EPA Region 4 EDGE Quick Start Guide

The Superfund Program in the EPA Region 4 uses the EQuIS Data Gathering Engine (EDGE) software from EarthSoft to ensure accurate and complete field data collection events. EDGE runs on field devices, such as a laptop, tablet PC, USB drive, or SD Card. EDGE generates chain-of-custody (COC) files for laboratory analysis and submits Electronic Data Deliverables (EDDs) via a connection to the EQuIS Data Processor (EDP) for real-time error checking of data. The EDGE Field EDD user report provides a template EDD with specific site information that is tailored for each field event.
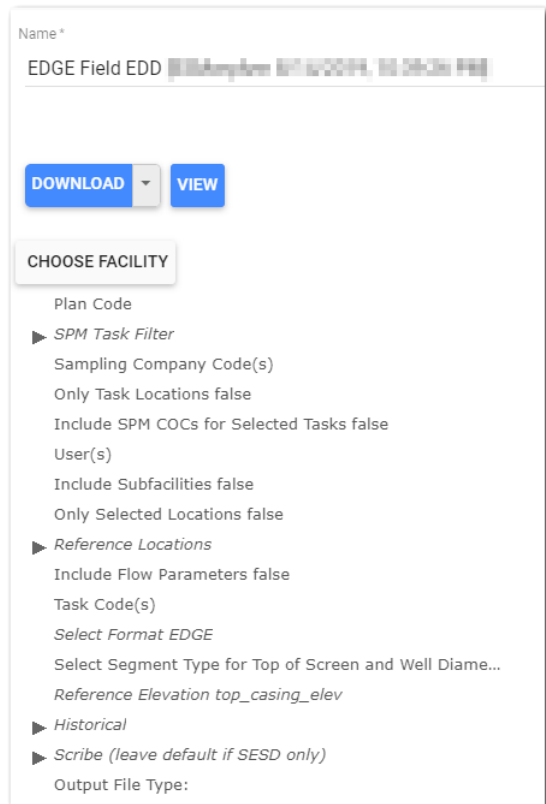
This guide provides a brief overview of how to access, register, configure, and use EDGE. Visit the EarthSoft online help for more detailed documentation: https://help.earthsoft.com/index.html?edge.htm.

Obtain EDGE Field EDD and EDGE Reference Values

To obtain your EDGE Field EDD and Reference Value File (RVF), login to the **Field Team Sampling Information Dashboard** at: https://epar4.equisonline.com/default.aspx?d=7432991. If you do not already have a user login to the EPAR4 EQuIS database, contact R4DART@EPA.GOV.

1. Click the **Facility Chooser** ⚲ and select the site you will be sampling.

2. Update the input parameters and run the **EDGE Field EDD** user report in the EZView Widget.

    a. Select the **Edit** ⚙ button (to the left of the Download button) to open the **Report Parameter Editor**.

    b. Leave all default values unless directed otherwise.

    c. Go to the **Reference Locations** parameter group and expanded the group to show all parameters by clicking on the arrow (▶) to the left of the group name.

d. Select either the **Group(s)** or **Individual(s)** option. Pick the locations to be sampled from the window displaying available values.

e. Go to the **Scribe** parameter group.

f. Leave the default starting sample number if only SESD laboratory. Otherwise, click the arrow (▶) to the left of the group name and enter the Contract Lab Program (CLP) starting sample number as provided by the CLP administrator (e.g., D2345).

g. Click on **Output File Type**. Select either **.xls** or **.xlsx** in the window displaying available output options.

h. Click the **Download** button to download the EDGE Field EDD as an Excel file. **Save** (and rename) the file to the desired Windows folder.

3. Obtain a new EDGE Reference Value File for the selected facility.

a. On the EDP EDD Upload widget, find the EDGE format and click the 🗐 icon under the **Reference Values (*.rvf)** column in that row.

b. **Download** the file. If desired, rename the downloaded *EDGE.rvf* file to include the site name (i.e., facility). You will copy this file to the EDGE folder after you have obtained the software.

Obtain and Register EDGE Software

EDGE is not installed with an installation program. EDGE is delivered in a zip file. EDGE is then extracted and registered to a specific drive on your computer or to a field device. Windows operating system is required.

The EPA Region 4 has upgraded to EQuIS 7. All users should obtain the latest version of the EDGE 7 software at: earthsoft.com/products/edp/edp-format-for-epar4/

Download and save the *EPAR4_EDGE.zip* file from the EarthSoft website to the field device and perform the following steps:

- Be sure to unblock the zip file. Right click on the *EPAR4_EDGE.zip* file in the Explorer window and select **Properties**. On the General tab, check the **Unblock** option.

- To operate EDGE, the files need to be extracted (unzipped) to a folder where you have full permissions, such as the Desktop or "My Documents" folder.

- Copy the facility-specific EDGE Reference Value File downloaded from the Field Team Sampling Information Dashboard to the *EDGE\Formats\EDGE* folder where you extracted the EDGE files (e.g., *C:\Users\yourname\Desktop\EPAR4_EDGE\EDGE\Formats\EDGE*).

- Double click on the **Start_EDGE exe** file to start the program. EDGE requires a license and registration prior to opening any formats or adding any data.

