

Canada

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The Mine Effluent Reporting System is accessible through the Single Window Information Manager (https://ec.ss.ec.gc.ca/).

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List of Acronyms

ALT: Acute Lethality Test

EC: Effective concentration

ECCC: Environment and Climate Change Canada

EEM: Environmental Effects Monitoring

EEMER: Environmental Effects Monitoring Electronic Reporting System

EPOD: Environmental Protection Operations Directorate

FDP: Final Discharge Point

IC: Inhibiting concentration

LC: Lethal concentration

MDMER: Metal and Diamond Mining Effluent Regulations

MDL: Method Detection Limit

MERS: Mine Effluent Reporting System

QA: Quality Assurance

QC: Quality Control

RCM: Recognized Closed Mine

SLT: Sublethal Toxicity Test

SW: Single Window

SWIM: Single Window Information Manager

Notice and Resources

Examples in this guide use fictitious values for illustrative purposes and do not represent actual results or reported information.

In case of discrepancy between this document and the *Metal and Diamond Mining Effluent Regulations* (MDMER), the Regulations prevail. The consolidated version of the MDMER are available at: http://laws-lois.justice.gc.ca/PDF/SOR-2002-222.pdf.

For questions related to MERS, please contact us by e-mail: sdem-mers@ec.gc.ca

For questions related to the MDMER, please contact Environment and Climate Change Canada (ECCC) by e-mail: mdmer-remmmd@ec.gc.ca.

For further information about the MDMER, please visit <u>Canada.ca/metal-diamond-mining-effluent.</u>

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1 Introduction

The Mine Effluent reporting module allows the owner or operator of facilities subject to the *Metal and Diamond Mining Effluent Regulations* (MDMER) to submit regulatory data to Environment and Climate Change Canada (ECCC). This module is accessible through the Single Window (SW) reporting system.

Information can be submitted to ECCC in three ways:

- 1. Mine Effluent Reporting System (MERS);
- 2. Environmental Effects Monitoring Electronic Reporting System (EEMER);
- 3. Inspector (Enforcement Officer).

The MDMER include requirements to notify, submit and report information. Table 1-1 provides a summary of the regulatory information submitted through MERS:

Table 1-1: MDMER Information to be submitted via MERS

Information to be submitted	Recipient of information
Section 8 – Identifying information	
Sections 9 & 10 – Final Discharge Points	
Sections 13 & 16 – Reduced frequency notification	
Sections 21 & 22 – Reporting Monitoring Results	
Section 26 – End of Commercial Operation Notice	Minister of the Environment,
Section 32 – Recognized Closed Mines (RCM)	via MERS,
Section 33 – RCM Identification information	https://ec.ss.ec.gc.ca/
SCHEDULE 5, Section 8 – Information Related to Effluent and	
Water Quality Monitoring Studies	
SCHEDULE 5, Section 11, 14 & 19 – Inability to follow the study	
design ¹	
SCHEDULE 5, Section 17 – Cessation of discharge	

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¹ Regional EEM coordinators may be contacted regarding the information to be submitted to MERS.

1.1 Getting Started

The two flowcharts below provide a workflow overview for a regulatee and consultant/laboratory. Two scenarios are illustrated: Case 1 (Figure 1-1) where a consultant is entering reports, data, and other information on behalf of a regulatee and Case 2 (Figure 1-2) where a regulatee is reporting on their own.

The consultant/laboratory role within MERS only allows for data entry for version 1 of the report. The consultant/laboratory role will be unable to make any modifications to higher versions of the reports.

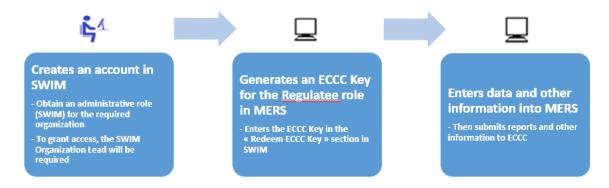
If a facility wishes to make changes to the report (version 2 or higher), then someone with the regulatee role will need to make the modifications in MERS.

Regulatee (with consultant-laboratory) <u>1</u>@1 Generates an Creates an Generates an **Waits for ECCC Key for the** account in SWIM **ECCC Key for the** Submits report consultant-Consultant-- Obtain an administrative role (SWIM) for the required organization Regulatee role for MERS Laboratory role laboratory to and other information to for MERS . To grant access, the SWIM Organization Lead role will be required Send the ECCC Key by email to the consultant other information into MERS Consultant Submit ECCC Key for Consultant-Inform the regulatee Creates an account Enter data and other Laboratory in SWIM that the report is in SWIM information into ready to be - Wait for the regulatee to send you the ECCC Key MERS submitted

Figure 1-1: Case 1 – Workflow Overview for Consultant and Regulatee Collaboration

Figure 1-2: Case 2 – Workflow for Regulatee without Consultants

Regulatee (without consultant)



1.1.1 Single Window (SW) Reporting System

SW serves as the reporting system to many of ECCC's programs. As such, it provides access to program-specific reporting tools.

The Single Window Information Manager (SWIM), the administrative module of SW, allows you to:

- Create, edit, or update information about the account profile, organization(s), facility(ies) and contacts; and
- Manage roles for other users.

The options on the left navigation pane will expand and collapse as the user moves up and down the SWIM informational structure. When entering or modifying data, use the <u>Save</u> function regularly.

A warning message will be displayed after 15 minutes of inactivity, and after 20 minutes, the user will be logged out and any unsaved information will be lost. The SWIM platform user guide can be found at: https://www.canada.ca/en/environment-climate-change/services/reporting-through-single-window/guidance.html.

To get started:

- (1) Go to https://ec.ss.ec.gc.ca/ and select the language you wish to use;
- (2) Register to obtain a GCKey or use your existing GCKey, if you are already have one. Otherwise, use a sign-in partner;
- (3) Verify or create your individual SWIM Profile;
- (4) If your organization does not already exist in SWIM, the regulatee will need to create the organization and become the SWIM Organization Lead. If the organization already exists, you will need to contact your SWIM Organization Lead to request an ECCC Key to allow you to access a facility in that organization. Indicate which facility you need access to and select the type of account you wish to have: Regulatee or Consultant/Laboratory. The SWIM Organization Lead will then send you the ECCC Key (NOTE: PLEASE DO NOT USE THE REQUEST ACCESS FUNCTION IN SWIM);
- (5) If your facility (within the organization) does not already exist in SWIM, the SWIM Organization Lead will need to create your facility (Chapter 1.4 Managing Facilities in SWIM);
- (6) The SWIM Organization Lead grants to her/himself, and to others (other regulatees and consultants/labs), access to MERS for particular facilities, as needed, via email by using the <u>Manage Access/Grant Access</u> function (Chapter <u>2 Access to MERS</u>);
- (7) Follow the link to MERS on the homepage.

1.1.2 Accessing Environment and Climate Change Canada's Single Window

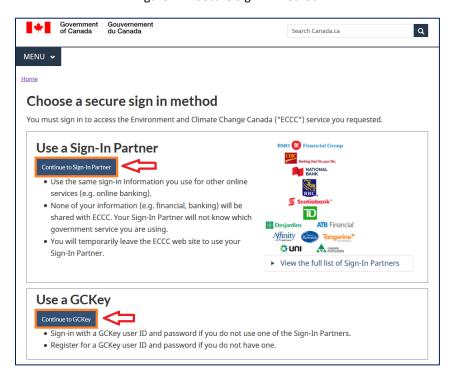
Go to https://ec.ss.ec.gc.ca/ and select the language that you wish to use (English or French).

Figure 1-3: Select Language



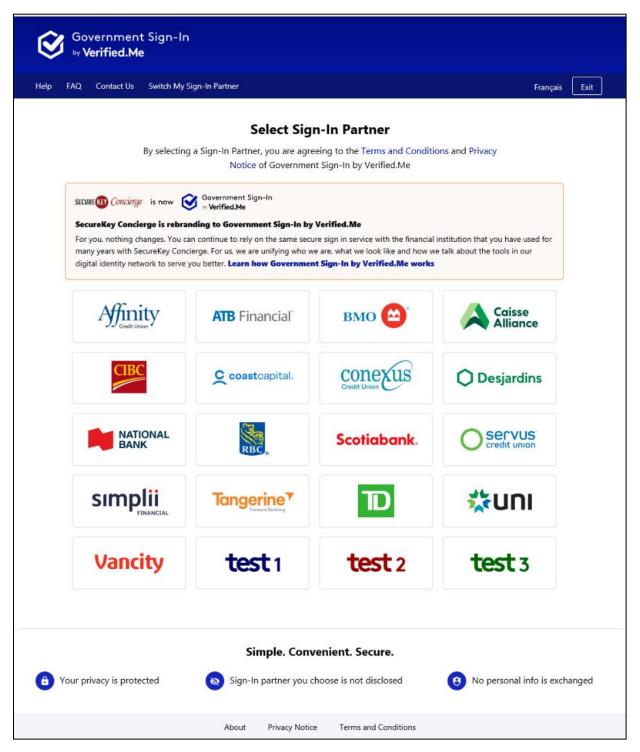
Choose whether you want to login using the Sign-In Partner option (your bank account credentials) or by using GCKey.

Figure 1-4: Secure Sign-In Method



If you click on <u>Continue to Sign-In Partner</u>, you will be transferred to the "Government Sign-In by Verified. Me" page:

Figure 1-5: Sign-In Partner



Choose the financial institution of your choice and follow the typical sign-in process²:

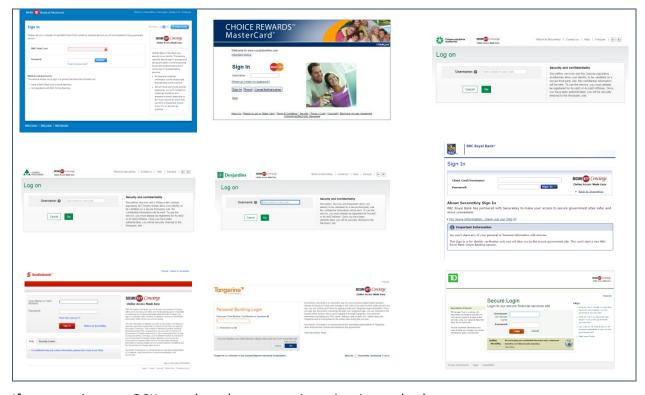
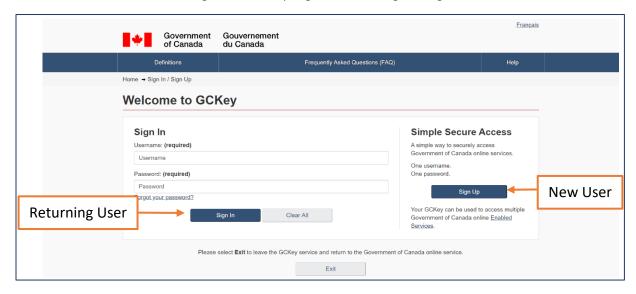


Figure 1-6: Financial Institutions Sign-In Pages

If you continue to GCKey, select the appropriate sign-in method:

Figure 1-7: GCKey Registration and Sign-In Page



² These are external websites and subject to change per individual companies' purview.

1.1.3 Returning User

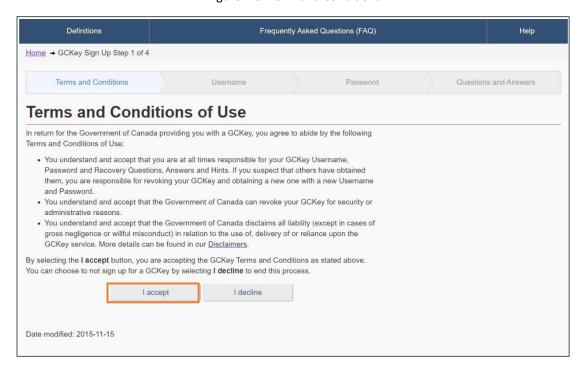
As a returning user, you will be directed to the Single Window Home page.

Unless you need to update your profile, continue directly to Chapter 2 Access to MERS.

1.1.4 New User

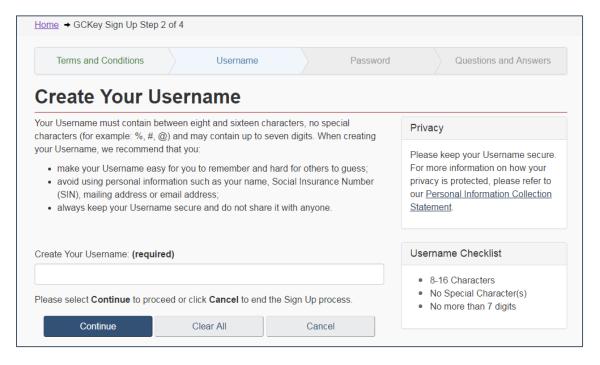
(1) Accept the Terms and Conditions of Use:

Figure 1-8: Term and Conditions



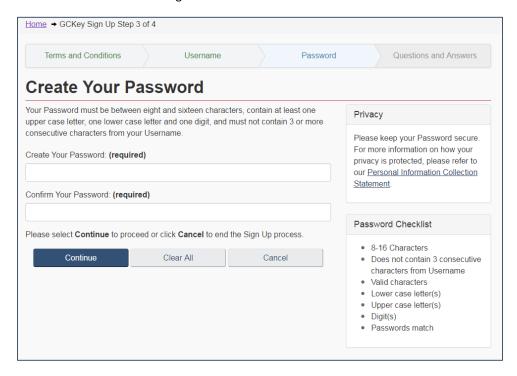
(2) Create your username:

Figure 1-9: Create Your Username



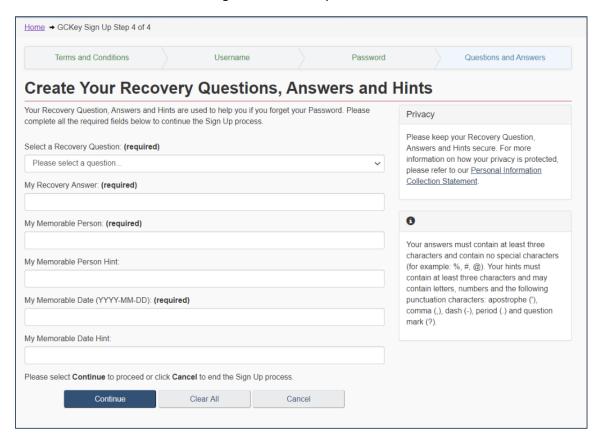
(3) Create your password:

Figure 1-10: Create Your Password



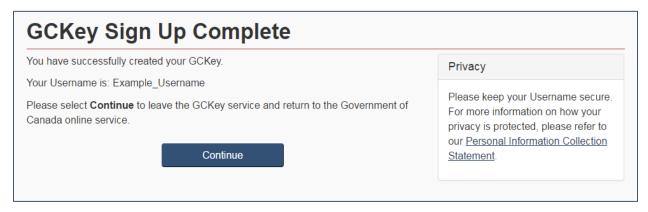
(4) Create your recovery questions, answers and hints:

Figure 1-11: Recovery Questions



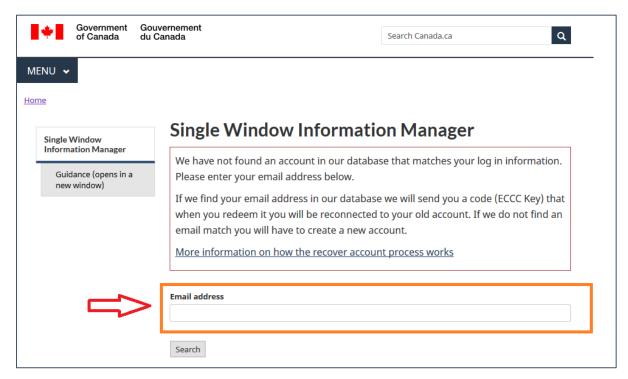
(5) Continue into the SW – New User page:

Figure 1-12: Complete Sign-In



(6) Once on the SWIM New User page, do a preliminary search for your email address:

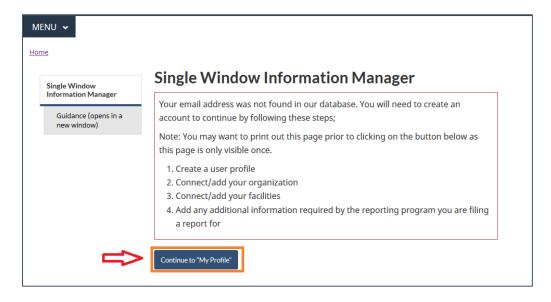
Figure 1-13: SWIM New User



(7) If your email address is not found, you will be prompted to update your profile information and instructed to continue to the "My Profile" page.

Note: You should only have one account and this account should use your own business address. You are not permitted to use a generic email address or the same email address of another person.

Figure 1-14: SWIM "My Profile"



1.2 Verify or Create your SWIM Profile

At this point, you will be directed to the "My Profile" page (Figure 1-15).

The three mandatory text fields are found in the personal information portion of the page marked by a red asterisk: "Given name", "Family name", and "Email address" (Figure 1-16). There are two types of addresses for which you may provide information in the "My Profile" page: your mailing address and your physical address (Figure 1-17). You can also provide additional information on the delivery mode associated with the mailing address in the field "Delivery Mode" (Figure 1-18). We suggest that you complete "My Profile" as much as possible.

To save unnecessary typing, you can use the Copy To Physical and the Copy to Mailing buttons to copy all duplicated fields into the other address portion.

