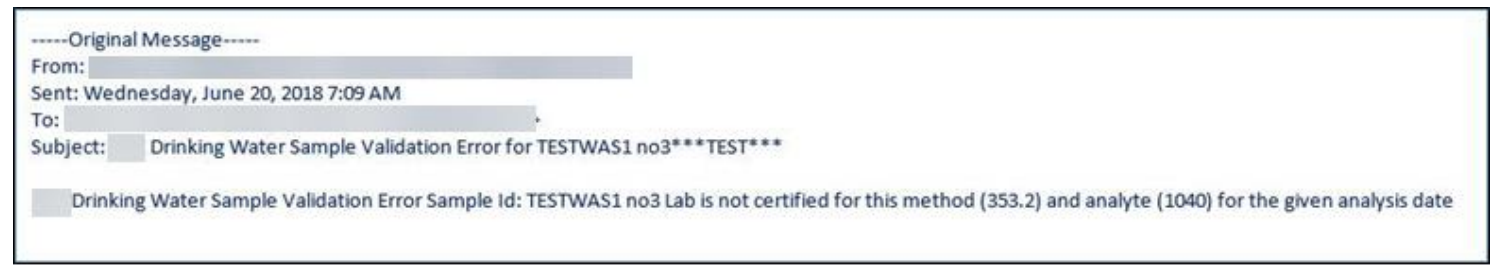
In the job details row, the user will be able to see exactly when the data was submitted to the State, who the preparer, reviewer, and certifier were, and when the certification steps were completed. This row will update automatically once the user clicks **OK** on the pop-up window.



Part 4: Validation Errors from the State

After the Sample Job is submitted to the State there is still a possibility the sample may be rejected during the state validation process (meaning the errors will not necessarily be listed on the **Validations** tab in CMDP). The following steps outline how to address rejected sample submissions.

Step 1: If a data error was identified in a sample submission AFTER it was accepted by the State, the State will notify laboratory staff via email explaining the sample has been rejected along with the reason for the rejection.


-----Original Message-----
From:
Sent: Wednesday, June 20, 2018 7:09 AM
To:
Subject: Drinking Water Sample Validation Error for TESTWAS1 no3***TEST***

Drinking Water Sample Validation Error Sample Id: TESTWAS1 no3 Lab is not certified for this method (353.2) and analyte (1040) for the given analysis date

In order to understand the type of error that occurred, refer to the table below. This table highlights the rejection message as displayed on the email along with an explanation of the rejection, and the specific fields within the Excel template that could generate the error.

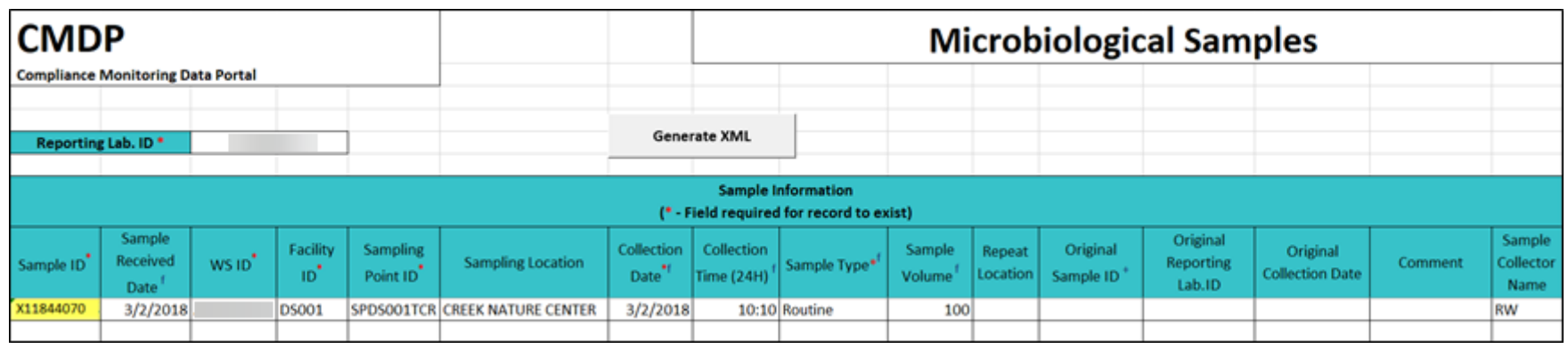
NOTE: The **(xxxx)** denoted in the **Rejection Message** column acts as a placeholder indicating unique information related to the sample submission will be displayed here (e.g., analyte code, method code).