- If the EPA R4 version of EDGE is not already registered on the device, a registration window will appear. Click the **Register** button on the Evaluation window. (The registration window can also be opened by clicking the EDGE application button in the upper-left corner of EDGE and clicking **Register**).

- Go to the **Workstation Licenses** tab and click to request registration keys for the computer or device. EarthSoft will send an email with the registration key codes enclosed.

- Copy the registration keys to the **New Key Codes** window of the Workstation Licenses tab. Click the **Save Key(s)** button and then the **OK** button. EDGE should open and load the EDGE format file (i.e., *EDGE.xse*) provided in the zip file. This format file is configured to meet the EPA Region 4 specifications.
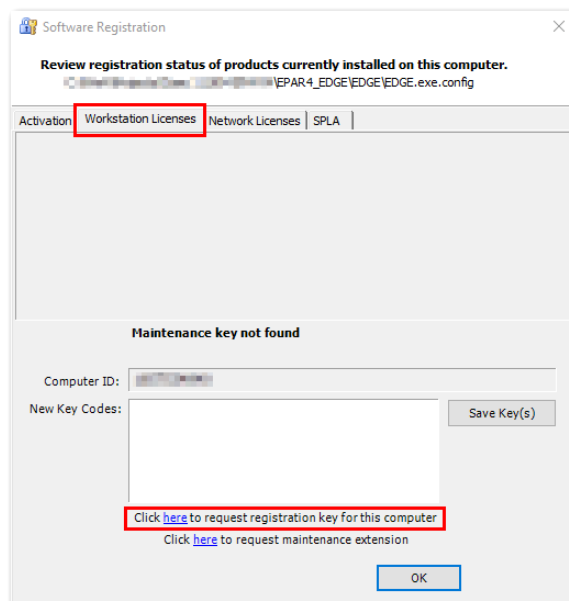
Open and Configure EDGE

Double click on the **Start_EDGE exe** file (if EDGE is not still running) and perform the following steps:

- Load the **EDGE format** (if the EDGE format did not automatically load). Select **Open Format** ⬆️ from the EDD group on the Home ribbon. Navigate to the location of the EDGE Format and select the *EDGE.xse* file (in the *\EDGE\Formats\EDGE* folder).

- The *EDGE.rvf* file will automatically load if it is the only RVF in the *\EDGE\Formats\EDGE* folder. To load or change the RVF, click on **Select RVF** from the EDD group on the Home ribbon. Select the appropriate RVF (saved from the dashboard and copied to the *\EDGE\Formats\EDGE* folder).

- Change the **configuration settings** if needed. The following configuration options are already set by the EDGE format file but can be modified. Some additional file manipulations are required to be consistent with these settings. Step 1c must be completed or the EDGE Field EDD will not load properly.

  1. **Comment Indicator** – The standard EQuIS comment row indicator symbol (#) must be changed to another symbol to allow the sys_loc_code of #DART# for QC samples needing analysis assigned. The EDGE format file has assigned the dash (-) symbol to replace the # symbol.

     a. To change the comment indicator to a different symbol, follow these steps.

        i. Navigate to the **Plugins** tab ribbon and click **EDGE Configuration**. The EDGE Configuration window will open.

        ii. Select the **EDP Options** button in the bottom left corner to open the Options window.

        iii. Select **General** and update the **CommentIndicator** field from - to another chosen character.

        iv. Select **OK** to close the Options window and then **Save** on the EDGE Configuration window.

        v. Click the **Close** button.
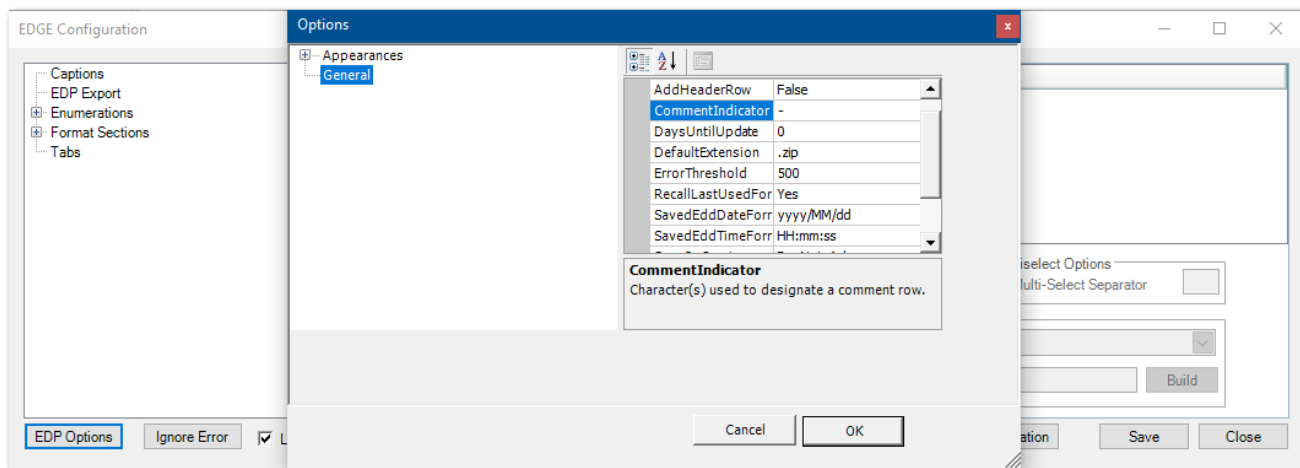
b. If the dash is replaced with a different character, open the ***ScribeCOC.xls*** file in the *EDGE\COC Template* folder to change the comment indicator in this file.