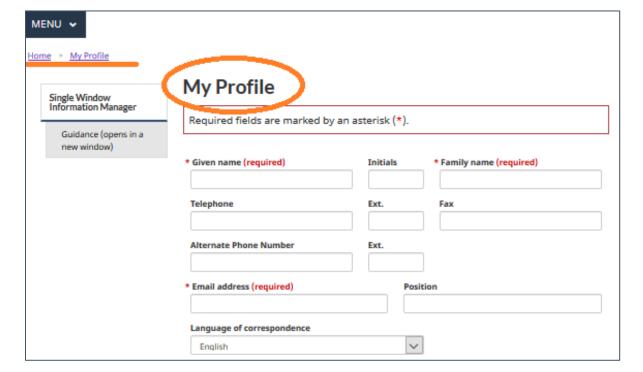
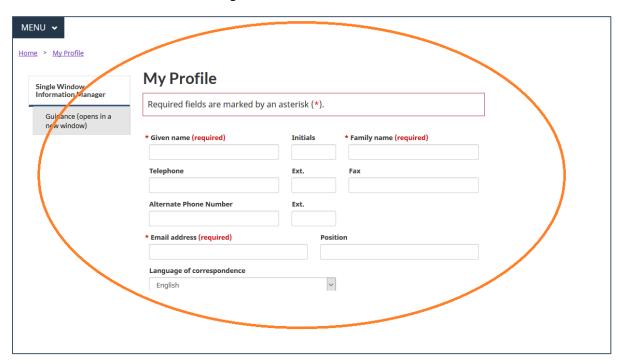


Figure 1-15: My Profile

(1) The first portion of personal information;

Figure 1-16: Personal Information



(2) The addresses; and

Figure 1-17: SWIM Address

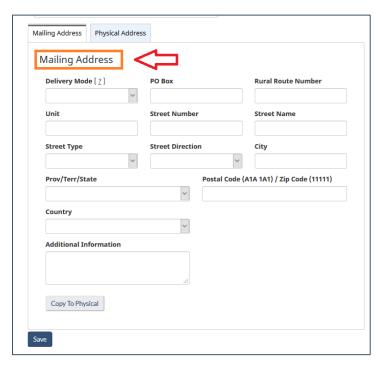
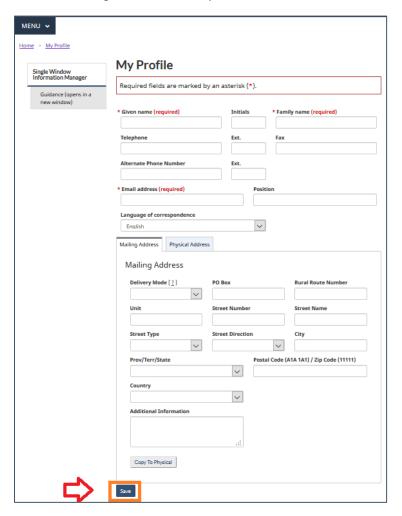


Figure 1-18: Mailing Address Delivery Modes

- General Delivery is delivery to customers not renting a post office box, customers having no fixed address, members of the travelling public, or anyone who cannot receive mail from a letter carrier or rural route contractor;
- Rural Route is delivery by a contractor to customers living along or near well-defined roads in a reasonably well-settled area;
- Suburban Services is delivery by a contractor to group mail boxes.
 Usually found near or on the perimeters of urban areas;
- Post Office Box is a numbered box in a post office assigned to a
 person or organization, where mail for them is kept until collected;
 and
- Mobile Route is delivery of mail to industrial parks or areas.

(3) The Save button.

Figure 1-19: Save "My Profile" in SWIM



When all the personal and address-related information have been filled in or at minimum, the three mandatory fields, click the <u>Save</u> button to save your profile. You will then be directed to the SWIM home page.

You will not have access to MERS right away. To gain access to MERS:

- If you have an ECCC Key for your facility, go to Chapter 2.5 Redeeming your ECCC Key.
- If you do not have an ECCC Key and your organization does not exist in the system, consult Chapter <u>1.3 Create Your Organization</u>. You will thus become the first SWIM Organization Lead for your organization. You can consult Chapter <u>1.4 Managing Facilities</u> and Chapter <u>2.1 Granting Access to MERS</u>.
 - The SWIM Organization Lead is automatically granted to the user who creates an organization. The SWIM Organization Lead can update organization and facility information, as well as grant and delete access for other users. If you do not know who your SWIM Organization Lead is, email: sdem-mers@ec.gc.ca.
- If you do not have an ECCC Key and you are NOT the SWIM Organization Lead, but your organization already exists in the system, please email your SWIM Organizational Lead for an ECCC Key for your facility. This would include facility representatives that have already been entered into SWIM as part of a larger organization. Please consult Chapter 2.5 Redeeming your ECCC Key. If you do not know who your SWIM Organization Lead is, email: sdem-mers@ec.gc.ca.
- For consultants and laboratory personnel: If you do not have an ECCC Key and you are
 NOT the SWIM Organization Lead, please email your SWIM Organizational Lead for an
 ECCC Key for your facility. This will be the case for Consultants/Labs_that require access
 to MERS. Please consult Chapter 2.5 Redeeming your ECCC Key.

1.2.1 Types of Roles in SWIM

This section outlines relevant SWIM roles. Please see Chapter <u>2.3 Types of Roles in MERS</u> for more information about the linkages of MERS roles and SWIM roles.

A SWIM Organization Lead:

- Can update organization and facility information;
- Grants themselves access to reporting programs (e.g. MERS);
- Grants others access to the organization and reporting programs using ECCC Keys;
- Can delete access for all users; and
- This role is automatically granted to the user who created the organization, but can also be granted to other people.

A SWIM Editor:

- Can update organization and facility information
- Cannot grant or delete access for users

A SWIM Member:

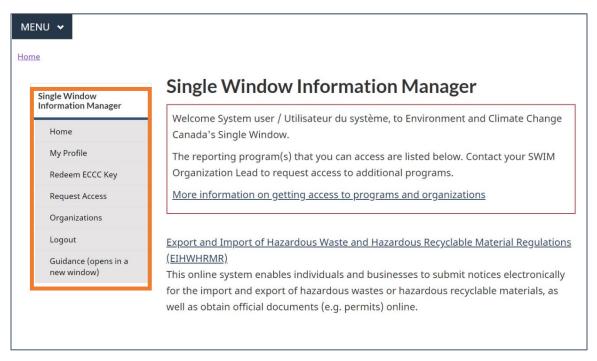
- Can view organization and facility information
- Cannot edit records

The SWIM platform user guide can be found at: https://www.canada.ca/en/environment-climate-change/services/reporting-through-single-window/guidance.html.

1.2.2 SWIM – Contents

Here are the contents on screen once a SWIM profile has been successfully saved (Figure 1-20):

Figure 1-20: SWIM Contents



The **Guidance** tab opens as a new page with detailed instructions for working within the SWIM environment.

The **Logout** tab should be used to securely and completely sign out of SWIM. If you do not use this link, you may receive error messages if you attempt to log back into the website without closing your browser completely first.

1.3 Create Your Organization

When you are creating your profile for the first time, you will not yet have an organization associated with your profile.

Note: If you are NOT the SWIM Organization Lead, your Organization will automatically be added to your profile when you enter the ECCC Key provided to you by the SWIM Organization Lead. DO NOT USE THIS CHAPTER.

Note: If you are creating an organization for the first time, you will become the SWIM Organization Lead by default. The SWIM Organization Lead is an owner or operator and the person who administers access by others (other regulatees and consultants/labs) to the facilities in your organization. Ensure that the person who first creates the organization is prepared to fulfill this role.

As the first SWIM Organization Lead, you will need to create your Organization in the system; however, you still need to perform a cursory search prior to adding the new organization so that the organization is not created twice.

(1) From the top banner or navigation pane to the left-hand side of the screen, click Organizations.

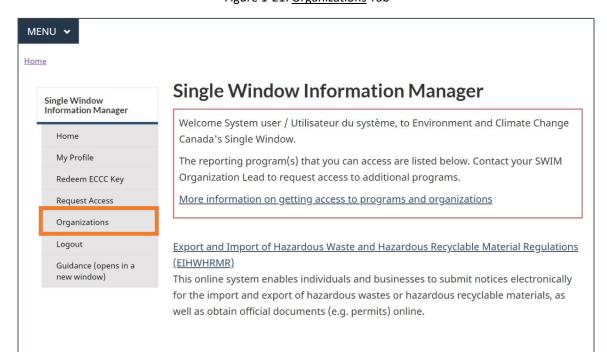
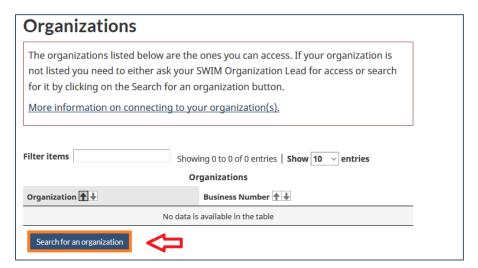


Figure 1-21: Organizations Tab

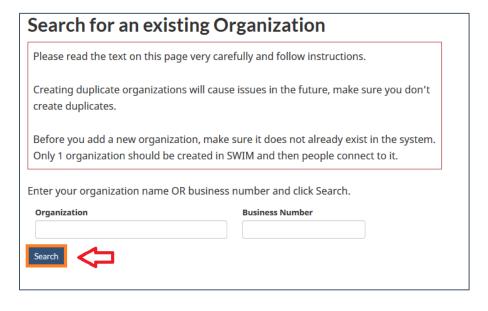
(2) Select <u>Search for an organization</u>.

Figure 1-22: Organization Search



(3) Once <u>Search for an organization</u> is selected, the existing organizational database page will load to search and verify whether your organization already has been included. If your organization already exists in the system, this organization should be used.

Figure 1-23: Search for Organization



(4) Enter your organization name or business number and select <u>Search</u>, using common spellings and capitalizations for the expected mine name (e.g. using variations such as "Inc", "Inc.", "Incorporated", or "incorporated"). You will be directed to a search results page (similar to the initial "Organizations" section). If no results are obtained, please start a new search with different spelling and/or with the business number. If the search shows that your Organization has already been created, please contact your SWIM Organization Lead for an ECCC Key for your facility within that organization, and proceed as outlined in Chapter <u>2.5</u> <u>Redeeming Your ECCC Key</u>. If your Organization does not appear, select <u>Add an</u> organization.

Organization

Showing 0 to 0 of 0 entries | Show 10 ∨ entries

Organizations

Business Legal Name ↑ ↓ Business Number ↑ ↓ Physical Address ↑ ↓

No data is available in the table

ONLY if you don't find the organization you are looking for you then click on Add an organization button to create an organization in our database.

Add an organization

Figure 1-24: Search results page

(5) Fill in the information requested for your Organization. Two fields, each marked by a red asterisk, are mandatory: "Business Legal Name" and "Mailing Address". The question regarding the category of your business is mandatory. We suggest that you complete your Organization information as much as possible.

When you have filled in your organization information, select <u>Save</u> (Figure 1-25). You will be returned to the "Organizations" main page, which should reflect the addition of your Organization.

Home > Organizations > New organization Organization Single Window Information Manager Required fields are marked by an asterisk (*). Home My Profile * Business Legal Name (required) Redeem ECCC Key Request Access English Trade Name French Trade Name Organizations Organizations that fall into the following categories do not have to enter a business number: Logout Indigenous organization
 charitable/non-profit organizations
 small businesses with less than \$30K in revenue
 located outside Canada Guidance (opens in a new window) Does your organization fit into one of these categories? Select ▼ Business Number **DUNS Number** Web Site Mailing Address * Physical Address Mailing Address Delivery Mode [2] Rural Route Number Street Direction Street Type City Postal Code (A1A 1A1) / Zip Code (11111) Prov/Terr/State Country ۳ Additional Information Copy To Physical

Figure 1-25: Organization Information Page

1.3.1 Managing Organization(s)

When you have an Organization associated with your profile, you are able to see it in the "Organizations" section (Figure 1-26). You will also note that you have more options available to you on the left-hand navigation pane.

MENU ❖ Home > Organizations **Organizations** Single Window Information Manager The organizations listed below are the ones you can access. If your organization is Home not listed you need to either ask your SWIM Organization Lead for access or search for it by clicking on the Search for an organization button. My Profile Redeem ECCC Key More information on connecting to your organization(s). Request Access Organizations Filter items Showing 1 to 1 of 1 entries | Show 10 v entries Logout Organizations Guidance (opens in a Organization 🛧 🕹 Business Number 1 new window)

Figure 1-26: Organization Dashboard

The additional features become visible when you select your organization, by clicking on its name (Figure 1-27).

123456789

Guide Organization / Organisation Guide

Search for an organization

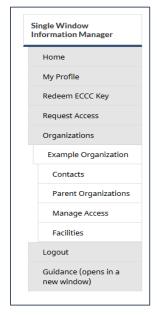


Figure 1-27: SWIM Organizations Tree

You may now manage your contacts, parent organizations and facilities. You may also <u>Manage</u> <u>Access</u>; however, you cannot manage access in your facility until you create a facility.

1.4 Managing Facilities in SWIM

1.4.1 Adding a Facility

For a facility to have access to MERS, the SWIM Organization Lead must first add a facility using the steps outlined below.

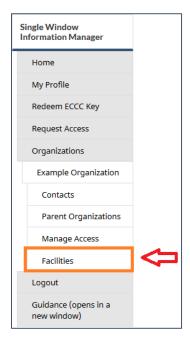
Note: DO NOT CREATE DUPLICATES OF A FACILITY IN SWIM.

With respect to Schedule 5 of the MDMER, two reporting systems are used: MERS, which collects information under Schedule 5, Part 1, and EEMER, which collects information under Schedule 5, Part 2. Once initially created in SWIM, the same facility should be used when accessing both MERS and EEMER, which allows for reported data to be linked.

Please use the search function, as described below, to check for an existing facility, using common spellings or if no result is obtained, partial spelling and capitalizations for the expected mine name (e.g. using variations such as "Inc", "Inc.", "Incorporated").

See Chapter <u>2.4 Transfer of Ownership of Facilities</u>, if applicable.

Figure 1-28: SWIM Navigation Pane - Facilities (2)

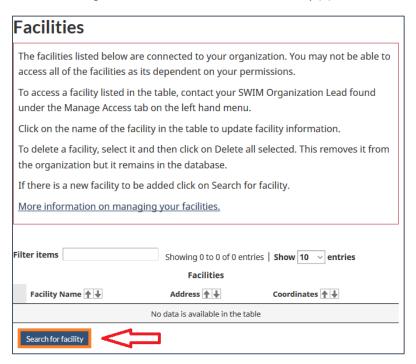


When you first access "Facilities" by selecting it from the left-hand navigation pane (Figure 1-28), you will come to a "Facilities" table without any listed facilities (Figure 1-29).

To add a facility to your organizational profile:

(1) Select the blue <u>Search for facility</u> button.

Figure 1-29: Facilities – Search for a facility (1)



(2) Search the database to see if your facility already exists in the system. If your organization already exists in the system, then this organization must be used. Enter a portion of the facility name, using common spellings or if no result is obtained, then partial spelling and capitalizations for the expected mine name (e.g. using variations such as "Inc", "Inc.", "Incorporated", or "incorporated"), or postal code and click <u>Search</u>.

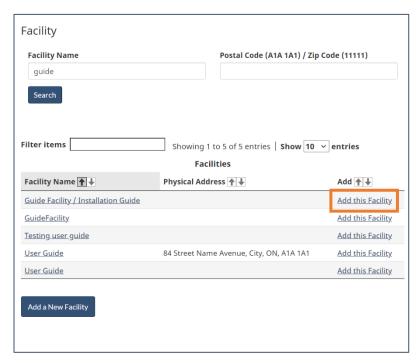
Figure 1-30: Facilities – Search for a facility (2)



- (3) If the search shows that your facility has already been entered into SWIM, then two scenarios are possible:
 - 1) The facility will appear as a hyperlink. You can then click on the name of the facility to see what organization owns it. If possible, contact the organization that owns the facility to release it and make it available to you. Otherwise, click on "Add facility" and a transfer request will be sent to ECCC.

 2) The facility is not a hyperlink which means it is not currently associated with any organization. You can then click "Add a new facility" and your facility will be automatically added to your organization.

Figure 1-31: Facilities – Search for a facility (3)



(4) If your facility does not appear in the Search results, select the blue <u>Add a New Facility</u> button. **NOTE: DO NOT MAKE DUPLICATES OF EXISTING FACILITIES.**

Facility **Facility Name** Postal Code (A1A 1A1) / Zip Code (11111) guide Filter items Showing 1 to 5 of 5 entries | Show 10 v entries Facilities Physical Address Facility Name Add ↑↓ Guide Facility / Installation Guide Add this Facility <u>GuideFacility</u> Add this Facility Testing user guide Add this Facility User Guide 84 Street Name Avenue, City, ON, A1A 1A1 Add this Facility <u>User Guide</u> Add this Facility Add a New Facility

Figure 1-32: Facilities – Search for a facility (4)

(5) Fill in the facility information. There are two mandatory fields marked with a red asterisk: "Facility Name" and "Ownership Type". We suggest that you complete the Facility information as much as possible.

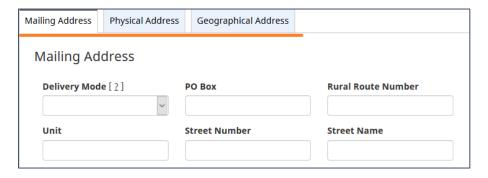
Facility Required fields are marked by an asterisk (*). * Ownership type (required) Owned Mailing Address Physical Address Geographical Address Mailing Address Delivery Mode [2] Street Type Street Direction City Postal Code (A1A 1A1) / Zip Code (11111) Prov/Terr/State Country Additional Information Copy To Physical

Figure 1-33: SWIM Facility Information Page

(6) Fill in the address information (please refer to Figure 1-18: Mailing Address Delivery Modes).

Note: There is a third type of address that you may provide for your facilities: A geographical address. Similar to mailing address and physical address information, the geographical latitude and longitude information will be used to auto-populate fields in MERS (Figure 3-2) and, where appropriate, reports to several other programs.

Figure 1-34: SWIM Facility Address Page



(7) When you have filled in the information you wish to provide, click the blue <u>Save</u> button to be returned to your main Facilities page. If at any time you would like to delete a facility, this can be done by checking the box next to the appropriate facility and then the red <u>Delete all selected</u> button. You are able to add new facilities by clicking on the blue <u>Search for facility</u> button.

Figure 1-35: SWIM Facility Dashboard



2 Access to MERS

This chapter outlines the steps to follow to provide a facility representative or a laboratory/consultant access to MERS once your organization and a facility under your organization have been created.

You will not be able to manage access in MERS until at least one facility has been added to your organization.

Note: DO NOT CREATE DUPLICATES OF A FACILITY IN SWIM.

With respect to Schedule 5 of the MDMER, two reporting systems are used: MERS, which collects information under Schedule 5, Part 1, and EEMER, which collects information under Schedule 5, Part 2. Once initially created in SWIM, the same facility should be used when accessing both MERS and EEMER, which allows for reported data to be linked.

Please use the search function, as described below, to check for an existing facility, using common spellings or if no results are obtained, partial spelling and capitalizations for the expected mine name (e.g. using variations such as "Inc", "Inc.", "Incorporated").

See Chapter <u>2.4 Transfer of Ownership of Facilities</u>, if applicable.