Rejection Message	Explanation of Rejection	Fields for Labs to Review
Invalid data: Lab sample ID is too long. Maximum allowed length: 20 characters	**Sample ID** field exceeds the maximum allowed 20-character limit.	Enter **Sample ID** that is within 20-character limit.
Lab is not certified for this method (xxxx) and analyte (xxxx) for the given analysis date	**Method** field contains method code that Analyzing Lab is not certified for.	Confirm **Method** field contains method code that Analyzing Lab is certified for.
Sample age for Sample Result (xxxx) is beyond the allowed limit	Sample result exceeds hold time. **Analysis Start Date** value entered is more than 30 hrs. from **Collection Date**.	Confirm **Analysis Start Date** value and **Collection Date** value are correct.
Required field: Sample collection date is missing	**Collection Date** field is blank.	Add data to **Collection Date** field.
Required field: Sample collection time is missing	**Collection Time (24H)** field is blank.	Add data to **Collection Time (24H)**.
Required field: Lab receipt date is missing	Lab **Sample Received Date** field is blank.	Add data to **Sample Received Date** field.
Required field: Sample collection location is missing	**Sampling Location** field is blank	Add data to **Sampling Location** field.
Required field for Sample Result (xxxx) Analysis start date is missing	**Analysis Start Date** field is blank.	Add data to **Analysis Start Date** field.
Required field for Sample Result (xxxx) Analysis start time is missing	**Analysis Start Time** field is blank.	Add data to **Analysis Start Time** field.
REJECT: Inconsistent result data: Review rules for populating Presence Indicator (ResultMeasurementQualifier), Count (ResultMeasurementValue), and/or Interference. (SAMPLE RESULT)	(e.g., **A/P** field listed as Present but **Count** field does not have a value.) *NOTE: Only required for Microbial Samples.*	If contaminant is *Present* in sample, **Count** field may need data (determined by method used).
REJECT: Inconsistent result data: Presence Indicator is "A" (absent) and Count Value is not "0". (SAMPLE RESULT)	(e.g., **A/P** field listed as Absent but **Count** field has a value.) *NOTE: Only required for Microbial Samples.*	If contaminant is *Absent* in sample, **Count** field should not have data entered.
REJECT: Laboratory Received Date supplied was prior to Sample Collection Date. (SAMPLE)	The sample has to be collected before it is received by the laboratory.	Confirm the **Sample Received Date** is *before in time* of the **Collection Date**.
REJECT: Sample Result failed duplicate by data check. A sample result for the same analyte is already present for this sample (SAMPLE RESULT)	A sample result with the same information in the **Analyte [Code-Name]** (as it relates to the sample) has already been submitted to the State.	Review previous sample result(s) submitted and if indeed information is correct, confirm the **Sample ID** field is different compared to the previous sample submitted. Contact the CMDP Helpdesk if issue persists.

Step 2: Once the user understands the issue, you will need to make the appropriate correction(s). However, this process is different than any errors corrected PRIOR to the sample submission to the State (i.e., errors list on the **Validations** tab).
To correct errors AFTER the sample has been submitted to the State, the user must make **the appropriate *edits* to the originally submitted Excel template**.

NOTE: CMDP will not allow for the same Sample ID number to be used twice. After the validation errors are corrected within the originally submitted Excel template, please **add an "X" to the beginning of the Sample ID #** (e.g., Field name changed from 11844070 to X11844070 highlighted in screen shot below).