    i. On the **Setup** worksheet, update the **CommentIndicator** value from - to the character chosen above.

    ii. **Save As** and supply a file name to be selected for use.

c. The comment indicator symbol (#) must be changed in the EDGE Field EDD user report.

    i. Open the **EDGE Field EDD** user report saved from the Field Team Sampling Information Dashboard.

    ii. For each worksheet in the file, change the # symbol in the first row to the - symbol (or the character chosen).

    iii. **Save** the file.

2. **Sample ID** – Setup an appropriate nomenclature for auto creation of the Sample ID (i.e., sys_sample_code). There is no required nomenclature for the Sample ID but needs to be unique.

a. Navigate to the **Plugins** tab ribbon and click **EDGE Configuration**. The EDGE Configuration window will open.

b. Expand the **Enumerations** node on left pane in the EDGE Configuration window.

c. The EDGE format file has the Sample IDs auto created using the month and year (e.g., Location-1119). The following instructions detail how these enumerations were created. These enumerations can be modified or other nomenclatures may be similarly created.

    i. Scroll down and select the **sampleid_date_format** enumeration.

        1. If the desired date format is not listed, click the **Add to List** button in the Enumeration Values frame to add a new value.

        2. Add **MMyy** and select **OK**.

        3. Highlight the newly added enumeration value and click the **Value Up** button until the enumeration is at the top of the list.

   4. Click the **Save** button.
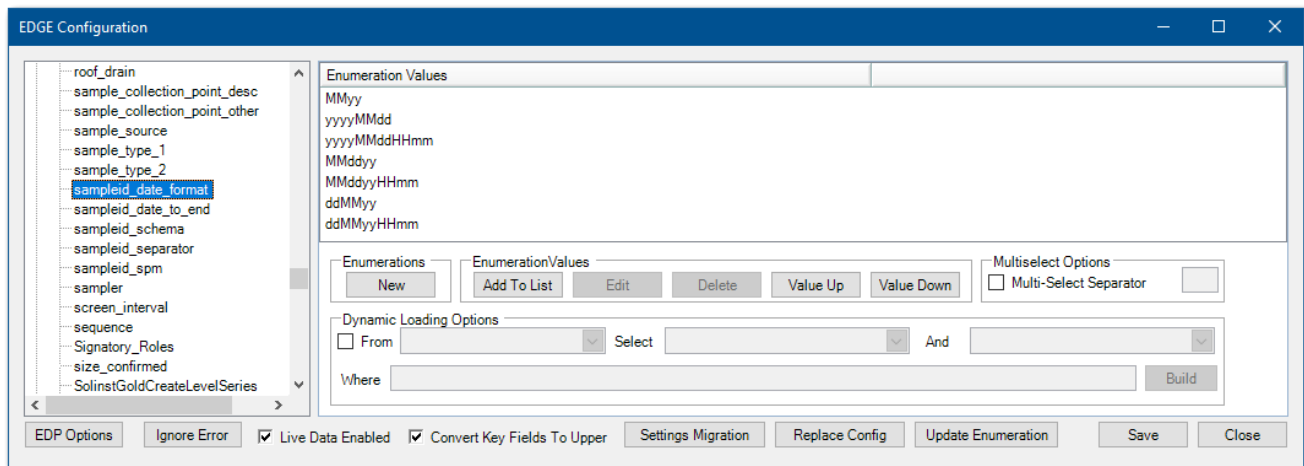
    ii.   Select the **sampleid_date_to_end** enumeration.

        1. In the Enumerations Values pane, highlight **DATE_TO_END** and click the **Value Up** button until the enumeration is at the top of the list.

        2. Click the **Save** button.

    iii. Select the **sampleid_schema** enumeration.

        1. In the Enumerations Values pane, highlight **EDGE_LocDate** and click the **Value Up** button until the enumeration is at the top of the list.

        2. Click the **Save** button.

    iv. Select the **sampleid_separator** enumeration.

        1. In the Enumerations Values pane, highlight **DASH** and click the **Value Up** button until the enumeration is at the top of the list.

        2. OR, select **NOTHING** to get LocationMMYY without a separator.

        3. Click the **Save** button.

3. **COC_v1 Customization** – The field names in the forms can be customized. The following changes have been implemented on the COC_v1 format section. Other changes can be made.

    a. If not still in the EDGE Configuration window, navigate to the **Plugins** tab ribbon and click on **EDGE Configuration**.

    b. Expand the **Formats** node on left pane in the EDGE Configuration window.

    c. Select the **COC_v1** section.

    d. On the Columns tab in the right pane, scroll to the **custom_field_1** field.

        i. The **Caption** has been changed from "custom_field_1" to "**Case Number:**".

        ii. Scroll to the far right. The **Required** check box has been selected.

    e. The caption for the **Remark** field has been changed to "**Remark for QC Assignment:**". This has been automated to work off of the QC flag.

    f. Click the **Save** button.

    g. Click the **Close** button to close the EDGE Configuration window.