The first user to create the organization will become the SWIM Organization Lead. This user will be able to grant themselves and other users the role of regulatee or consultants/laboratories. If you wish to add additional SWIM Organization Leads for your organization, the SWIM Organization Lead can proceed themselves by following the standard steps to grant access (See section 2.1 Granting access to the MERS) and by selecting the Single Window Information Manager module.

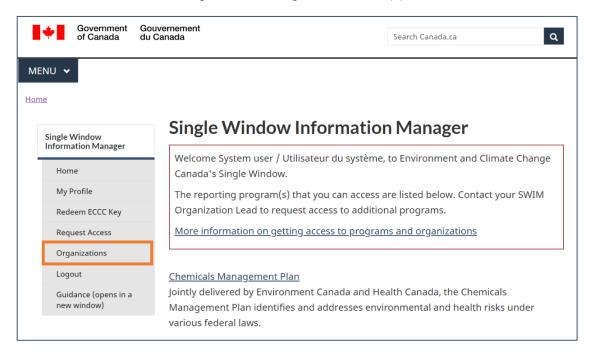
If you do not know who your SWIM Organization Lead is, email: sdem-mers@ec.gc.ca.

2.1 Granting Access to MERS

The **SWIM Organization lead** must follow these steps to generate keys:

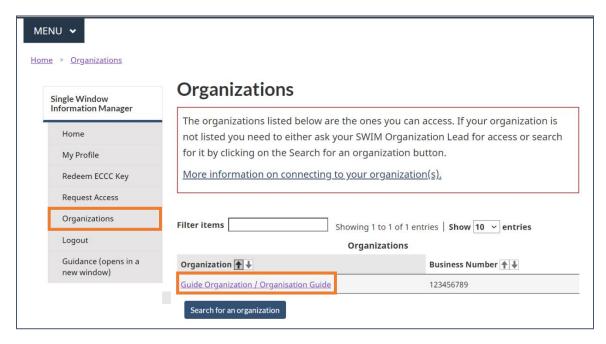
Step 1: Click on <u>Organizations</u> on the navigation pane on the left-hand side.

Figure 2-1: Granting Access to MERS (1)



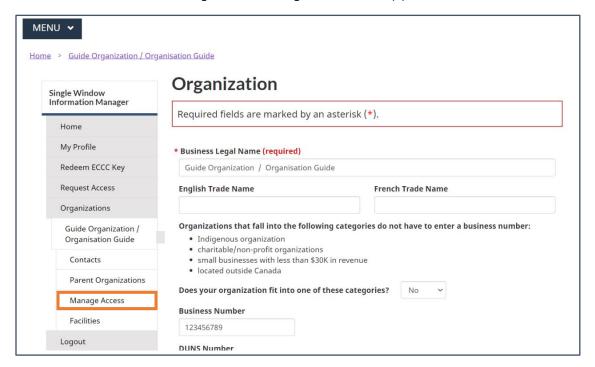
Step 2: Click on the name of your organization.

Figure 2-2: Granting Access to MERS (2)



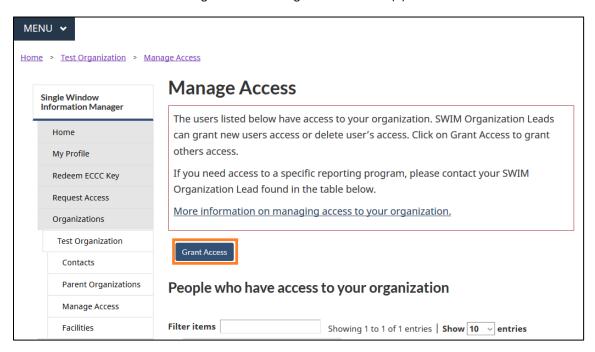
Step 3: Click on Manage Access on the left-hand navigation pane.

Figure 2-3: Granting Access to MERS (3)



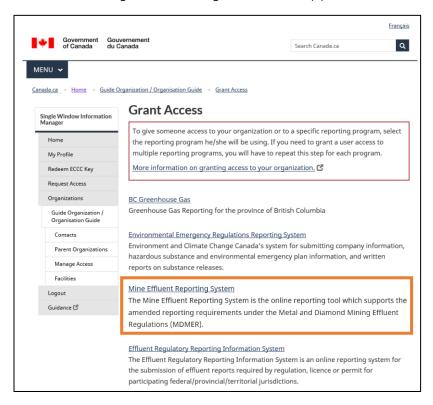
Step 4: Click on Grant Access at the top of the table.

Figure 2-4: Granting Access to MERS (4)



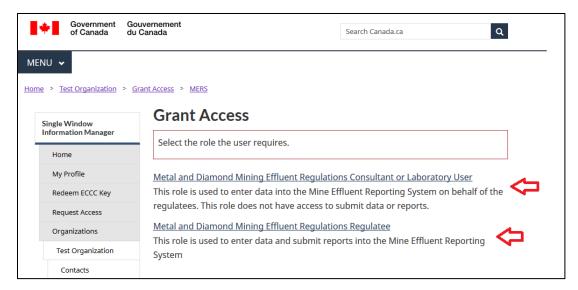
Step 5: Click on the applicable reporting system (Mine Effluent Reporting System).

Figure 2-5: Granting Access to MERS (5)



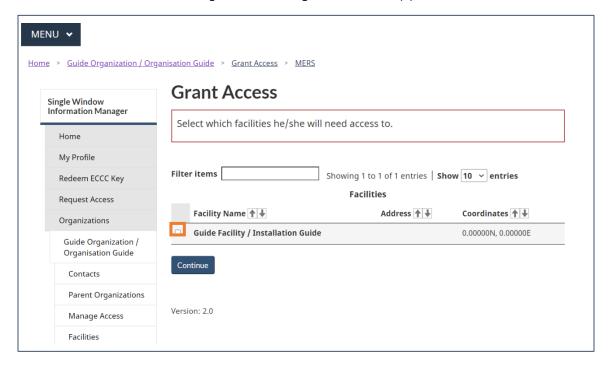
Step 6: Click on the level of access that you want to provide (see Chapter <u>2.3 Types of Roles</u>).

Figure 2-6: Granting Access to MERS (6)



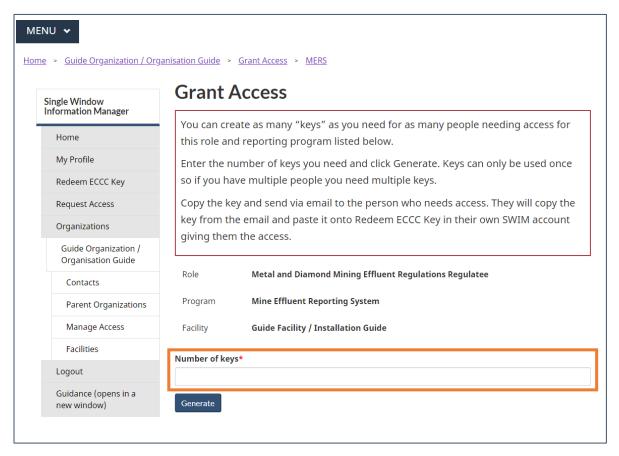
Step 7: Select **all** the facilities that require access and click <u>Continue</u>.

Figure 2-7: Granting Access to MERS (7)



Step 8: Input the number of keys you need to generate (one key for each user you are granting access to).

Figure 2-8: Granting Access to MERS (8)



Step 9: Copy each ECCC key and send it to the user(s) who require access.

Figure 2-9: Granting Access to MERS (9)



Once the recipient has obtained the key, they must click on <u>Redeem ECCC Key.</u> On the left-hand navigation pane in your own account, paste the entire key into the text box and click <u>Activate Key</u>. MERS will then be accessible through the SWIM home page.

If you do not know who your SWIM Organization lead is, email: sdem-mers@ec.gc.ca.

2.2 Removing Access to MERS

SWIM Organization Leads may delete users that no longer require access to the organization's profile. To do so, please follow the steps 1-3 listed in Chapter 2.1 Granting Access to MERS, and scroll down to the "People who have access to your organization" portion of the page.

Next, click the checkbox in the far left column of the row of the user whose access is to be removed, then click the red <u>Delete all selected</u> button. Several boxes can be checked, thus removing several accesses at the same time.

On the "Delete Access" screen, click the red <u>Delete all selected</u> button again, users will no longer have access (Figure 2-10).

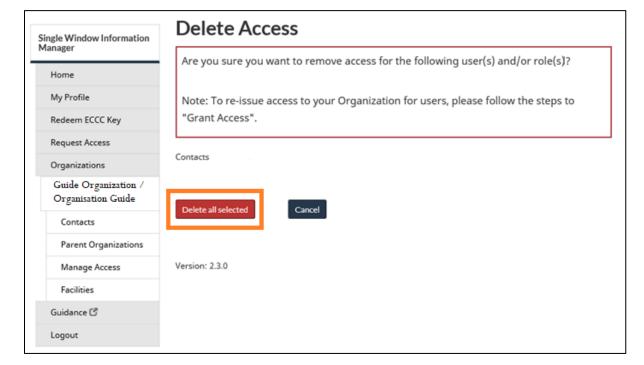


Figure 2-10: Removing Access to Organization

2.3 Types of Roles in MERS

Two **role types** are available to the SWIM Organization Lead when granting access to users: the Regulatee role and the Consultant or Laboratory user role.

Metal and Diamond Mining Effluent Regulations Regulatee

This role is an unrestricted data entry role. The user is able to:

- Access and edit facility information;
- Create, submit, view and amend reports, and delete unsubmitted reports;
- Submit, edit, and view notifications, and delete unsubmitted notifications;
- Download submitted data in Excel format and submitted reports as a PDF.

When granting a user this role for a given facility, please note that they will not be given any SWIM role.

Metal and Diamond Mining Effluent Regulations Consultant or Laboratory User

This role allows a user to enter data into MERS on behalf of regulatees. This role does not have access to facility information and can create reports and enter data only for version 1 reports. They cannot submit reports or amend submitted reports. Additionally, this role is able to download data regarding regulatory information, acute lethality tests, and EEM submissions.

When granting a user this role, please note that they will not be given any SWIM role.

2.4 Transfer of Ownership of Facility

In the case of a change in ownership of a facility, the new owner must add it to their organization in SWIM. In the "Facilities" section, click the <u>Search for Facility</u> button, then search for the facility you wish to add to your organization (Figure 1-29). Two scenarios are therefore possible:

- 1) The facility appears as a hyperlink. You can then click on the name of the facility to see which organization it is associated with. If possible, contact the SWIM Organization Lead who owns the facility to release it and make it available to you. Otherwise, click Add this facility (Figure 2-11) and a transfer request will be sent to ECCC.
- 2) The facility is not a hyperlink, which means it is not currently associated with any organization. You can then click Add this facility (Figure 2-11) and the facility will automatically be added to your organization's profile.

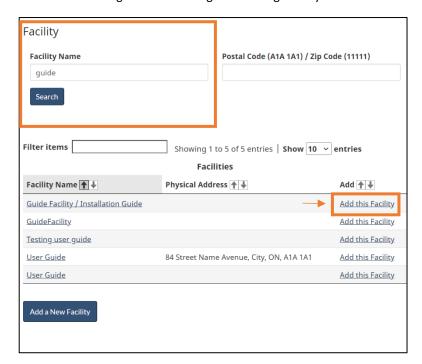


Figure 2-11: Adding Pre-Existing Facility

Information about the transfer of ownership of facilities in SWIM can be found in the "Managing your facilities" section of the SWIM guidance at:

https://www.canada.ca/en/environment-climate-change/services/reporting-through-single-window/guidance.html.

Note: If the MDMER require a notification or submission of information to the Minister of the Environment, that notification must be made through the "Notifications" tab of MERS. Please consult Chapter 8.1 Creating Notifications for information on how to create and submit notifications required by the MDMER.

If you require additional information or assistance for the transfer of ownership of facilities in SWIM, contact: gigu-swim@ec.gc.ca.

2.5 Redeeming your ECCC Key

If you have been provided an **ECCC Key** by your SWIM Organizational Lead, click on <u>Redeem ECCC Key</u> and activate it to save it to your profile.

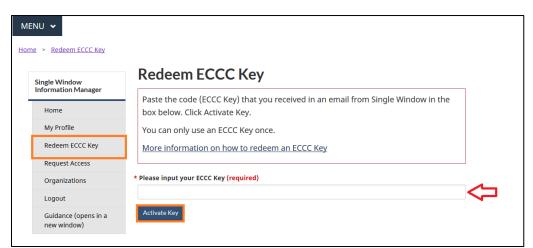


Figure 2-12: Redeeming ECCC Key (1)

If you see the screen below (Figure 2-13), this denotes that the ECCC Key was already used. You will need to request a new one.

Figure 2-13: Redeeming ECCC Key (2)

Redeem ECCC Key

Paste the code (ECCC Key) that you received in an email from Single Window in the box below. Click Activate Key.

You can only use an ECCC Key once.

More information on how to redeem an ECCC Key

• The ECCC Key provided has already been redeemed. Please note that each key can only be redeemed once.

Please input your ECCC Key (required)

eb12ab1b-4c3e-4eb0-8705

Activate Key

If your ECCC key is valid, it should redeem successfully:

Figure 2-14: Successful Key

Redeem ECCC Key

Your key has been redeemed successfully.

Select Home from the left navigation pane to return to the homepage and then select MERS.

2.6 Navigating to MERS

MERS is accessible through the **SWIM Homepage** (Figure 2-15).

MENU • Home Single Window Information Manager Single Window Information Manager Welcome System user / Utilisateur du système, to Environment and Climate Change Home Canada's Single Window. The reporting program(s) that you can access are listed below. Contact your SWIM Organization Lead to request access to additional programs. Redeem ECCC Key More information on getting access to programs and organizations Request Access Logout Chemicals Management Plan Guidance (opens in a Jointly delivered by Environment Canada and Health Canada, the Chemicals Management Plan identifies and addresses environmental and health risks under various federal laws. Climate Change Funding Programs The Climate Action Incentive Fund (CAIF) and the Low Carbon Economy Fund (LCEF). ePCB This database allows regulatees to submit their PCB reports online as required by the PCB Regulations Mine Effluent Reporting System The Mine Effluent Reporting System is the online reporting tool which supports the amended reporting requirements under the Metal and Diamond Mining Effluent Regulations (MDMER).

Figure 2-15: Navigating to MERS from SWIM

2.6.1 Navigating in MERS

Opening MERS will lead you to the home page where general information and announcements for the system will be located. This page is important, as it is where information on changes to the system and updates will be located.

Other important tabs in MERS include:

- The Facilities tab (Chapter <u>3 Facility Registration in MERS</u>);
- The Reporting Dashboard (Chapter 4 Reporting Dashboard);
- The Notifications tab (Chapter 8 Notification Dashboard);
- The Downloads tab (Chapter 9 Downloads).

You can navigate between them by clicking on their respective tabs on the heading bar (Figure 2-16).

Opening MERS in a minimized window will change the layout (Figure 2-17; Figure 2-18).

Figure 2-16: MERS Home Page

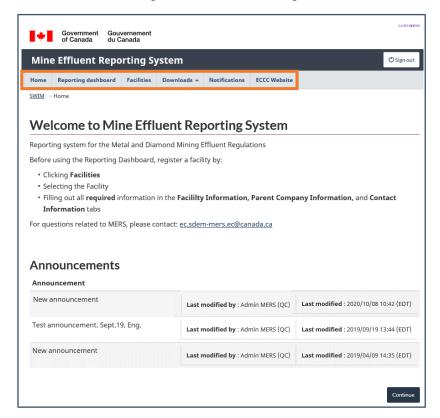
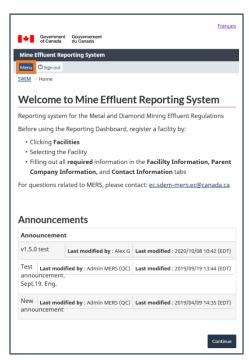


Figure 2-17: MERS Home Page - Small Screen



Menu Government of Canada Gouvernement du Canada Home Mine Effluent Reporting System Reporting dashboard Menu OSign out Facilities SWIM > Home ➤ Downloads Welcome to Mine Effluent Re Notifications Reporting system for the Metal and Diamond M ECCC Website Before using the Reporting Dashboard, register Clicking Facilities Contact us · Selecting the Facility Departments and agencies Filling out all required information in the F Public service and military Company Information, and Contact Info For questions related to MERS, please contact: Treaties, laws and regulations Government-wide reporting Announcements Prime Minister Announcement How government works v1.5.0 test Last modified by : Alex G Last n Open government Test Last modified by : Admin MERS (QC) Last n Social media announcement, Mobile applications Sept.19. Eng. About Canada.ca New Last modified by : Admin MERS (QC) Last n Terms and conditions announcement Privacy

Figure 2-18: MERS Home Page - Small Screen, Expanded Menu

3 Facility Registration in MERS

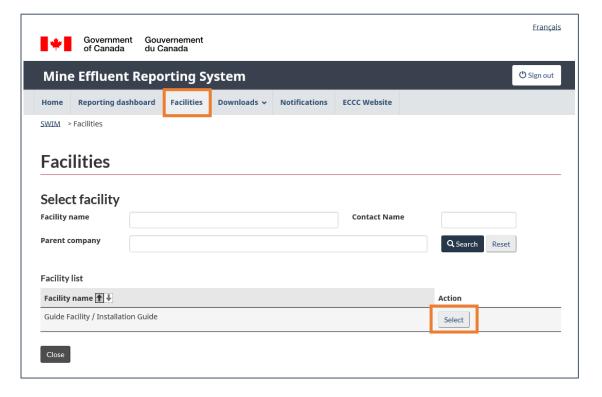
Once you gain access to MERS, facility registration requires completion.

To complete the registration of a facility, click on the **Facilities** tab and select the facility from the list (Figure 3-1). This will bring you to the "Facility information" section where you can input information required by the system to complete reports and notifications.

To create a report or notification, you must complete, at minimum, the following sections of the **Facilities** tab: the "Facility information", "Parent company information", "Final discharge point information" and "Contact information".

Note: Only facilities that you have been granted access from SWIM will be shown in the list of facilities. Please see Chapter 1.4.1 Adding a Facility if your facility is not found in MERS.