After editing the Excel template, generate the XML file. It is recommended to rename the **XML file** and the **Job Description** with a naming convention that indicates the sample/result is a resubmission.


CMDP
Compliance Monitoring Data Portal

Microbiological Samples

Reporting Lab. ID *

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	Sample Type *f	Sample Volume f	Repeat Location	Original Sample ID *	Original Reporting Lab.ID	Original Collection Date	Comment	Sample Collector Name
X11844070	3/2/2018		DS001	SPDS001TCR	CREEK NATURE CENTER	3/2/2018	10:10	Routine	100						RW

Step 3: Once the XML file is generated, re-upload the sample submission into CMDP, review the **Validations** tab for any inconsistencies and submit the sample/result to the State (following the process outlined on pages 1-5 of this document) .

Congratulations! This completes the process for addressing rejected sample submissions using the Excel template.

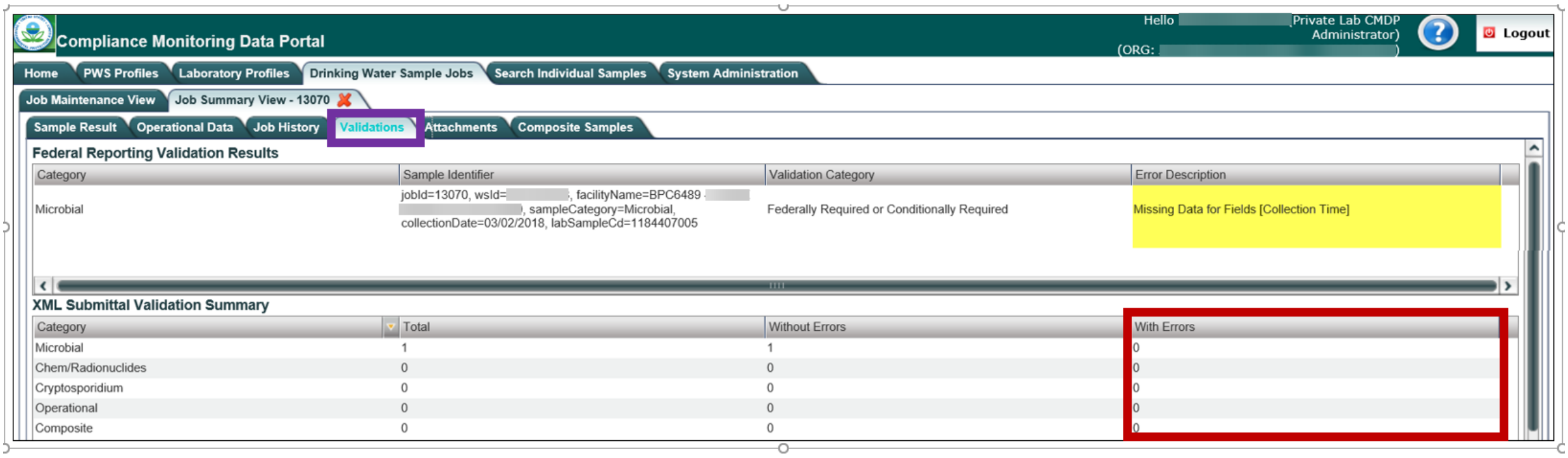
Part 5: Example Scenario of Sample Rejection

EXAMPLE: The scenario below outlines how a CMDP Lab System Administrator identifies and corrects a federal reporting error with an initial sample submission and how to address a second error identified by the State.