Collect Samples in Field

Once EDGE is configured, the EDGE Field EDD can be loaded and the sampling event can be performed.

Double click on the **Start_EDGE exe** file (if EDGE is not still running). When EDGE is started, the last opened format and reference value files are loaded and the Home tab is displayed in the Data Tab area. The EDGE interface consists of the main application menu, a series of ribbons to access various components of EDGE, the Data Tab area, the Task Chooser pane, the Location Chooser/Filter pane, the Intelligent Bar, and the Status Bar at the bottom that displays the loaded format file, reference value file, and EDD file. The EPA Region 4 EDGE contains four forms/tabs: (1) Safety Meeting, (2) Location, (3) Field Samples, and (4) EPA GW.
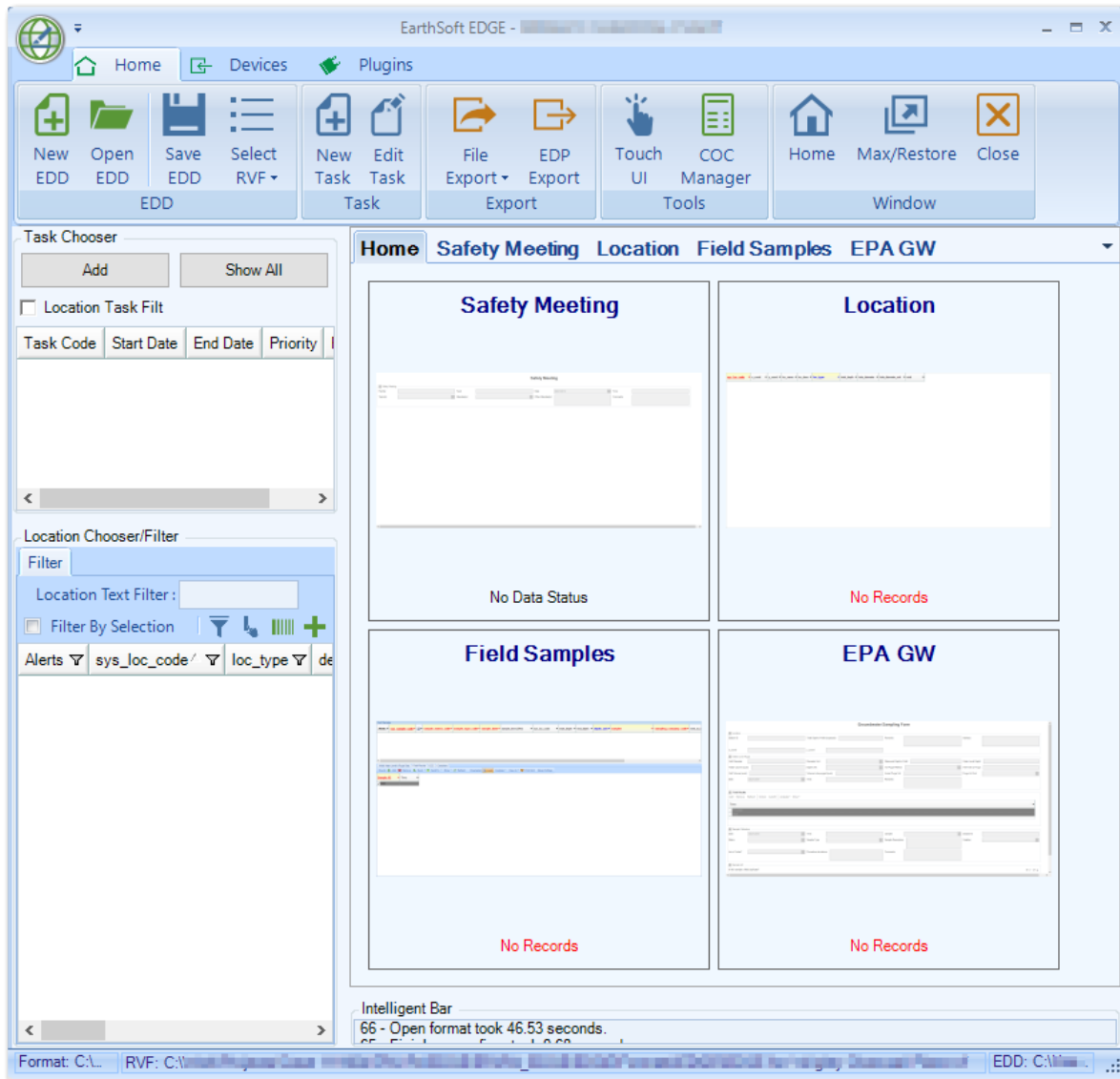

1. Select **Open EDD** from the EDD group on the Home ribbon. Browse to and open the EDGE Field EDD user report (Excel file) downloaded from the Field Team Sampling Information Dashboard. The data stored in the Field EDD is displayed in the Task Chooser and the Location Chooser/Filter panes and any pre-populated sampling information is placed into the visible tabs in EDGE.