Figure 3-1: Facility Information - Facility List



3.1 Facility information

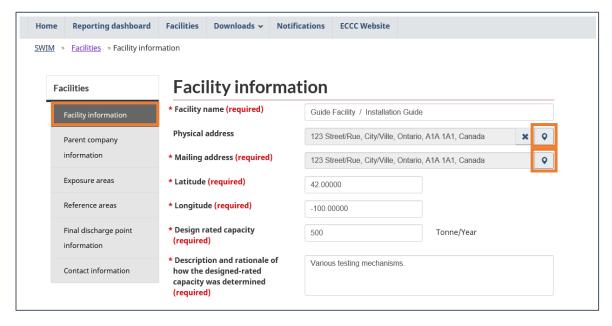
In the "Facility information" section, general information (Figure 3-2) about the facility is already entered. To be able to save the page, required fields must be completed.

When first inputting facility information, some data such as the facility physical address, mailing address and coordinates will be automatically populated if they have already been entered in SWIM. This can also be done by clicking on the <u>Update from SWIM</u> button at the bottom of the page (Figure 3-6).

When saving information in MERS, fields that are also present in SWIM will be updated with the newly saved information.

Note: Coordinates must be in decimal degrees format with 5 digits after the decimal (Ex 42.12345).

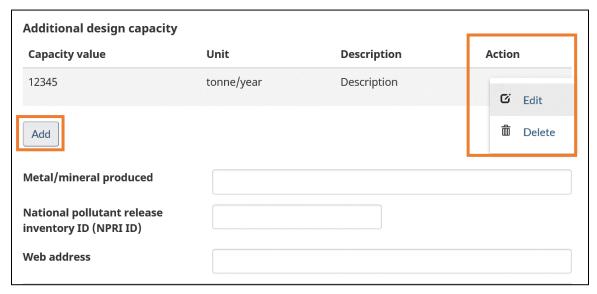
Figure 3-2: Facility Information - General Information



To edit addresses, click on the \circ (pin) icon on the right side of the field. This will open a window where address information can be input and edited. An error will be shown when attempting to save an address that does not meet the requirements of the system. Be sure to save before leaving this window.

Additional design rated capacities can be added by clicking on the <u>Add</u> button (Figure 3-3). This will open a new window to input the value, unit, and description of the new design capacity. Once added, the additional design capacity will appear in the list and can be deleted or modified by clicking on the button in the Action column.

Figure 3-3: Facility Information - Additional Design Capacity and Other Facility Information



You can add a **facility operating status** by selecting the type and start date (Figure 3-4). When first registering a facility, only the date subject to MMER and date subject to MDMER will be available as options for the facility operating status types. Different facility operating statuses become available depending on the current status of the facility. These options, in no particular order, are: "Date subject to MMER", "Date subject to MDMER", "Cessation of discharge", "Resume discharge", "End of commercial operation," "Return to commercial operation", "Intent to become a recognized closed mine" and "Recognized closed mine." The date subject to the MMER (the *Metal Mining Effluent* Regulations which predate the MDMER before 2018) or date subject to MDMER are only required for the first entry.

Facility status types may be linked to notifications submitted to the Minister of the Environment. Any new information or updates to the facility operating status must be made within the **Facilities** tab. In addition, if the MDMER require a notification or submission of information to the Minister of the Environment, that notification must be made through the **Notifications** tab (please see Chapter <u>8.2 Completing & Saving Notifications</u>).

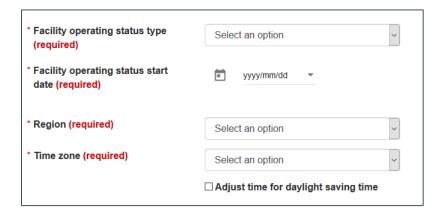
Once a status is updated, previous facility operating status types will appear as a list (Figure 3-5).

The date associated with the status cannot be changed once it has been added. Please verify that the information is correct before saving. To make a change to the date of a status field, a request must be sent to sdem-mers@ec.gc.ca.

Note: Facility operating status records, region, time zone and adjustment for daylights savings will become locked and cannot be modified after saving. To make a change to these fields, a request with justification must be sent to sdem-mers@ec.gc.ca.

Note: "Adjust time for daylights savings" defaults to unchecked. Be sure to check the box if the facility is in a time zone that is adjusted to daylight savings.

Figure 3-4: Facility Information - Facility Status, Region and Time Zone

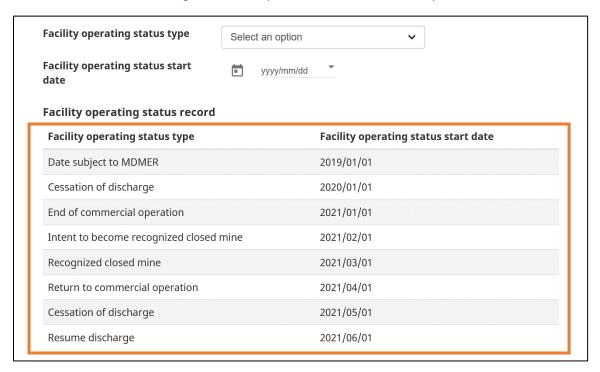


Canadian provinces and territories are divided into regions in MERS as follows:

Table 3-1: Regions and Associated Provinces and Territories

Region	Province or Territory	
Atlantic	Nova Scotia	
	New Brunswick	
	Prince Edward Island	
	Newfoundland And Labrador	
Ontario	Ontario	
Quebec	Quebec	
Prairie Northern	Alberta	
	Saskatchewan	
	Manitoba	
	Northwest Territories	
	Nunavut	
Pacific And Yukon	British Columbia	
	Yukon	

Figure 3-5: Facility Information - Previous Facility Status



The **owner and operator information** (Figure 3-6) is required to be complete for registration. Enter the name and fill out the addresses by clicking on the \circ (pin) icon. When adding the owner and operator information, the <u>Same as owner</u> button can be used to copy any information in the owner details to the operator details.

Note: Make sure to click on the <u>Save</u> button at the bottom right of the page. Any unsaved information will be lost when leaving the page. If you are editing the page, a note must be added indicating the changes.

Owner and operator Owner detail Name (required) Physical address (required) Q Mailing address (required) Q Operator detail Same as owner Name (required) Physical address (required) Q Mailing address (required) Q Note Add note

Figure 3-6: Facility Information - Owner and Operator Details

Owner and operator information may be linked to notifications or information submitted to the Minister of the Environment. Any new information or updates to the owner and operator information must be first made within the **Facilities** tab. In addition, if the MDMER require a notification or submission of information to the Minister of the Environment, that notification must be made through the **Notifications** tab (please see Chapter <u>8.2 Completing & Saving Notifications</u>).

Close

Update From SWIM

3.2 Parent Company Information

In the "Parent company information" section (Figure 3-7), the name and physical address of the parent company are required. Clicking on <u>Edit</u> in the <u>Action</u> column will show the fields that can be modified. Clicking on the \bigcirc (pin) icon to the right of the address field will open a window where it can be modified and saved.

The <u>Update from SWIM</u> button can be used to populate the fields with the information currently in SWIM.

The <u>Status</u> column will indicate the state of submission for the parent company: orange for inprogress and green for submitted (Table 4-1). The status will already be submitted if it has been completed for another facility under the same organization.

The <u>Relationship</u> column will show the link for the facility with past organizations. In the event of a change in parent company of a facility, the relationship will become broken and the new parent company will be shown as a new row in the table.

Note: Information saved on this page will update the organization information in SWIM.

Facilities Reporting dashboard Downloads ~ Notifications **ECCC Website** SWIM > Facilities > Parent company information Parent company information **Facilities** Facility information Parent company Status Name Physical address Relationship Action Guide Organization / 123 Street/Rue, City/Ville, Ontario, Organisation Guide A1A 1A1, Canada Edit Exposure areas Reference areas Parent company detail Final discharge point * Name (required) Guide Organization / Organisation Guide information * Physical address (required) 123 Street/Rue, City/Ville, Ontario, A1A 1A1, Canada Q Contact information Mailing address Q 123 Street/Rue, City/Ville, Ontario, A1A 1A1, Canada × Cancel Update From SWIM

Figure 3-7: Parent Company Information

Parent company information may be linked to notifications or information submitted to the Minister of the Environment. Any new information or updates to parent company information must be made within the **Facilities** tab. In addition, if the MDMER require a notification or submission of information to the Minister of the Environment, that notification must be made through the **Notifications** tab (please see Chapter <u>8.2 Completing & Saving Notifications</u>).

3.3 Exposure and Reference Areas

The process to add reference and exposure areas for a given facility is the same.

The "Exposure areas" section will show a table of exposure areas associated with the facility (Figure 3-8). Clicking on the <u>Add new exposure area</u> button will open a new page where the required information can be added (Figure 3-9). The area is added to the table when clicking <u>Save</u>. Clicking on <u>Close</u> will return you to the list where the areas that you have added will be shown.

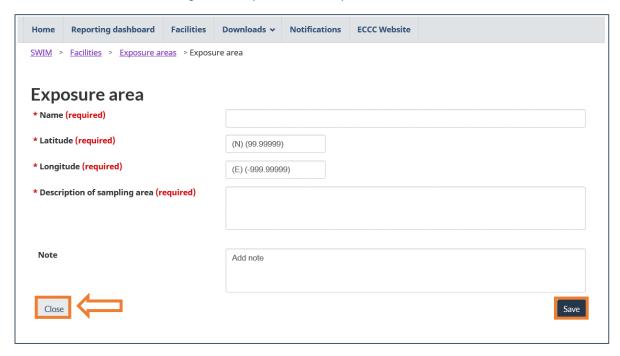
Existing areas can be modified by clicking <u>Edit</u> in the <u>Action</u> column of the table. When editing an area, a note is required to save the page.

Note: Coordinates must be in decimal degrees format with 5 digits after the decimal (Ex 42.12345).

ECCC Website Home Reporting dashboard **Facilities** Downloads ~ Notifications SWIM > Facilities > Exposure areas Exposure areas **Facilities** Name Latitude Longitude Action Facility information Area / Zone 42.00000 -100.00000 **∕** Edit Parent company Add new exposure area Exposure areas Close Reference areas Final discharge point information Contact information

Figure 3-8: Exposure Area - Exposure Area List

Figure 3-9: Exposure Area - Exposure Area Details



3.4 Final discharge point information

Adding a **final discharge point (FDP)** is similar to adding a reference/exposure area (Figure 3-10). Clicking <u>Add new FDP</u> will open a window where information about the FDP is submitted (Figure 3-11). The FDP is then added to the list once saved.

FDPs added to the list can then be modified by clicking on <u>Edit</u> in the <u>Action</u> column. When editing an FDP, a note documenting the change is required to save the page.

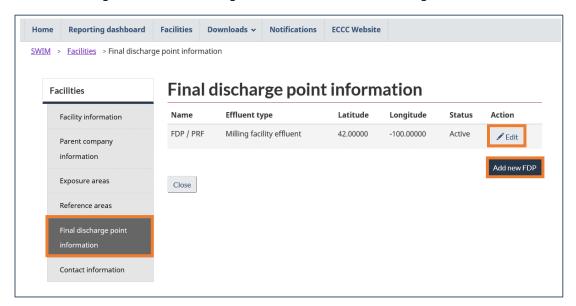


Figure 3-10: Final Discharge Point Information - Final Discharge Point List

Much of the information about an FDP will be locked and cannot be modified after being added. This includes the name, date of first deposit, whether the effluent is deposited into marine waters, and the latitude and longitude. Once locked, to make a change to one of these fields, a request must be sent by e-mail to sdem-mers@ec.gc.ca.

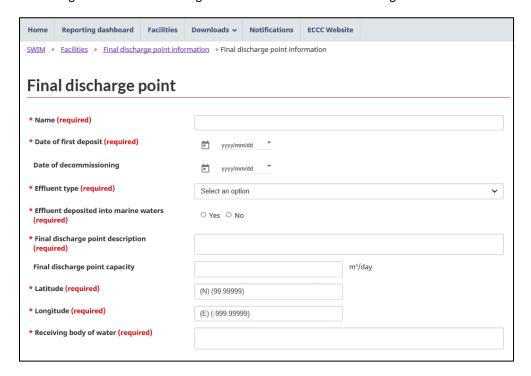
An FDP cannot be removed once it has been added. It is therefore very important to verify that the information is correct before saving.

An FDP can be deactivated by selecting the date of decommission. Decommissioning an FDP will mark it as "inactive". It will no longer appear as an option for reports where the FDP is not active during the reporting period. **Once a FDP is decommissioned, it cannot be reactivated or modified**.

FDPs may be linked to notifications or information submitted to the Minister of the Environment. Any new information or updates to the information about an FDP must be made within the **Facilities** tab, before a notification is made. In addition, if the MDMER require a notification or submission of information to the Minister of the Environment, that notification must be made through the **Notifications** tab (please see Chapter <u>8.2 Completing & Saving Notifications</u>).

Note: Coordinates must be in decimal degrees format with 5 digits after the decimal (Ex 42.12345).

Figure 3-11: Final Discharge Point Information – Final Discharge Point Details



To link an FDP to an exposure or reference area, click on <u>Link exposure area</u> or <u>Link reference</u> <u>area</u> (Figure 3-12), and a window will open where the area can be selected from the dropdown menu. **Only areas that have been added will be shown as options in the dropdown menu.** It is recommended to add the areas before entering the FDP information, otherwise you will need to return and modify the FDP after adding the areas.

Linked exposure areas Action Status Area name Latitude Longitude Active Area / Zone -100 **▶** Decommissioning Link exposure area Linked reference areas Latitude Longitude Action Status Area name Active Area / Zone **✓** Decommissioning Link reference area Note Add note Save Close

Figure 3-12: Final Discharge Point Information - Exposure and Reference Area Links

3.5 Contact Information

The "Contact information" section (Figure 3-13) will show a table of the contacts added to the facility. Clicking on Add new contact will open a window where a contact can be selected from the dropdown list. Contacts available in the list include users who have access to the organization in SWIM (all users that appear in the "Manage Access" page) and contacts added for the organization in SWIM (in the "Contacts" tab under your organization).

Once added, fields with the contact details will be shown and need to be completed to save the contact. Contacts can be edited or deleted by clicking on the respective buttons in the <u>Action</u> column.

All fields on this page are linked to the SWIM profile of the contact; clicking on <u>Save</u> will update the information in SWIM. Clicking on the <u>Update From SWIM</u> button can be used to populate the fields with the information currently present in SWIM.

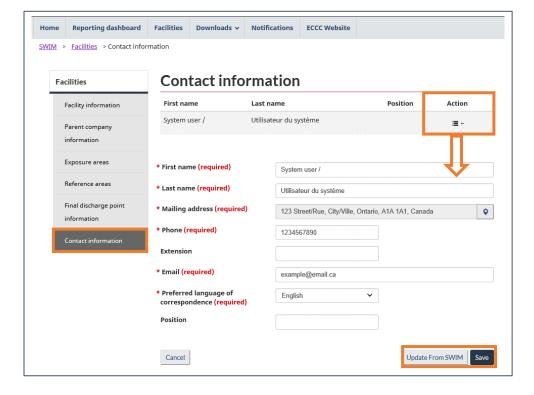


Figure 3-13: Facility information - Contact information

4 Reporting Dashboard

MERS enables users to create and submit quarterly and annual effluent monitoring reports, as well as information related to effluent and water quality monitoring studies. This information can be viewed through the "Reporting Dashboard".

The "Reporting Dashboard" shows the list of created reports and their state of progress (Figure 4-1). The status icon allows the user to monitor the progress of reports created. The status of the report will change as information is added.

A new report can be created by clicking on the <u>New report</u> button, selecting the facility, the type of report and then the reporting period (Figure 4-2; Figure 4-3 and Figure 4-4).

Several actions are available by clicking on the button in the <u>Action</u> column for the respective report. The available actions depend on the status of the report and are shown in Table 4-1.

The "Reporting Dashboard" will not have any reports, until a search has been conducted. Checking the <u>Keep Search Results</u> box retains the search results upon returning to the "Reporting Dashboard". In conducting a search, the filtering criteria can be used to find previously created reports.

Table 4-1: Report status icon and available actions

Status	Icon	Available Actions
New	Ĺ	Edit
		Delete
		Print Preview
In-Progress	\Box	Edit
		Delete
		Print Preview
Completed		Edit
	L	Delete
		Submit
		Print preview
Submitted	,	Amend
		View
		Print Preview

Figure 4-1: Reporting Dashboard

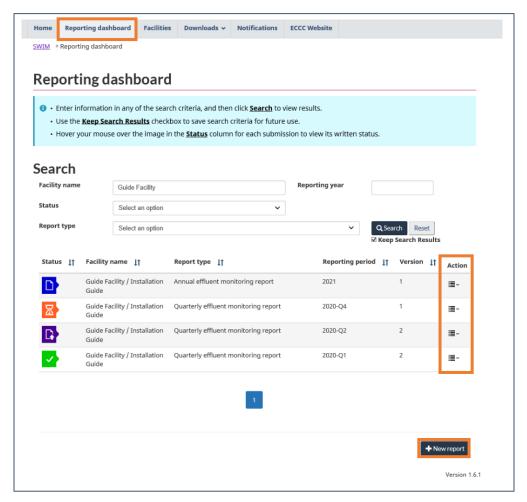


Figure 4-2: New Report - Facility list

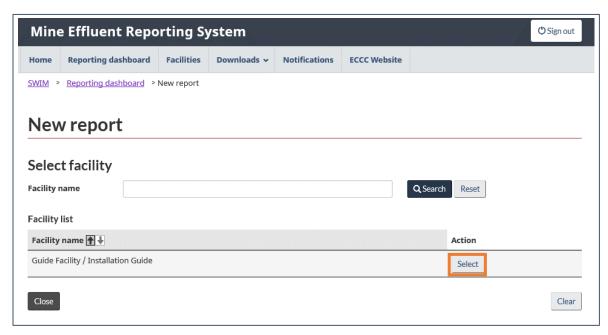


Figure 4-3: New Report - Report Type Selection

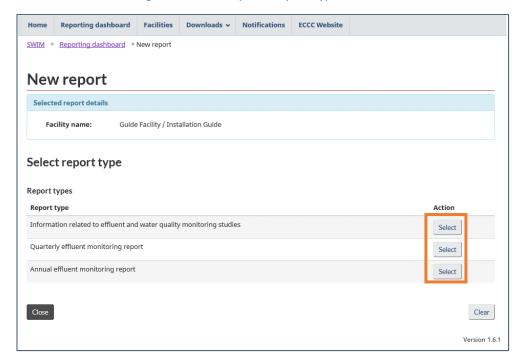
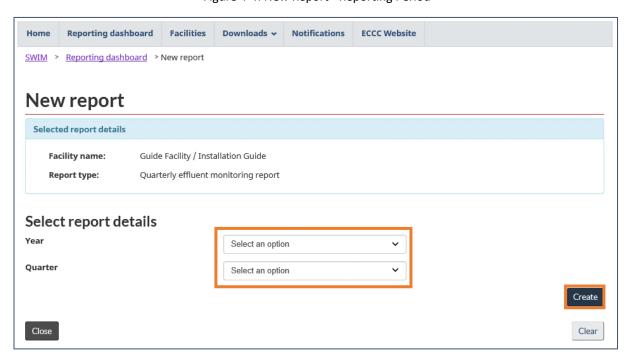


Figure 4-4: New Report - Reporting Period



4.1 Amending, Deleting, and Submitting Reports

After submitting a report, someone with the regulatee role may **amend** a report in the "Reporting Dashboard" if required. This will create a new version for editing. The previous version will be archived with its date of submission and will be available to view in the report history located in the "Summary" section. All changes in the amended version must be documented in the note fields before saving the page.