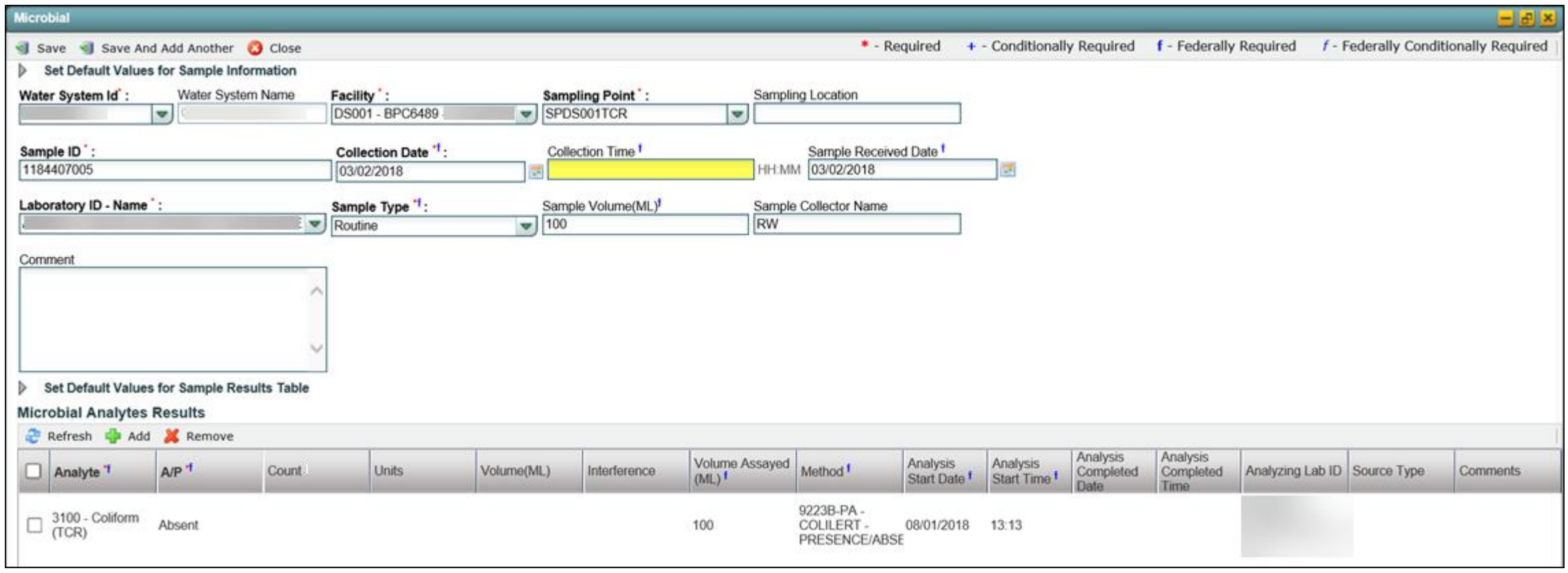
Step 1: After the XML file is uploaded into CMDP, confirm that all sample submittals are listed on the **Sample Results** sub-tab (refer to page 1 for screenshot).

Then, review the **Validations** tab. During review, one validation error is listed under the **Federal Reporting Validations Results** table. The CMDP error message (highlighted below) indicates the **Collection Time (24H)** field is either blank or the information is entered incorrectly. Before clicking on this row for additional information, review the rest of the **Validations** tab to confirm no additional errors have occurred.