2. In the **Task Chooser** pane (the left top pane), either highlight/select an existing task or select the **Add** button to add your Project code.

    a. Enter a **Task Code** (e.g., 17-0006).

    b. Enter the other fields with known information (e.g., description and start/end dates).

    c. Enter the event phase for the **Task Type** (e.g., RA).

    d. Select the **Add Task** button.

    e. Highlight/Select the new Task.
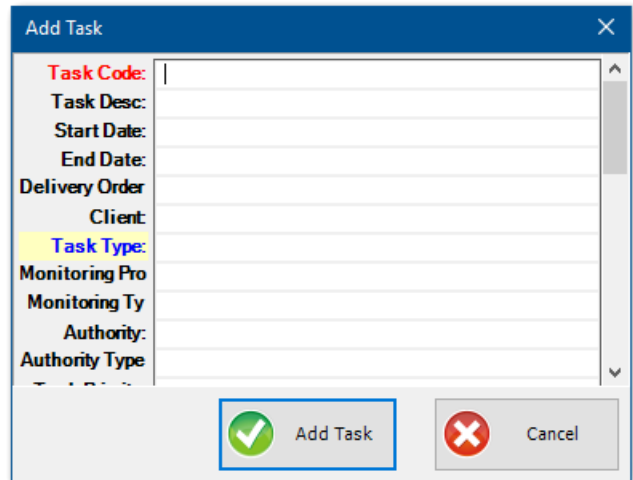
3. In the **Location Chooser** pane (the left bottom pane), check if there are any Alerts and if so:

    a. Select the **Location** Tab in the Data Tab area.

    b. Scroll to see and fix any errors (e.g., ft to feet; R4 value to Scribe value).

    c. Optionally, select the **Alert** number at the left of the row to open an error screen.

    d. Resolve all errors and **Save** file.

4. If you need to add a new location, one can be added through the **Location Chooser** pane.

    a. Select **Add** ➕ from the Location Chooser toolbar.

    b. Enter the desired **sys_loc_code** and select the **Create** button. Note a new record is added to the Location Chooser pane.

    c. Select the **Locations tab** in the Data Tab area and populate any pertinent details in the appropriate fields for the new location.

5. Select the **Field Sample** tab in the Data Tab area to begin entering sample information.

    a. Select **Auto Fill** from the Grid group on the Form ribbon to open the Auto Fill Manager window.

    b. Enter any information that will be consistent for all samples, and can thus be auto filled (e.g., sample date, sampler, sample type, matrix, composite, etc.).

    c. Select **OK**. Note that these values may be updated and/or overwritten if needed during sample collection.
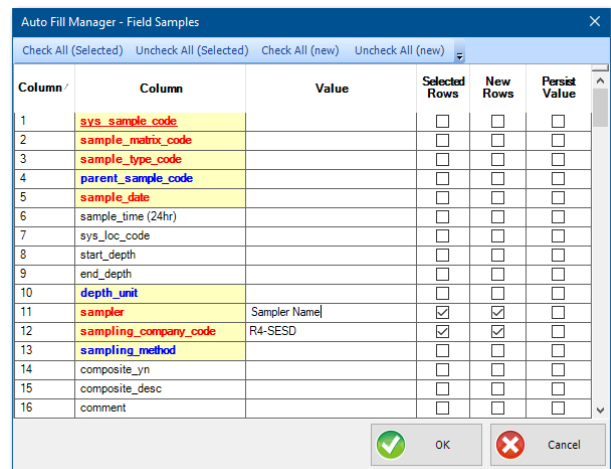
6. Add Samples.

    a. Select the **Location** in the Location Chooser pane to denote from which location the sample is taken.

    b. Select **New** ➕ from the Record group on the Form ribbon to add the new field sample record. (Note that sampling records do not have to be created one at a time. Create multiple sampling records by using the CTRL key to select multiple locations before selecting New).

    c. From the auto fill, many items should already be populated.

    d. Scroll left and update the **Sample Time** from 00:00 to the actual time.

e. Populate other fields as needed.

f. If the record is a duplicate sample, the auto created Sample ID (i.e., sys_sample_code) can be modified by typing directly in the field. Note that any changes will not be retained if the date field is entered again for the record (i.e., triggers the auto creation of the sys_sample_code).

7. Click **Save** from the File group on the Form ribbon.

Create Chain-of-Custody

1. Select the **Home** ribbon and then **COC Manager** from the Tools group to open the COC Manager.

2. Select **New** ✚ from the COC section to generate a new COC number. The "Set ID for New COC" window will open.

   a. Either retain the system generated COC ID, or

   b. Select **By User** to set your own COC ID.

   c. Select **OK**. Note that the **COC Details tab** will be partially populated.