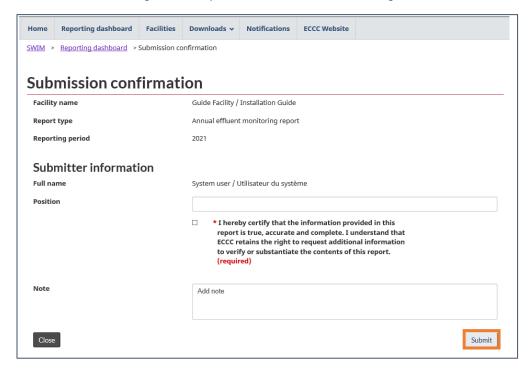
Note: Report pages that require amendments must have a note entered in order to save the page and complete the amended submission. Notes are <u>only</u> viewable in the current version submitted. If additional amendments are made, notes from previous amendments do not carry over. It is important that notes clearly identify what was found in the previous submission, the change that is being made to the current amended submission and why this change is being made. If notes from previous versions of the report are still applicable, they must be copied over to the newest amended version.

If an amended report is deleted prior to submission, the reporting data will default to the previous version. If there is no previous version, deleting the report will remove it from the dashboard entirely.

Note: Reports that have been submitted cannot be deleted. Only reports which have the status of "New", "In-Progress", and "Completed" may be deleted from the system.

Selecting <u>Submit</u> for a report will open the "Submission confirmation" page (Figure 4-5). The name of the submitter will be filled based on the profile of the logged in user. The certification statement is required to submit the report. In the case where an amended report is submitted, the "Note" field becomes required.

Figure 4-5: Report Submission Confirmation Page



5 Quarterly Effluent Monitoring Report

The **quarterly report** includes deleterious substance, pH and acute lethality results. Opening a report will show the "Summary" section, which includes general information about the report including its version and status (Figure 5-1).

The "History" portion at the bottom of the page will show any previous report versions which can be viewed or printed by clicking on the button in the <u>Action</u> column.

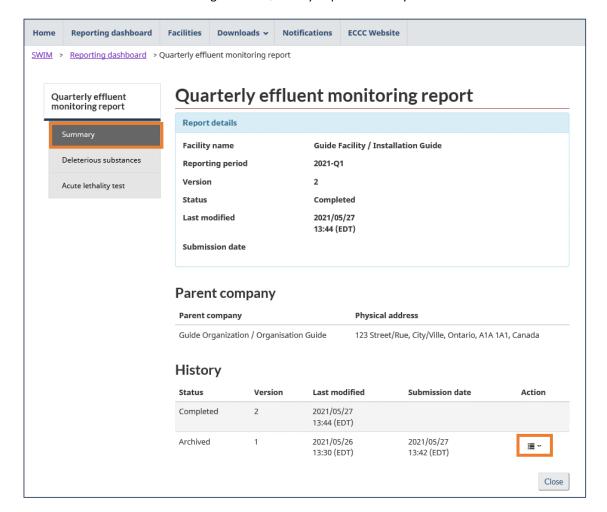


Figure 5-1: Quarterly Report Summary

5.1 Deleterious Substances

The "Deleterious Substances" section allows you to submit the information gathered for effluent monitoring with respect to **deleterious substance** and **pH testing**.

The page shows a table with an entry for all FDPs and months in the reporting period. The entries in the table can be limited to a specific FDP by selecting it in the dropdown menu and clicking <u>Search</u> (Figure 5-2).

At the bottom of the page, the quarterly mass loading of each FDP is shown, this is calculated automatically by the system, based on the submitted deleterious substance data (Figure 5-2).

Clicking on <u>Edit</u> in the <u>Action</u> column will open a deleterious substance report for that entry in the table.

Note: FDPs that have been active at any time during the reporting period will have an entry in the list for each month of the reporting period.

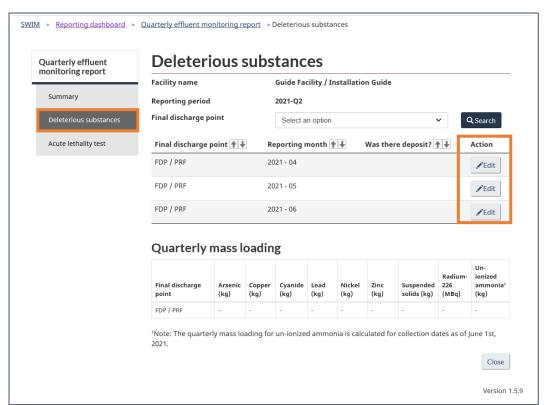


Figure 5-2: Deleterious Substances Section

5.1.1 Deleterious Substances Report

In the **deleterious substances report** (Figure 5-3), you must indicate whether there was a deposit and if cyanide was ever used. If a deposit was indicated, the number of days that effluent was deposited and the total volume of effluent deposited are required.

The monitoring frequencies will default to "Normal"; select the applicable frequency for each substance and species. The monitoring frequencies of Rainbow Trout or Threespine Stickleback will be blank depending on whether the FDP deposits into marine waters. However, it is still possible to select a frequency.

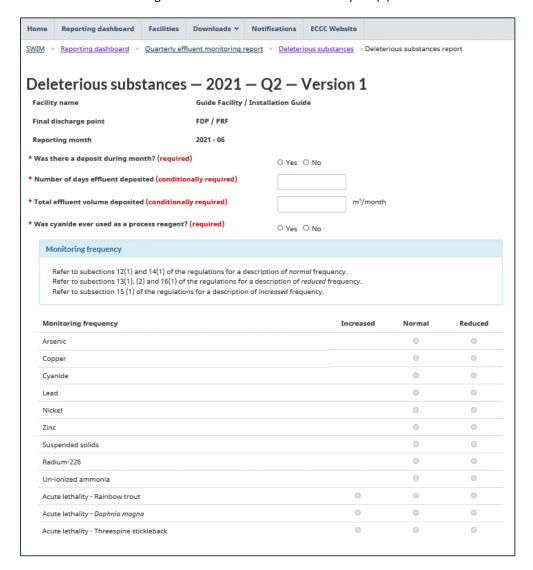


Figure 5-3: Deleterious Substances Report (1)

The deleterious substances and pH data table will show all the submitted data for the given FDP and reporting month.

The "Failed acute lethality test" column indicates if the sample is associated with an **Acute Lethality Test** (ALT) report. **Samples associated with an ALT are not added on this page**; they are added in the ALT portion (Chapter <u>5.4 Acute Lethality Test - Report Deleterious Substances</u>).

Clicking the <u>Add</u> button will open a new page where the substance details are submitted (Chapter <u>5.1.1.1 Deleterious Substances Details</u>). Existing entries can be modified or deleted by clicking on the button in the <u>Action</u> column for the associated FDP (Figure 5-4).

The monthly mean concentration and monthly mass loading for each substance will be automatically calculated by the system and shown in the respective tables at the bottom of the page. When editing a deleterious substance report, a **note** is required to save the page or add an entry.

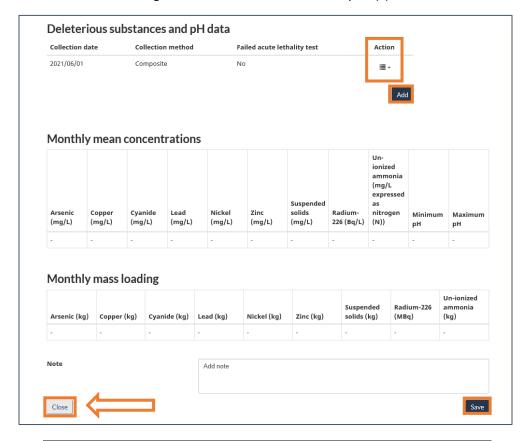


Figure 5-4: Deleterious Substances Report (2)

Note: The note box in Figure 5-4 is used to provide additional information on submitted data such as monitoring frequency, days of effluent deposit, or effluent volume deposited. Additionally, this text box is required to highlight modifications and changes made to these fields in amended reports.

5.1.1.1 Deleterious Substances Details

In the "Deleterious substances details" page (Figure 5-5), the collection date and method are required. The "<" box is checked to indicate that the analytical result is less than the method detection limit provided by the laboratory. If checked, one-half of the value put in the "Value" column will be used in the calculation of the monthly mean concentration.

Clicking Save will add the entry to the deleterious substance table (Figure 5-4); entries can be modified or deleted after being added. A **note** is required to save if there are any modifications.

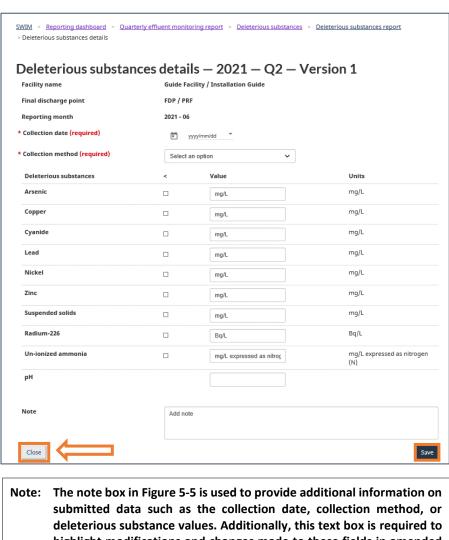


Figure 5-5: Deleterious Substances Details

highlight modifications and changes made to these fields in amended reports.

Beginning June 1, 2021, the grab sample layout allows for the input of un-ionized ammonia.

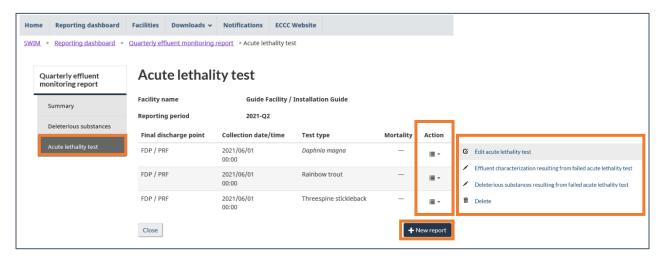
5.2 Acute Lethality Test (ALT) Reports

ALT results, associated effluent characterizations, and deleterious substance reports are submitted in the "acute lethality test" section.

To report an ALT, from the ALT table (Figure 5-6), click on <u>New report</u>. This will open a window (Figure 5-7) where you must select the FDP, the species tested, and the collection date and time of the sample. Clicking <u>Create</u> will add an entry to the ALT table.

Note: The button found in the action column of Figure 5-6 can be used to delete ALT reports.

Figure 5-6: Acute Lethality Test Table



To **edit or delete** an ALT, **report effluent characterization**, or **report deleterious substances** for an entry, click on the button in the <u>Action</u> column and select the appropriate action.

Editing an ALT entry will open the report, where the data for the individual report can be added. Each page is described in subchapters below. Navigate between the ALT sections by using the navigation pane on the left of the screen (Figure 5-8).

If an associated effluent characterization and deleterious substance record is created for an ALT that is then deleted, please note that those individual records will also be deleted.

Note: When editing be sure to save the information on every page. Not all fields are required to save information in this section. Refer to the MDMER and relevant reference methods for reporting requirements.

Note: If the "Rainbow Trout and *Daphnia magna*" option is chosen as "Fish species tested", two separate records will be created; however, deleting one will result in the automatic deletion of the other.

Figure 5-7: "Create acute lethality test" page

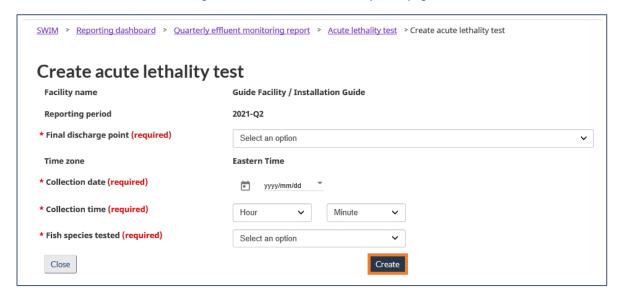
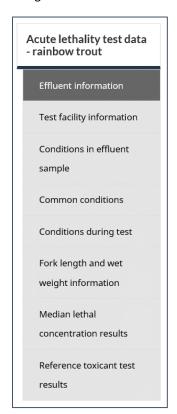


Figure 5-8: ALT Sections



5.2.1 Effluent information

Indicating the changes made is required when modifying the acute lethality report. Any **notes** with respect to other sections of the ALT report that do not have their own note field should also be submitted in this section (Figure 5-9 et Figure 5-10).

5.2.1.1 Threespine Stickleback

The "Effluent information" section for Threespine Stickleback (Figure 5-9), will show the general information associated with the sample.

Select the "Collection method" and enter the name of the collector, and if there was filtration of the effluent, it must be reported in addition to filtration notes.

Anything unusual about the test, any problems encountered, and any remedial measures taken must be reported in the "Anything unusual about test" and "Note" sections.

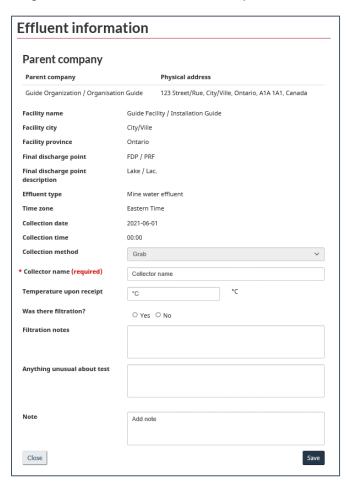


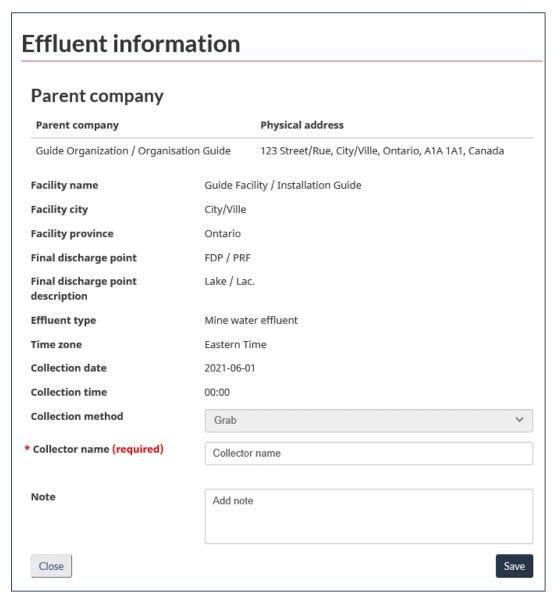
Figure 5-9: Effluent Information – Threespine Stickleback

5.2.1.2 Rainbow Trout and Daphnia magna

The "Effluent information" section for Rainbow Trout and *Daphnia magna* (Figure 5-10), will show the general information associated with the sample.

Select the "Collection method" and enter the name of the collector. A note indicating the changes is required to edit an acute lethality test. Any **notes** with respect to other sections of the ALT report that do not have their own note field should also be submitted on this page (Figure 5-9; Figure 5-10).

Figure 5-10: Effluent Information – Rainbow Trout and *Daphnia magna*



5.2.2 Test Facility information

5.2.2.1 Threespine Stickleback

Information about the test and the test facility is entered in the "Test facility information" section for Threespine Stickleback (Figure 5-11).

The "Test method" will default to the method selected when creating the report. In the case where there were deviations from "must" requirements, a description of the deviations is required.

Enter the test lab name, city and province, and input the date and time that the test was started, the name of the person(s) performing and verifying the test, in addition to the date and time that the sample was received. If there was no labelling or coding, make note of it within the textbox.

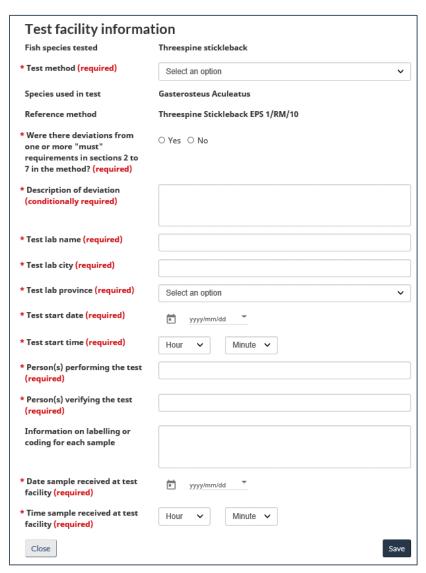


Figure 5-11: Test Facility Information – Threespine Stickleback

5.2.2.2 Rainbow Trout

Information about the test and the test facility is entered in the "Test facility information" section for Rainbow Trout (Figure 5-12).

The "Test method" will default to the method selected when creating the report. In the case where there were deviations from "must" requirements, a description of the deviations is required.

Enter the test lab name, city and province, input the date and time that the test was started, and enter the name of the person(s) performing and verifying the test.