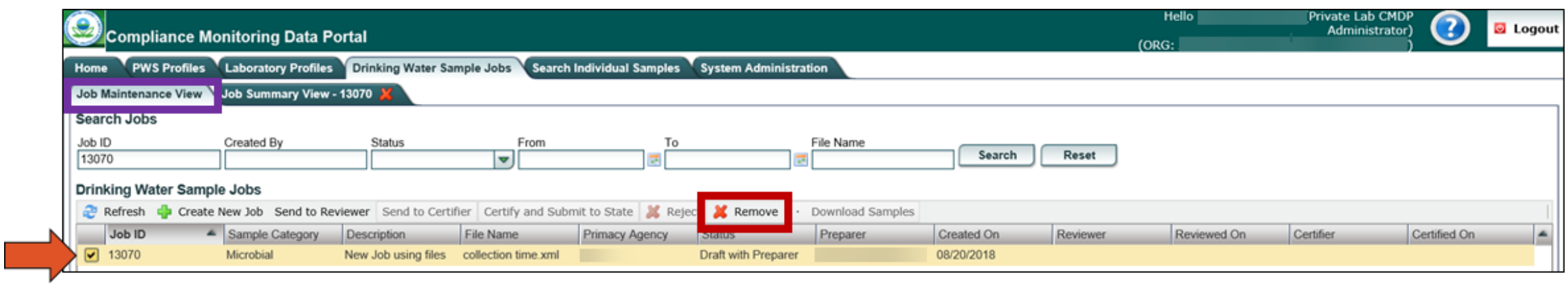
NOTE: All values within the **With Errors** column are listed as "0" (located under the **XML Submittal Validation Summary** table) indicating that no additional errors occurred.



After confirming that only one validation error occurred, double clicking on the error message located under the **Error Description** column brings up the specific sample submission (**NOTE**: This only works for errors listed under the Federal Reporting Validation Results header). In this case, the **Collection Time** field is blank.



Step 2: The existing XML file must be deleted from CMDP. To delete the Sample Job from CMDP, click on the **Job Maintenance View** tab, select the appropriate Sample Job from the list then click the **check box** located to the left of the **Job ID** (indicated by arrow in screen shot below), and then select the **Remove** button to permanently delete the sample submission from CMDP.



Step 3: *Next,* ***edit the Excel file with the error*** *by adding* the appropriate data into the **Collection Time (24H)** field (highlighted field in screen shot below). Once the Excel template is updated, generate the XML file by selecting the **Generate XML** button.