3. Select the **Lab** from the drop-down menu.

   a. The Lab Information on the COC Details tab is read only and will auto populate.

   b. 'R4-SESD' has the proper information in the rt_company table.

   c. CLP Labs contain the company type of LAB_CONTRACT.
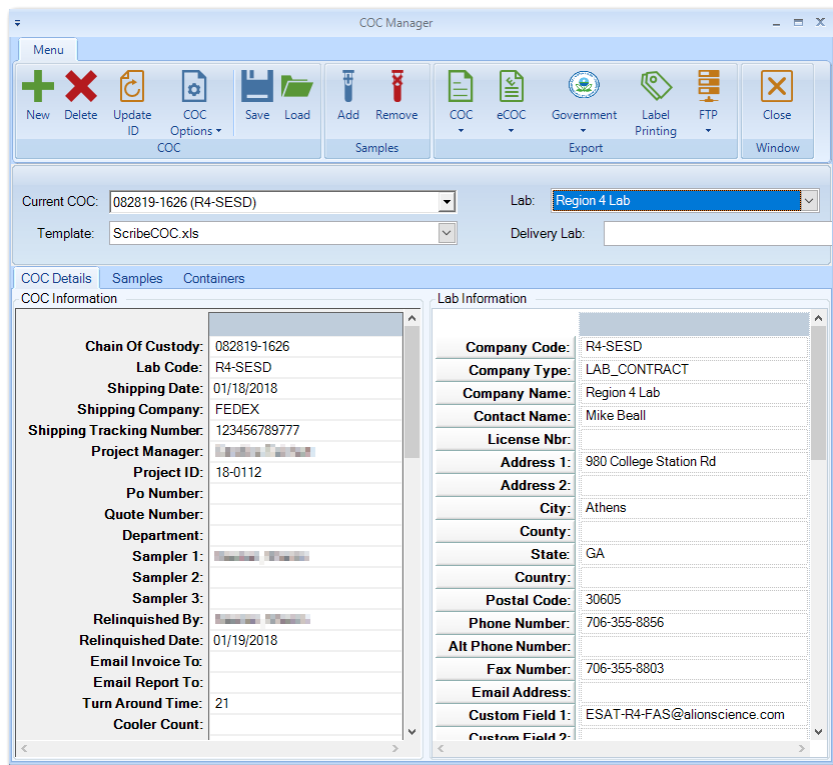
4. Select the COC **Template** from the drop-down menu. This will be *ScribeCOC.xls* unless there is a renamed version with any updates. Macros in the Excel template file are used to generate the PDF and XML files and must be enabled for the template to properly function.

5. Fill out the COC Information in the left pane of the COC Details tab.

   a. Custom_field_1 has been updated to hold the **Case Number**.

   b. The **Remark** field is to hold the information designating which samples need QC samples.

   c. Select the **Save** button in the COC group.

6. Select the **Samples** tab.

   a. Select **Add** 💉 from the Samples group in the ribbon to add samples from the EDGE EDD to the COC.

b. Single-click on one or more samples from the **Samples** list in the left upper window. To add more than one sample, use the CRTL key. The Shift key can be used to select all samples.

c. Select one or more analyses in the right upper window.

- Group Type will define the type of CLP Sample ID used and to which COC it flows.
- Group Owner may be used to filter CLP or Non-CLP.

d. Click the **Assign Analysis** button. The select samples will appear in the Assigned Lab Analysis pane with the selected analytical methods.

e. Select the **Finish** button to return to the main COC Manager page. The added samples appear in the Samples tab.
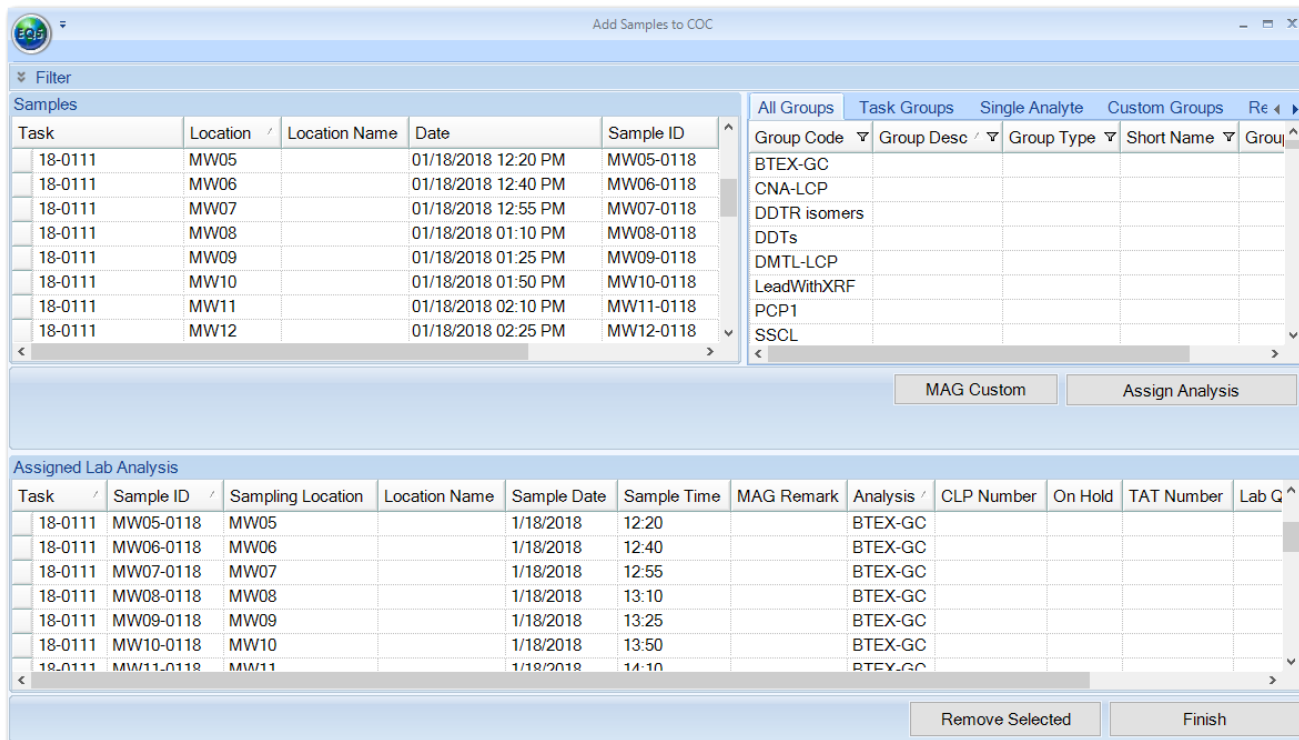
7. Edit the **Sample Information** for each sample.