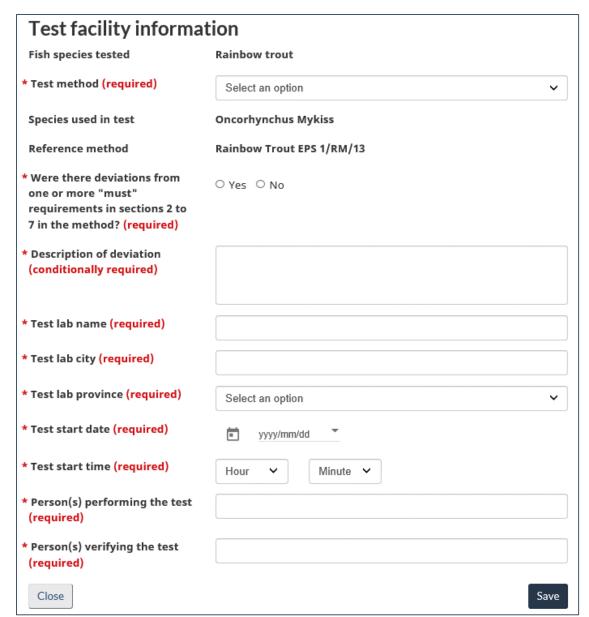


Figure 5-12: Test Facility Information – Rainbow Trout

5.2.2.3 Daphnia magna

Information about the test and the test facility is entered in the "Test facility information" section for *Daphnia magna* (Figure 5-13).

The "Test method" will default to the method selected when creating the report. In the case where there were deviations from "must" requirements, a description of the deviations is required.

Enter the test lab name, city and province, input the date and time that the test was started, and enter the name of the person(s) performing and verifying the test.

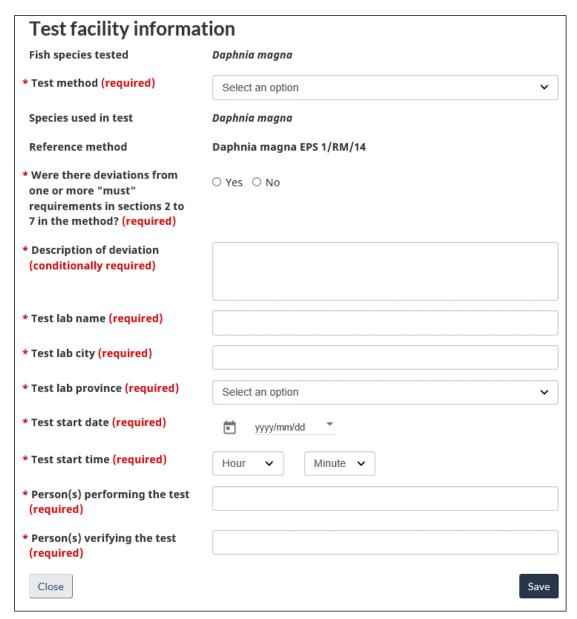


Figure 5-13: Test Facility Information – Daphnia magna

5.2.3 Conditions in Effluent Sample

5.2.3.1 Threespine Stickleback

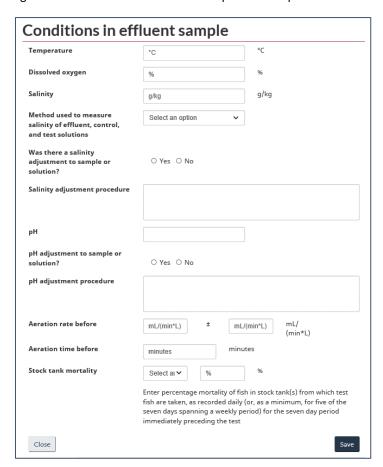
Information about the conditions in the effluent sample prior to the test is entered in the "Conditions in effluent sample" section for Threespine Stickleback (Figure 5-14).

In the case of adjustments to salinity or pH, an indication of the procedure must be reported. The available methods to measure the salinity of effluent are "Conductivity" and "Refractometry".

The "Stock tank mortality" is the cumulative mortality of the fish for the seven-day period preceding the test. The available flags for the "Stock tank mortality" are "blank" and ">".

Note: "Aeration rate before" and "Aeration time before" refer to aeration in addition to standard pre-aeration (30 minutes at 6.5 ± 1 mL/min*L), as required per Section 4.3 of Reference Method EPS 1/RM/10. Please leave "Aeration rate before" and "Aeration time before" blank if no additional pre-aeration was conducted. A zero value (0) is considered a field entry.

Figure 5-14: Conditions in Effluent Sample – Threespine Stickleback



5.2.3.2 Rainbow Trout

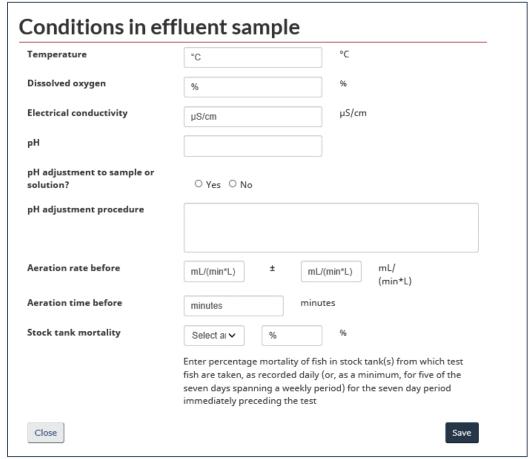
Information about the conditions in the effluent sample prior to the test is entered in the "Conditions in effluent sample" section for Rainbow Trout (Figure 5-15).

If there was adjustment to the pH, the adjustment procedure must be reported.

The "Stock tank mortality" is the cumulative mortality of the fish for the seven-day period preceding the test. The available flags for the "Stock tank mortality" are "blank" and ">".

Note: "Aeration rate before" and "Aeration time before" refer to aeration $\underline{\text{in}}$ $\underline{\text{addition to}}$ standard pre-aeration (30 minutes at 6.5 \pm 1 mL/min*L), as required per Section 4.3 of Reference Method EPS 1/RM/13. Please leave "Aeration rate before" and "Aeration time before" blank if no additional pre-aeration was conducted. A zero value (0) is considered a field entry.

Figure 5-15: Conditions in Effluent Sample – Rainbow Trout



5.2.3.3 Daphnia magna

Information about the conditions in the effluent sample prior to the test is entered in the "Conditions in effluent sample" section for *Daphnia magna* (Figure 5-16).

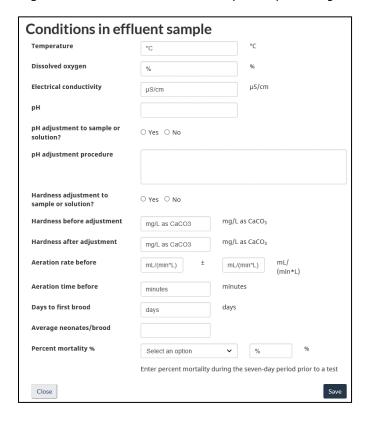
If there was an adjustment to pH, an indication of the procedure must be reported.

The "Hardness before adjustment" must be reported. In the case of adjustment to the hardness, the "Hardness after adjustment" must also be reported.

The available flags for the "Percent mortality" are "blank" and ">".

Note: Please leave "Aeration rate before" and "Aeration time before" blank if no pre-aeration occurred. A zero value (0) is considered a field entry. For additional information, please see Reference Method EPS 1/RM/14.

Figure 5-16: Conditions in Effluent Sample – Daphnia magna



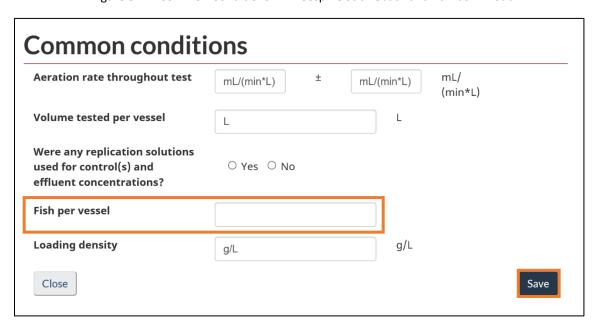
5.2.4 Common Conditions

5.2.4.1 Threespine Stickleback and Rainbow Trout

Common conditions for all samples are entered in the "Common conditions" section for Threespine Stickleback and Rainbow Trout (Figure 5-17).

The values reported within "Fish per vessel" will be used to automatically calculate the percent of mortality and percent of fish showing atypical/stressed behavior.

Figure 5-17: Common Conditions – Threespine Stickleback and Rainbow Trout

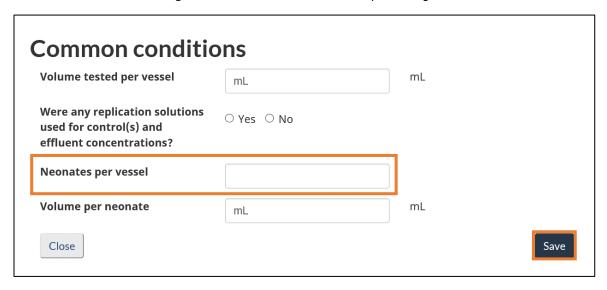


5.2.4.2 Daphnia magna

Common conditions for all samples are entered in the "Common conditions" section for *Daphnia magna* (Figure 5-18).

The values reported within "Neonates per vessel" will be used to automatically calculate the percent of mortality and percent of organisms showing atypical/stressed behavior.

Figure 5-18: Common Conditions – Daphnia magna



5.2.5 Conditions During Test

5.2.5.1 Threespine Stickleback and Rainbow Trout

By clicking <u>Add new condition</u> (Figure 5-19), a window will open where the test data may be entered for Threespine stickleback (Figure 5-20) and Rainbow Trout (Figure 5-21).

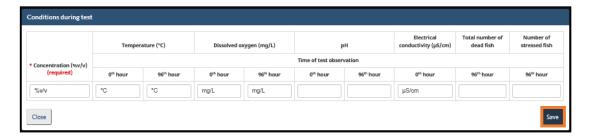
Conditions during test Concentration (%v/v) Total number of dead fish Number of stressed fish Action 100 3 **≣** -Add new condition Mortality and immobility information Mean number of fish in 96th hour Mean rate of fish in 96th hour (%) Concentration (%v/v) Stressed Dead Dead Stressed 3 40% 30% 100% Result (Pass/Fail) **Pass** Close

Figure 5-19: Conditions During Test – Threespine Stickleback And Rainbow Trout

Figure 5-20: Conditions During Test Data - Threespine Stickleback



Figure 5-21: Conditions During Test Data - Rainbow Trout



5.2.5.2 Daphnia magna

Conditions and observations for each sample during the test are entered in the "Conditions during test" section for *Daphnia magna*.

By clicking Add new condition (Figure 5-22), a window will open where the test data may be entered (Figure 5-23).

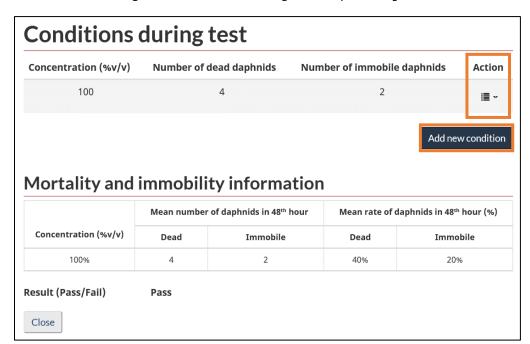
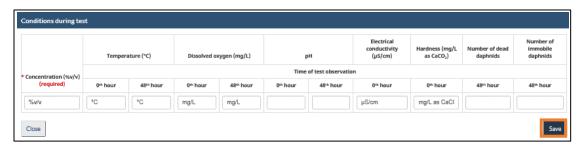


Figure 5-22: Conditions During Test - Daphnia magna

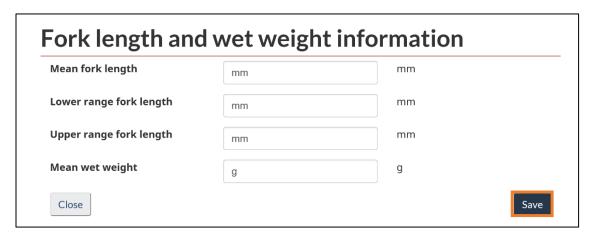
Figure 5-23: Conditions During Tests Data - Daphnia magna



5.2.6 Fork Length and wet weight information

Enter the mean **fork length** and **mean wet weight** of the control fish at the end of the test, in addition to the upper and lower for length ranges for Threespine Stickleback and Rainbow Trout in the "Fork length and wet weight information" section (Figure 5-24).

Figure 5-24: Fork Length and Wet Weight Information – Threespine Stickleback and Rainbow Trout



5.2.7 Median Lethal concentration results

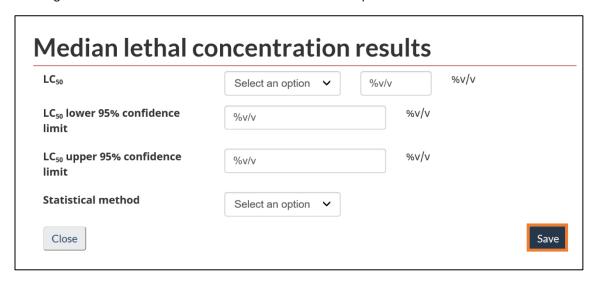
5.2.7.1 Threespine Stickleback and Rainbow Trout

Enter the **median lethal concentration** results which includes the LC₅₀ and the statistical method used to determine these values in addition to the confidence limits, in the "Median lethal concentration results" section (Figure 5-25).

The available flags for the LC_{50} are ">", "<" and "Non-lethal".

Options for the "Statistical method" include: "Binomial", "Log-Probit", "Moving Average" and "Spearman-Karber."

Figure 5-25: Median Lethal Concentration Results – Threespine Stickleback and Rainbow Trout



5.2.7.2 Daphnia magna

Enter the **median lethal concentration results** which includes the LC₅₀ and EC₅₀, in addition to the statistical method used to determine these values and their confidence limits, in the "Median lethal concentration results" section for *Daphnia magna* (Figure 5-26).

The available flags are: ">", "<", and "Non-lethal" for LC_{50} and ">", "<", and "No immobility" for EC_{50} .

Options for the "Statistical method" include: "Binomial", "Log-Probit", "Moving Average" and "Spearman-Karber."

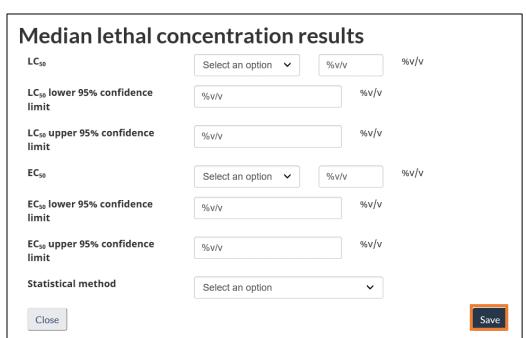


Figure 5-26: Median Lethal Concentration Results – Daphnia magna

5.2.8 Reference Toxicant Test Results

The reference toxicant test results used to determine the sensitivity of the batch of organisms tested must be reported in the "Reference toxicant test results" section (Figure 5-27).

Figure 5-27: Reference Toxicant Test Results - Threespine Stickleback and Rainbow Trout

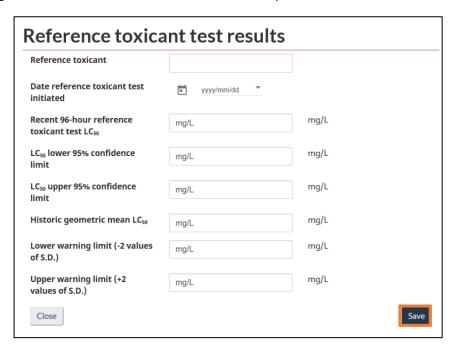
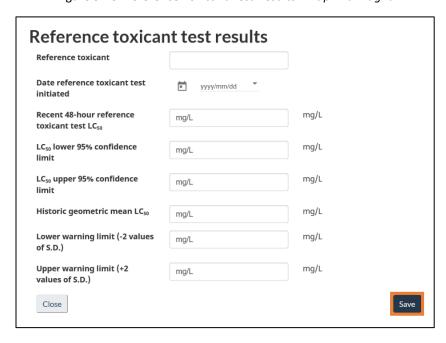


Figure 5-28: Reference Toxicant Test Results – Daphnia magna



5.3 Acute Lethality Test – Report Effluent Characterization for Acutely Lethal Effluent

To report **effluent characterization associated with an ALT**, click on the <u>Action</u> button for the given ALT and select <u>Effluent characterization resulting from failed acute lethality test</u> (Figure 5-29). A window showing a table with effluent characterizations associated to the given ALT report will open (Figure 5-30).

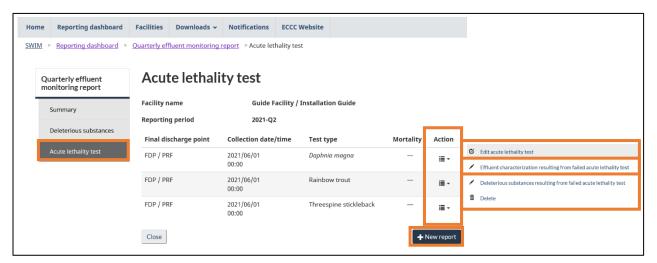
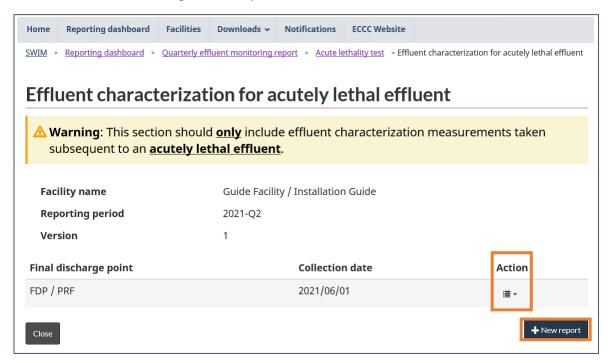


Figure 5-29: Acute Lethality Test Table - Report Effluent Characterization

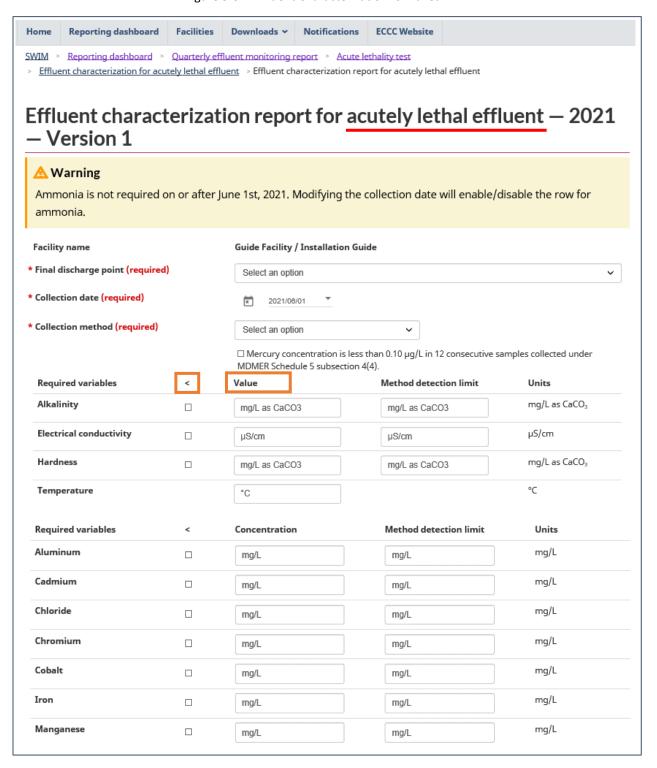
Clicking on <u>New report</u> will open the effluent characterization report where the results are submitted (Figure 5-31). On this page (Figure 5-31), the "FDP" and "collection method" must be selected. The "collection date" will default to the date of the sampling for the associated ALT but can be changed.