Reporting Lab. ID *

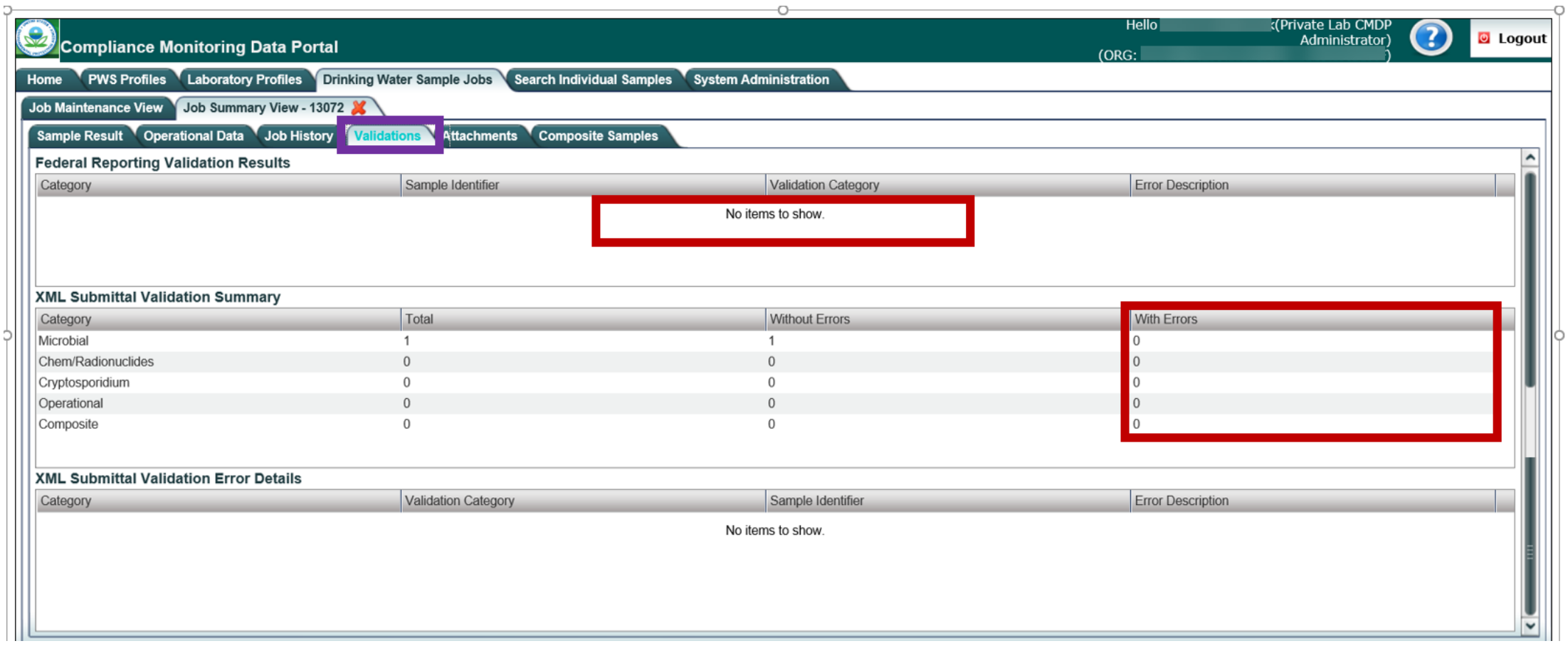
Generate XML

Sample Information
(* - Field required for record to exist)

Sample ID*	Sample Received Date*	WS ID*	Facility ID*	Sampling Point ID*	Sampling Location	Collection Date*!	Collection Time (24H)!	Sample Type*!	Sample Volume!	Repeat Location	Original Sample ID*	Original Reporting Lab.ID	Original Collection Date	Comment	Sample Collector Name
1184407005	3/2/2018		DS001	SPDS001TCR	CREEK NATURE CENTER	3/2/2018	10:10	Routine	100						RW

Step 4: Re upload the XML file into CMDP by following the process outlined in Part 1 of this document.

Step 5: Review the **Validations** tab again to confirm no validation errors exist then submit the sample/results to the State by following the process outlined in Part 3.



Step 6: After the Sample Job is submitted to the State, the next day an email is received indicating that the submission was rejected because it did not have a **Sampling Location** (highlighted field in screen shot below). **REMEMBER! The Sample Location and Method fields are not federally required and errors within these fields will not be identified within the Validations tab.**

REJECTED: Submission with missing Sampling Location

Reporting Lab. ID *

Generate XML

Sample Information
(* - Field required for record to exist)

Sample ID*	Sample Received Date*	WS ID*	Facility ID*	Sampling Point ID*	Sampling Location	Collection Date*!	Collection Time (24H)!	Sample Type*!	Sample Volume!	Repeat Location	Original Sample ID*	Original Reporting Lab.ID	Original Collection Date	Comment	Sample Collector Name
	3/2/2018		DS001	SPDS001TCR		3/2/2018	10:10	Routine	100						RW

To correct this error, **add** the appropriate information into the **Sample Location** field AND **add an "X"** to the beginning of the **Sample ID #** (highlighted in screen shot below). Since this error was identified AFTER the submission was sent to the state, you will not be able to delete the Sample Job from CMDP and must re-submit it as a new Sample Job.

Once the Excel template is updated with the appropriate information, upload the submission into CMDP, review the **Validations** tab, and submit the Sample Job to the state (following the process outlined in Part 1- Part 3).

CORRECTED: New submission with Sampling Location entered

Reporting Lab. ID *

Generate XML

Sample Information
(* - Field required for record to exist)

Sample ID*	Sample Received Date*	WS ID*	Facility ID*	Sampling Point ID*	Sampling Location	Collection Date*!	Collection Time (24H)!	Sample Type*!	Sample Volume!	Repeat Location	Original Sample ID*	Original Reporting Lab.ID	Original Collection Date	Comment	Sample Collector Name
X118447005-01	3/2/2018		DS001	SPDS001TCR	CREEK NATURE CENTER	3/2/2018	10:10	Routine	100						RW

The sample was successfully submitted to the state and no further validation errors were identified.