a. Select the check box to the left of the options you want to apply.

- **TAT** – Turn Around Time in days.
- **On Hold** – Should the Sample be placed on hold?
- **Lab QC** – Should the Sample have Lab QC performed?
- **Preliminary Results** – Should the Lab only perform preliminary analysis?

b. Enter the information for each option and then select the samples to which the information applies.

c. Select the **Apply to Selected** button.

d. Continue with different combinations as needed for the samples.

e. Once the information has been associated, it may be edited per sample.
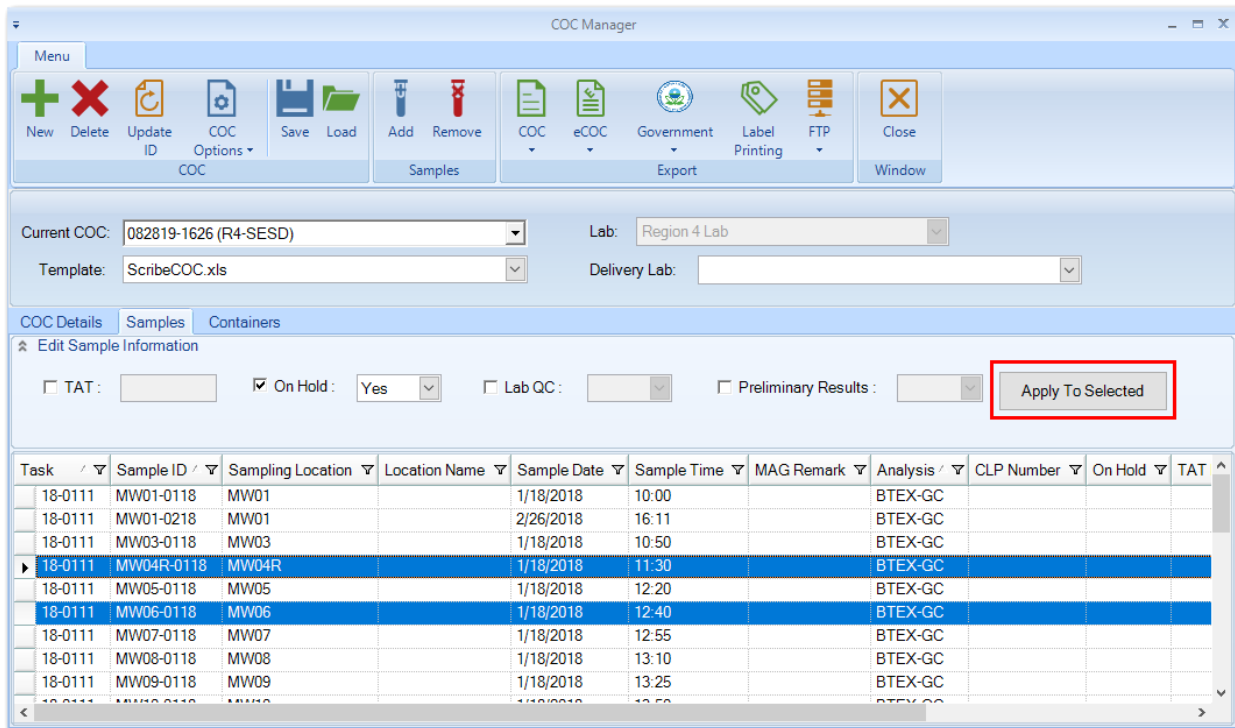
8. Select the **Containers** tab and enter select the appropriate information from the drop-down options.

   a. For each Sample's Analysis Method, you must provide the container information.

      - **Container Code** – Select the type of container used for the sample portion.
      - **Number of Containers** – Enter the number for that container type.
      - **Filtered** – Is the sample portion to be filtered in the field, lab, both, or not at all.
      - **Preservative** – Select the type of preservative used for the container.
      - **Container Description** – Enter any additional information regarding the container(s); may be an additional item to print on the label.

   b. If there are multiple types of containers being used, add additional lines for the samples.