Figure 5-30: Report Effluent Characterization Table



Note: The date chosen for an Effluent Characterization submission impacts the availability of certain fields. Beginning June 1, 2021, ammonia and un-ionized ammonia requirements change and the system adjusts accordingly.

Figure 5-31: Effluent Characterization for Failed ALT



) /			h		
Mercury¹		mg/L		mg/L		mg/L		
Molybdenum		mg/L		mg/L		mg/L		
Nitrate		mg/L expressed as nitrog		mg/L expressed as nitrog		mg/L expressed as nitrogen (N)		
Phosphorus		mg/L as P		mg/L as P		mg/L as P		
Selenium		mg/L		mg/L		mg/L		
Sulphate		mg/L		mg/L		mg/L		
Thallium		mg/L		mg/L		mg/L		
Uranium		mg/L		mg/L		mg/L		
Optional variables	<	Concentration		Method detection limit		Units		
Calcium		mg/L		mg/L		mg/L		
Dissolved organic carbon		mg/L		mg/L		mg/L		
Fluoride		mg/L		mg/L		mg/L		
Magnesium		mg/L		mg/L		mg/L		
Potassium		mg/L		mg/L		mg/L		
Sodium		mg/L] [mg/L		mg/L		
Total organic carbon		mg/L		mg/L		mg/L		
Total thiosalts		mg/L		mg/L		mg/L		
Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report description of the methodologies used to conduct effluent characterization, and to report QA/QC measures that were implemented and the data related to those measures, or provide description in the textbox provided.								
Note		Add note						
• Note: If the facility fulfills the condition of subsection 4(4) of Schedule 5 of the MDMER, this field may be blank.								

Note: The "Note" field in Figure 5-31 is used to provide additional information on submitted data such as collection method, collection date, or aquatic environment. Additionally, adding a note in this text box is required to highlight modifications and changes made to these fields in amended reports.

5.4 Acute Lethality Test – Report Deleterious Substances

Click on the button in the <u>Action</u> column for the associated ALT entry and select <u>Deleterious</u> <u>substances resulting from failed acute lethality test</u> (Figure 5-32).

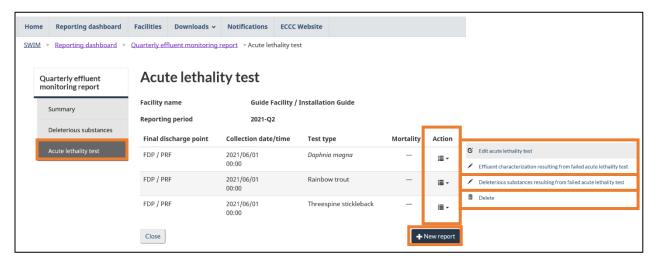


Figure 5-32: Acute Lethality Test Table - Report Deleterious Substances

A window showing a table with **deleterious substances** for each FDP associated to the given ALT report will open (Figure 5-33). When creating new reports, this table will say "No data is available in the table" and is populated manually.

Clicking <u>Add</u> will open the "deleterious substances" page where the data is submitted (Figure 5-34). The data is entered following the same steps as in Chapter <u>5.1.1.1 Deleterious Substances</u> <u>Report,</u> with the FDP automatically selected and locked. The "collection date" is set to the date of the collection of the ALT sample but can be changed. Once the "deleterious substances" page has been filled out, the associated record will populate the table.

When saving the entry, users will be redirected to the "Deleterious substances report" (as in Chapter <u>5.1.1 Deleterious Substances Report</u>). The value in the "Failed acute lethality test" column in the deleterious substances and pH data table will show "Yes", indicating that the new deleterious substances details are associated to an ALT regardless of the result of the ALT, and these new values will be calculated toward monthly mean averages in the "Deleterious substances report" (as in Chapter <u>5.1.1 Deleterious Substances Report</u>).

Figure 5-33: ALT Deleterious Substance Table

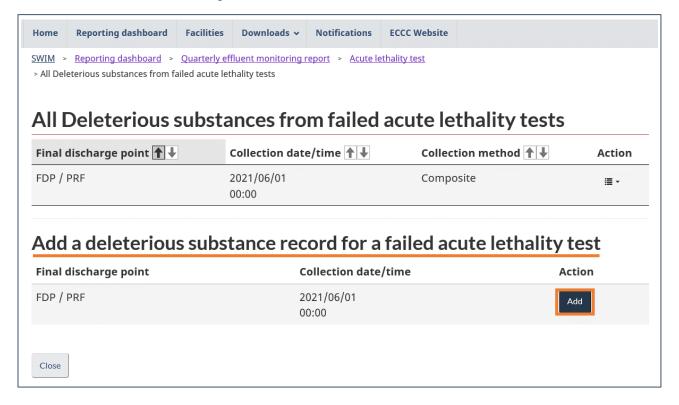
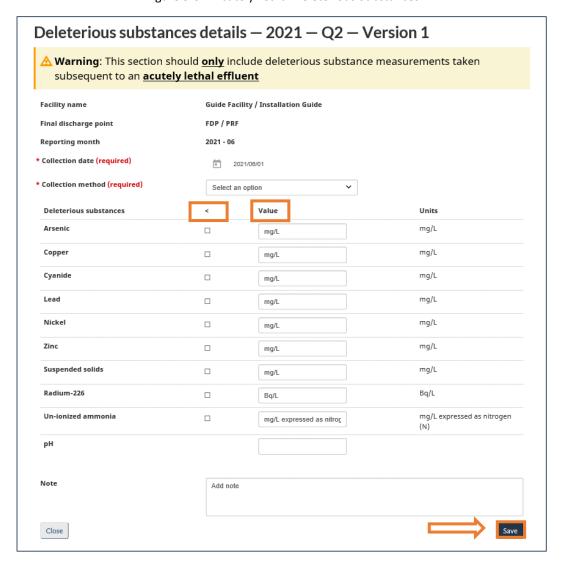


Figure 5-34: Acutely Lethal Deleterious Substances



6 Information Related to Effluent and Water Quality Monitoring Studies Report

The report includes subchapters for <u>6.1 Effluent characterization</u>, <u>6.2 Sublethal Toxicity Test LC₅₀</u>, <u>6.3 Sublethal Toxicity Test IC₂₅/EC₂₅</u>, <u>6.4 Water Quality Monitoring Data for Exposure/Reference Area and 6.5 Methodologies & QA/QC measures and data (e.g., lab certificates)</u>.

The "Summary" section (Figure 6-1) will show general information about the report, the associated facility and the parent company. A table showing the history of the report, including archived versions, can be viewed or printed by clicking on the button in the <u>Action</u> column.

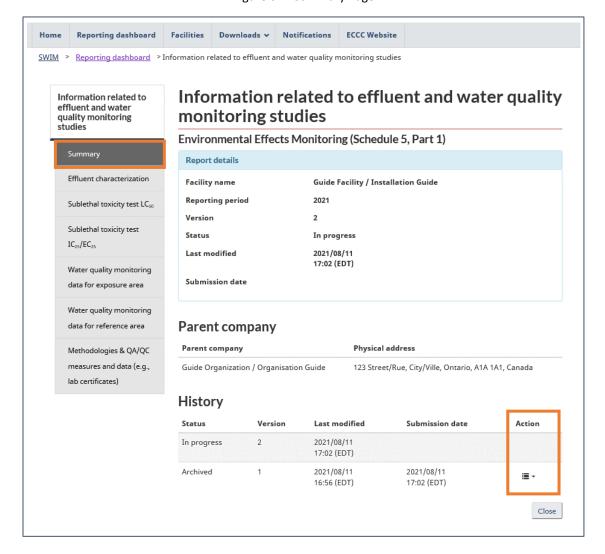


Figure 6-1: Summary Page

6.1 Effluent Characterization

The "Effluent characterization" section shows a table with the effluent characterization reports in addition to a table with the calculated mercury and selenium annual averages for each FDP (Figure 6-2).

To add an effluent characterization report, click on <u>New report</u>. This will open a new page where the data can be added (Figure 6-3). Saving an effluent characterization report will add an entry to the table where it can be edited or deleted by clicking on the button in the <u>Action</u> column for the associated entry.

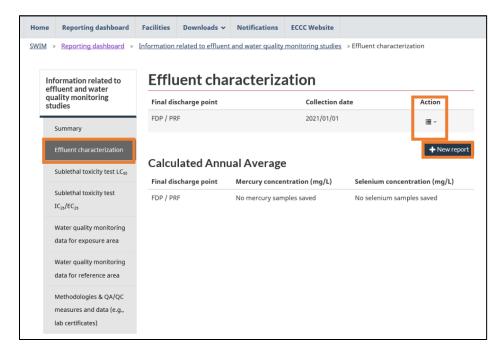


Figure 6-2: Effluent Characterization Table

On the effluent characterization report (Figure 6-3), the "FDP", "collection date" and "collection method" must be selected. The concentrations and method detection limits are reported for each variable. The variables are separated into two groups: required variables and optional variables groups.

If the concentration of mercury has been less than 0.10 μ g/L in 12 consecutive samples **and the box was checked**, the mercury fields can be left blank.

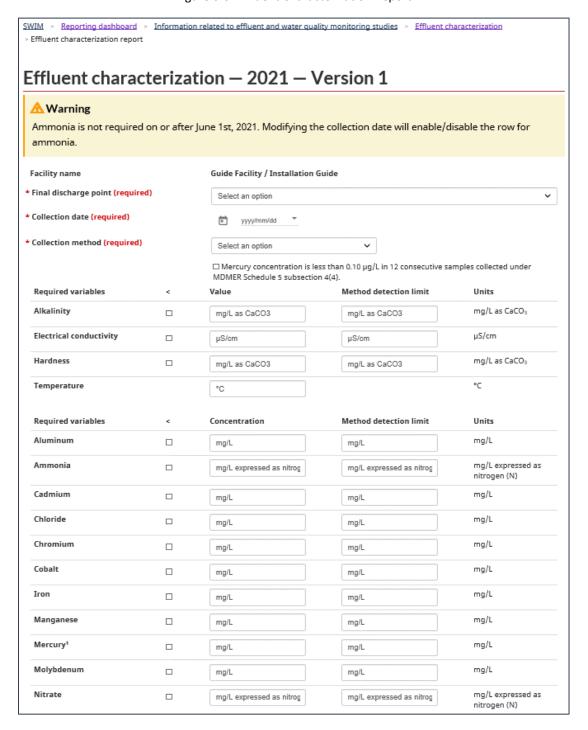
The user needs to enter a value in the "Value" field. Using the "<" box indicates that the analytical result is less than the method detection limit. If checked, one-half of the value put in the "method detection limit" column will be used in the calculation.

The methodologies used to conduct effluent characterization and the description of the QA/QC measures that were implemented, including the data related to the implementation of these measures, can be reported in the "Methodologies and QA/QC measures and data" section of

MERS. This allows for the uploading of files or, as text, in the box provided to this effect at the bottom of the effluent characterization report.

Note: The date chosen for an Effluent Characterization submission impacts the availability of certain fields. Beginning June 1, 2021, ammonia and un-ionized ammonia requirements change and the system adjusts accordingly.

Figure 6-3: Effluent Characterization Report



Phosphorus				mg/L as P		
		mg/L as P	mg/L as P			
Selenium		mg/L	mg/L	mg/L		
Sulphate		mg/L	mg/L	mg/L		
Thallium		mg/L	mg/L	mg/L		
Uranium		mg/L	mg/L	mg/L		
Optional variables	<	Concentration	Method detection limit	Units		
Calcium		mg/L	mg/L	mg/L		
Dissolved organic carbon		mg/L	mg/L	mg/L		
Fluoride		mg/L	mg/L	mg/L		
Magnesium		mg/L	mg/L	mg/L		
Potassium		mg/L	mg/L	mg/L		
Sodium		mg/L	mg/L	mg/L		
Total organic carbon		mg/L	mg/L	mg/L		
Total thiosalts		mg/L	mg/L	mg/L		
Please refer to the Methodologi measures and data (e.g., lab cer section in MERS to report descri methodologies used to conduct characterization, and to report measures that were implement data related to those measures description in the textbox provi	rtificates) ption of the effluent QA/QC ed and the , or provide					
Note		Add note				
1 Note: If the facility fulfills the	condition of sub	osection 4(4) of Schedule 5 of th	ne MDMER, this field may be blank.			
Close				Sav		

Note: The text boxes found on each reporting page of the "Information related to effluent and water quality monitoring studies" section of MERS are still available as an alternative to file uploads to submit a description of the methodologies used and QA/QC measures implemented, including the related data, as required under the MDMER Schedule 5, paragraphs 8(f) and (g).

Note: The "Note" box in Figure 6-3 is used to provide additional information on submitted data such as FDP, collection date, or collection time. Additionally, this text box is required to highlight modifications and changes made to these fields in amended reports.

6.2 Sublethal Toxicity Test LC₅₀

The "Sublethal toxicity test LC_{50} " section will show a table with all reported LC_{50} entries (Figure 6-4). Clicking <u>New report</u> will open the Sublethal toxicity test LC_{50} report page where the data can be input (Figure 6-5). Saving a report will add an entry to the table. The user may add additional entries by clicking on the <u>New report</u> button.

Existing entries can be edited or deleted by clicking on the button in the <u>Action</u> column for the associated entry.

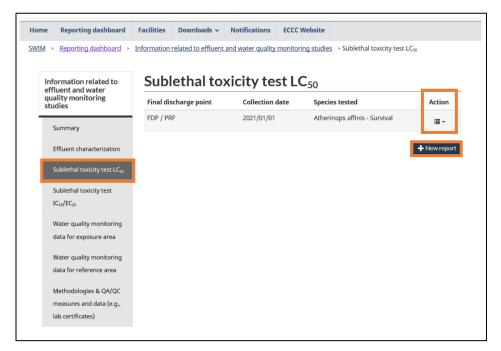


Figure 6-4: Sublethal Toxicity Test LC₅₀

On the report page, report the required fields by selecting the "FDP", "collection date", "collection method", "aquatic environment" and "species tested".

The available $\underline{LC_{50}}$ flags are "=" and ">". If the "=" flag is selected, then the confidence limits are required.

You can also report the rationale for the selected species with respect to deleterious substance loading and the manner in which the effluent mixes with the exposure.

Note: If validity criteria for the test were not met, rendering the sublethal toxicity test results invalid, then the "=" flag must be selected, and zeroes (0) must be added to the required data fields for LC50, IC25 or EC25 and the confidence limits. A comment must also be added to the "Note" section to indicate which validity criteria were not met.

Facilities Downloads → Notifications ECCC Website Reporting dashboard SWIM > Reporting dashboard > Information related to effluent and water quality monitoring studies > Sublethal toxicity test LC₅₀ > Sublethal toxicity test LC50 report Sublethal toxicity test LC₅₀ - 2021 - Version 1 Guide Facility / Installation Guide * Final discharge point (required) Select an option * Collection date (required) yyyy/mm/dd * Collection method (required) Select an option * Aquatic environment (required) Select an option * Species tested (required) Select an option Test start date yyyy/mm/dd * Consultant laboratory name * LC₅₀ flag (required) Select an option * LC₅₀ concentration (required) * LC₅₀ lower 95% confidence limit (conditionally required) * LC₅₀ upper 95% confidence limit (conditionally required) For the purpose of SLT, please indicate which data were used for determining the final discharge point that has potentially the most adverse environmental impact on Please refer to the Methodologies & QA/QC measures and data (e.g., lab certificates) section in MERS to report QA/QC measures that were implemented and the data related to the implementation of those measures, or provide description in textbox provided Note Add note

Figure 6-5: Sublethal Toxicity Test LC₅₀ Report

Note: The note box in Figure 6-5 is a required field when amending a report that is used to highlight modifications and changes made to the report. This box is also available as an optional field when creating a report that is used to provide additional information on submitted data, if needed.

Note: The text boxes found on each reporting page of the "Information related to effluent and water quality monitoring studies" section of MERS are always available as an alternative to file uploads to submit a description of the methodologies used and QA/QC measures implemented, including the related data, as required under the MDMER Schedule 5, paragraphs 8(f) and (g).

6.3 Sublethal Toxicity Test IC₂₅/EC₂₅

The "Sublethal toxicity test IC_{25}/EC_{25} " section shows a table with all the submitted IC_{25}/EC_{25} entries (Figure 6-6). Clicking on <u>New report</u> will open the sublethal toxicity test IC_{25}/EC_{25} report page, where the results can be submitted (Figure 6-7). Saving a report will add an entry to the table. You may add as many entries as required by clicking on the <u>New report</u> button.