9. Select the **Save** button in the COC group.

10. Prepare the Chain of Custody for the samples. Both the hard copy PDF and the electronic copy XML files will be generated. After all sampling is complete, the final COC may be created using the CLP custom option.

    a. From the Export group on the Menu ribbon, select **Government** > **Scribe**. The Analyte Method Group owner and group type determine which COC drop-down to select.

       - Use **CLP Generic** for the non-CLP Regional Lab.
       - Otherwise, select the appropriate group type from **CLP Organic**, **CLP Inorganic**, or **CLP High Resolution** for the Contract Lab Program.
       - Select **CLP Custom** for the final COC to be sent to Regional Lab.
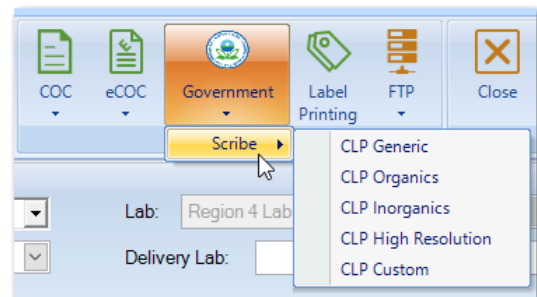
Setup of Facility Information
(Review EDGE FacilityReadOnly Tab to verify and update.
Although it says ReadOnly, the information will save into the EDD for COC generations)

EQuIS	COC XML Element	Scribe Data Element	Scribe Description	Example
dt_facility.sys_region_code	Sites.EPARegionNumber	Site.EPARegionNumber	EPA Region Number	4-
dt_facility.facility_name	Sites.SiteName	Site.Site_Name	Name of site or project	AMERICAN CREOSOTE WORKS INC
dt_facility.facility_type	Sites.Action	Site.Site_Action	Site Action (e.g., Emergency, TC, NTC, Remedial)	RD
dt_facility.program_code	Sites.CERCLIS	Site.CERCLIS	Cerclis Number	FLD008161994
dt_facility.client	Sites.AccountCode	Site.AccountCode	Account Code	000DD20445LA03
dt_facility.prp_agency	Sites.Lead	Site.Response_Authority	Response_Authority (e.g., OPA, CERCLA)	CERCLA
dt_facility.data_provider	Sites.SamplingCompany	Site.Contractor	Contractor name / company name	PL-CONT_BV
dt_facility.state	Sites.State	Site.Site_State	Site State	FL
dt_facility.facility_code	Sites.SiteNumber	Site.Site_No	Site Number (PK)	110002527025
dt_facility.region_code	Bottle.TagPrefix	Site.EPARegionNumber	EPA Region Number (with a dash suffix)	4

Create Labels

Print Labels if they were not pre-printed. The template *ScribeLabels5163_blank_date.docx* in the *\EDGE\Custom Labels* folder was designed to print on the Avery 5163 label size with the date and time NOT populated. This template can be modified (see instructions on the next page).

1. On the **Containers** tab in the COC Manager window, check the **Label Print** column for the analyses needing labels.
2. Select **Label Printing** from the Export group on the Menu ribbon.
   a. This will prompt for the label template to use.
   b. Select the **ScribeLabels5163_blank_date.docx** or the renamed file if the template was modified.

Modifying Label Template File

Open the *ScribeLabels5163_blank_date.docx* file in Word.

1. To add a field such as the sample's date to the right of the "Date:" label
   a. Select the **Insert** ribbon.
   b. In the Text group, select **Quick Parts** > **Field**.
   c. On the pop-up window,
      - From the **Categories** drop-down menu, select **Mail Merge**.
      - In the **Field names** list box, select **MergeField**.
   d. In the center, **Field Properties** will display.
      - Enter the **Field Name** as noted in the **Field Label** column in the table below.
      - Select the **Mapped Field** check box on the right and select **OK**.
   e. Select **Save As** and rename the file. Close Word.

2. The following fields may be configured:

Field Label	EDD/EDP Table	Field Label	EDD/EDP Table
TASK	ContractMagSPM_Bottles	PRESERV	ContractMagSPM_Bottles
SAMPLEID	ContractMagSPM_Bottles	FILTERED	ContractMagSPM_Bottles
MAG	ContractMagSPM_Bottles	SAMPLETYPE	FieldSample_v1
FRACTION	ContractMagSPM_Bottles	SAMPLEDATE	FieldSample_v1
METHOD	ContractMagSPM_Bottles	SAMPLEDATEONLY*	FieldSample_v1
TAT-DAYS	ContractMagSPM_Bottles	CONTAINER_DESC	ContractMagSPM_Bottles
HOLD_YN	ContractMagSPM_Bottles	MAG_REMARK	ContractMagSPM_Bottles
LAB	ContractMagSPM_Bottles	PROJECTID	COC_v1
LOCATION	FieldSample_v1	SAMPLETIME	FieldSample_v1
SAMPLER	FieldSample_v1	COLLECTIONMETHOD	FieldSample_v1
MATRIX	FieldSample_v1	MAG_DESC	ContractMagSPM_Bottles
FACILITY	ContractMagSPM_Bottles		

*Use of the SAMPLEDATEONLY is hardcoded to the YYYY/MM/DD; SAMPLEDATE uses the computer system date format.