Facilities Downloads → Notifications Reporting dashboard SWIM > Reporting dashboard > Information related to effluent and water quality monitoring studies > Sublethal toxicity test IC₂₅/EC₂₅ Sublethal toxicity test IC₂₅/EC₂₅ Information related to effluent and water quality monitoring studies Final discharge point Collection date Action FDP / PRF 2021/01/01 Arbacia punctulata - Reproduction **≡** -+ New report Effluent characterization Sublethal toxicity test LC₅₀ Water quality monitoring data for exposure area Methodologies & QA/QC measures and data (e.g., lab certificates)

Figure 6-6: Sublethal Toxicity Test, IC25/EC25

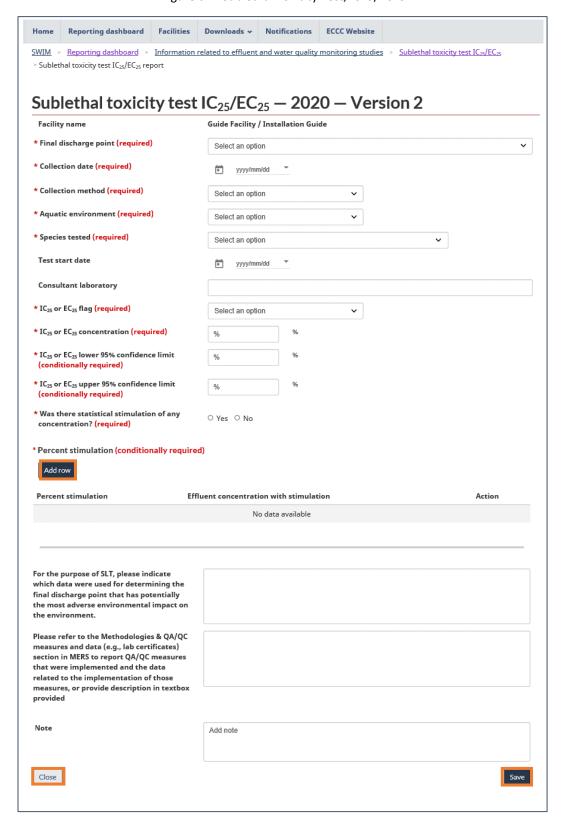
On the report page, enter the required fields by selecting the "FDP", the "collection date", "collection method", "aquatic environment" and "species tested". The available IC₂₅ or EC₂₅ flags are "=" and ">". In the case where the "=" flag is selected, then the confidence limits are required.

In the case where statistical stimulation was indicated as "Yes", then a "percent stimulation" entry must be added. This is accomplished by clicking on the <u>Add row</u> button which opens a window where the percent stimulation and effluent concentration with stimulation are added. Existing stimulation entries can be edited or deleted by clicking on the button in the <u>Action</u> column for the associated entry.

Existing entries can be edited or deleted by clicking on the button in the <u>Action</u> column for the associated entry.

Note: If validity criteria for the test were not met, rendering the sublethal toxicity test results invalid, then the "=" flag would be selected, zeroes (0) would be added to the required data fields for LC₅₀, IC₂₅ or EC₂₅ and the confidence limits. A comment would be added to the "Note" section to indicate which validity criteria were not met.

Figure 6-7: Sublethal Toxicity Test, IC25/EC25



Note: The text boxes found on each reporting page of the "Information related to effluent and water quality monitoring studies" section of MERS are still available as an alternative to file uploads to submit a description of the methodologies used and QA/QC measures implemented, including the related data, as required under the MDMER Schedule 5, paragraphs 8(f) and (g).

Note: The note box in Figure 6-7 is a required field when amending a report that is used to highlight modifications and changes made to the report. This box is also available as an optional field when creating a report that is used to provide additional information on submitted data, if needed.

6.4 Water Quality Monitoring Data for Exposure/Reference Area

The navigation pane options are the same for both the **exposure and reference areas**; the example shown will be for the Exposure area and is identical to the Reference area.

The "water quality data" section will display a table showing all the submitted entries (Figure 6-8). Clicking on <u>New report</u> will open the water quality monitoring data report where the information can be submitted (Figure 6-9). Saving a report will add an entry to the table. The user may add as many entries as required by clicking on the <u>New report</u> button.

Existing entries can be edited or deleted by clicking on the button in the <u>Action</u> column for the associated entry.

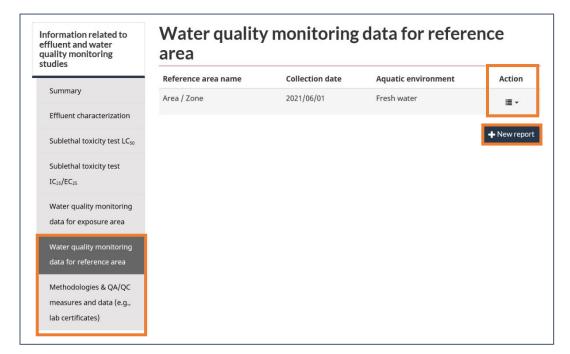


Figure 6-8: Water Quality Monitoring Data for Exposure/Reference Area

Select the area, collection date, collection method and aquatic environment. If the concentration of mercury has been less than 0.10 μ g/L in 12 consecutive samples and **the box was checked**, the mercury fields can be left blank.

Note: Selecting the Exposure/Reference area in Figure 6-9 will show all the FDPs linked to the exposure area within a table titled "Final discharge point".

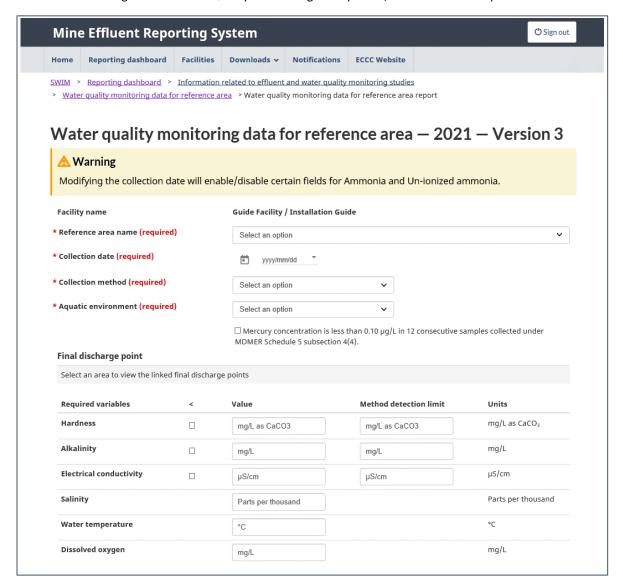
The variables are separated into three required variable groups and one optional variable group. Report the values, concentrations, and method detection limits as applicable.

The user needs to enter a value in the "Value" field. Using the "<" box indicates that the analytical result is less than the method detection limit provided by the laboratory.

At the bottom of the page, describe the QA/QC measures implemented and the related data in addition to the methodologies used to conduct water quality monitoring.

Note: The collection date for water quality monitoring data impacts the availability of certain fields. Beginning June 1, 2021, ammonia and unionized ammonia requirements change and the system adjusts accordingly.

Figure 6-9: Water Quality Monitoring for Exposure/Reference Area Report



Required variables	<	Concentration	Method detection limit	Units
Aluminum		mg/L	mg/L	mg/L
Ammonia 6		mg/L expressed as nitrog	mg/L expressed as nitrog	mg/L expressed as nitrogen (N)
Un-ionized ammonia 🕄		mg/L expressed as nitrog		mg/L expressed as nitrogen (N)
Cadmium		mg/L	mg/L	mg/L
Chloride		mg/L	mg/L	mg/L
Chromium		mg/L	mg/L	mg/L
Cobalt		mg/L	mg/L	mg/L
Iron		mg/L	mg/L	mg/L
Manganese		mg/L	mg/L	mg/L
Mercury ¹		mg/L	mg/L	mg/L
Molybdenum		mg/L	mg/L	mg/L
Nitrate		mg/L expressed as nitrog	mg/L expressed as nitrog	mg/L expressed as nitrogen (N)
Phosphorus		mg/L as P	mg/L as P	mg/L as P
Selenium		mg/L	mg/L	mg/L
Sulphate		mg/L	mg/L	mg/L
Thallium		mg/L	mg/L	mg/L
Uranium		mg/L	mg/L	mg/L

Required variables	<	Concentration	Method detection limit	Units
Arsenic		mg/L	mg/L	mg/L
Copper		mg/L	mg/L	mg/L
Cyanide		mg/L	mg/L	mg/L
Lead		mg/L	mg/L	mg/L
Nickel		mg/L	mg/L	mg/L
Zinc		mg/L	mg/L	mg/L
Total suspended solids		mg/L	mg/L	mg/L
Radium 226		Bq/L	Bq/L	Bq/L
рН				
0		Concentration	Method detection limit	Units
Optional variables	<	Concentration	Method detection limit	
Calcium		mg/L	mg/L	mg/L
Dissolved organic carbon		mg/L	mg/L	mg/L
Fluoride		mg/L	mg/L	mg/L
Magnesium		mg/L	mg/L	mg/L
Potassium		mg/L	mg/L	mg/L
Sodium		mg/L	mg/L	mg/L
Total organic carbon		mg/L	mg/L	mg/L
Total thiosalts		mg/L	mg/L	mg/L
Water depth		m		m
tease refer to the Methodologic teasures and data (e.g., lab certiction in MERS to report QA/QC teat were implemented and the lated to the implementation of teasures, or provide description rovided. The sease refer to the Methodologic teasures and data (e.g., lab certiction in MERS to report description	tificates) measures data f those n in textbox es & QA/QC tificates) otion of the			
ote		Add note		
Note: If the facility fulfills the c	ondition of sul	bsection 4(4) of Schedule 5 of th	ne MDMER, this field may be blank	
¹ Note: If the facility fulfills the c	ondition of sul	bsection 4(4) of Schedule 5 of th	ne MDMER, this field may be blank.	

Note: The text boxes found on each reporting page of the "Information related to effluent and water quality monitoring studies" section of MERS are still available as an alternative to file uploads to submit a description of the methodologies used and QA/QC measures implemented, including the related data, as required under the MDMER Schedule 5, paragraphs 8(f) and (g).

Note: The note box in Figure 6-9 is a required field when amending a report that is used to highlight modifications and changes made to the report. This box is also available as an optional field when creating a report that is used to provide additional information on submitted data, if needed.

6.5 Methodologies & QA/QC measures and data (e.g., lab certificates)

The "Methodologies & QA/QC measures and data" section is where files related to the requirements of MDMER Schedule 5, paragraphs 8(f) and 8(g) are to be uploaded. Files such as lab certificates for information submitted in previous sections of "Information Related to Effluent and Water Quality Monitoring Studies" which includes "Effluent characterization", "Sublethal toxicity test LC₅₀ and IC₂₅/EC₂₅" and "Water quality monitoring data for exposure/reference areas".

By clicking <u>Browse...</u>, selecting a file on their devices and then clicking <u>Upload</u>, users can upload multiple files related to each of these different requirements. Files of any file type and up to 25 megabytes (MB) can be uploaded within a single click of the <u>Upload</u> button. This process of clicking the <u>Upload</u> button can be repeated to upload multiple groups of files. An individual file cannot be larger than 25 MB.

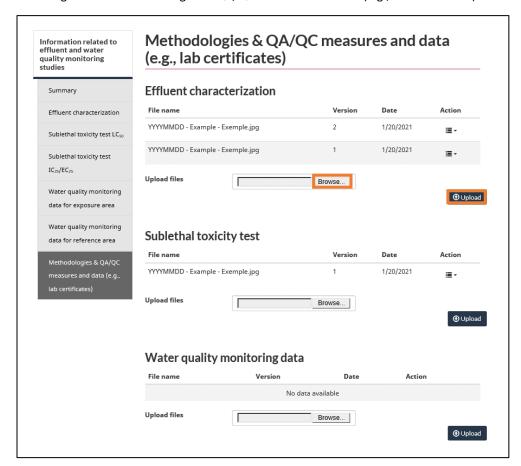


Figure 6-10: Methodologies & QA/QC measures and data (e.g., lab certificates)

In the <u>Action</u> column, you can delete files uploaded in the current version being edited. Previously uploaded and submitted files cannot be deleted. Through the <u>Action</u> column, all submitted files can also be downloaded for reference.

Figure 6-11: Methodologies & QA/QC measures and data (e.g., lab certificates) Action Options



7 Annual Effluent Monitoring Report

Within this report, a summary of the effluent monitoring results for each FDP is submitted.

The **annual report** "Summary" section (Figure 7-1) will show the reporting year for the selected facility, version number, and other information, such as the parent company. At the bottom of the page, a table showing the report history will have entries for the current and archived versions of the report and their statuses. Archived reports can be viewed or printed by clicking on the button in the Action column for the associated report version.

Note: All quarterly reports for the year must be submitted before submitting the annual report.

The annual report pulls information provided from the quarterly reports. Therefore, the quarterly reports should be submitted prior to the submission of the annual report.

If any of the quarterly reports are amended and then re-submitted **prior** to the submission of the annual report, these changes will automatically be reflected in the annual report.

If amendments are made to quarterly reports **after** the submission of the annual report, the annual report must be amended and resubmitted (Chapter <u>4.1 Amending, Deleting, and Submitting Reports</u>). This resubmission ensures that the annual report contains up-to-date information and matches the changes made to the quarterly reports.

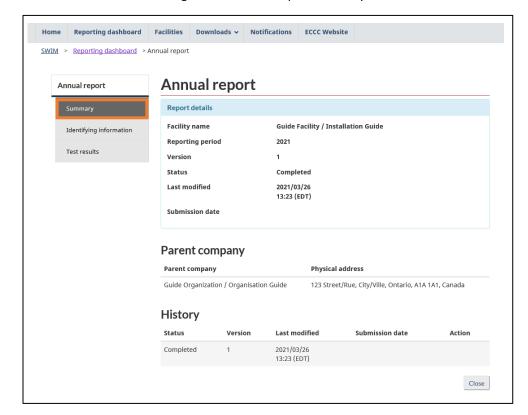


Figure 7-1: Annual Report Summary

In the "Identifying information" section (Figure 7-2), information about the facility is shown and you must submit identifying information about the operator.

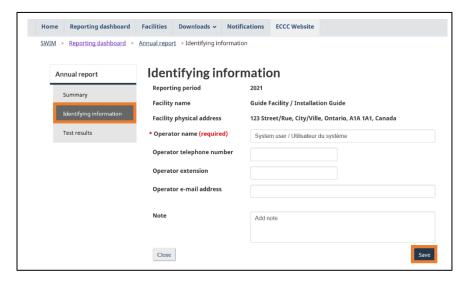
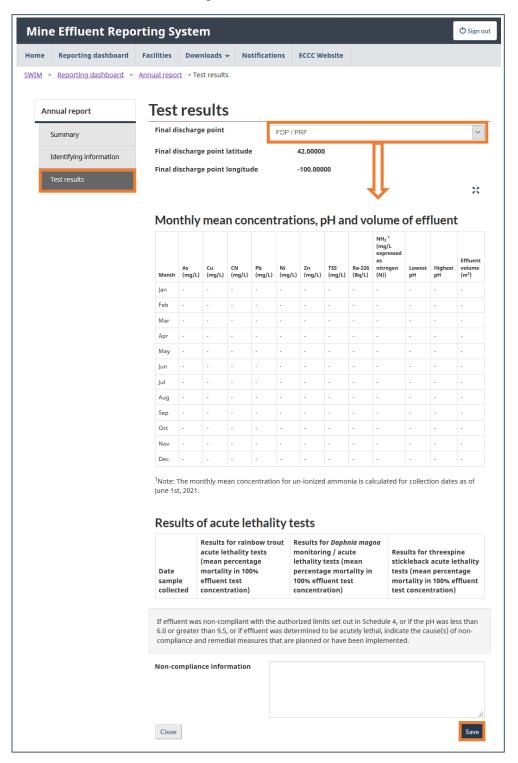


Figure 7-2: Identifying information

In the "Test results" section (Figure 7-3), tables showing the monthly mean concentrations calculated by the system and ALT results from **submitted** effluent monitoring reports, are shown for the selected FDP. Clicking on the \$\frac{1}{2}\$ (expand) icon will open the table in a larger window for viewing the data.

For the annual report to be completed, the page must be saved **for each FDP** in order to confirm the information and add any non-compliance information as required.

Figure 7-3: Test Results



8 Notification Dashboard

MERS allows users to create and submit **notifications or information to the Minister of the Environment**. This information is accessible through the "Notification Dashboard" in the **Notifications** tab. Please consult Table 8-1 for a list of notifications or information to be submitted through the "Notification Dashboard".

The "Notification Dashboard" (Figure 8-1) shows the list of created notifications and provides the owner or operator of a mine with the option to create new notifications. Several actions are available by clicking on the button in the <u>Action</u> column for each notification. The available actions depend on the status of the notification and are shown in Table 8-2.

The filtering criteria can be used to find previously created notifications. Checking the <u>Keep</u> Search Results box retains the search results upon returning to the "Notification Dashboard".

Note: Notifications previously sent to the Minister of the Environment, via the Regional Director of Environmental Protection Operations Directorate (EPOD), are now submitted through MERS.

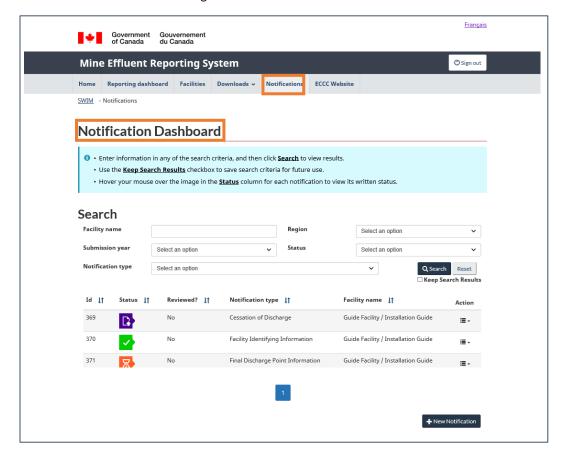
Table 8-1: MDMER Notifications to be submitted via MERS

Information to be submitted	Recipient of information
Section 8 – Identifying information Sections 9 & 10 – Final Discharge Points Sections 13 & 16 – Reduced frequency notification Section 26 – End of Commercial Operation Notice Section 32 – Recognized Closed Mines Section 33 – RCM Identification information SCHEDULE 5, Section 11, 14 & 19 – Inability to follow the study design SCHEDULE 5, Section 17 – Cessation of discharge	Minister of the Environment, via MERS, https://ec.ss.ec.gc.ca/

Table 8-2: Notification Status and available actions

Status	Icon	Available Actions
In-Progress		Edit
	X	Delete
		Print Preview
Completed		Edit
		Submit
	L	Delete
		Print preview
Submitted		View
		Print Preview

Figure 8-1: Notification Dashboard



8.1 Creating Notifications

A new notification is created by clicking on <u>New Notification</u> button (Figure 8-2) located at the bottom of the "Notification Dashboard", then selecting the specific notification required from the list of notification types on screen (Figure 8-3).

Once a specific notification is selected, you must select the associated facility and/or FDP (Figure 8-4; Figure 8-5).

Note: Notifications pertaining to FDPs require an additional selection.

New FDPs must be first added to the "Facilities" tab before a notification can be submitted. Please refer to Chapter 3.4 Final discharge point information.

Note: Modifications to information within the "Facilities" tab (e.g., operating status dates) must be completed prior to submitting a notification.

Figure 8-2: Creating New Notification

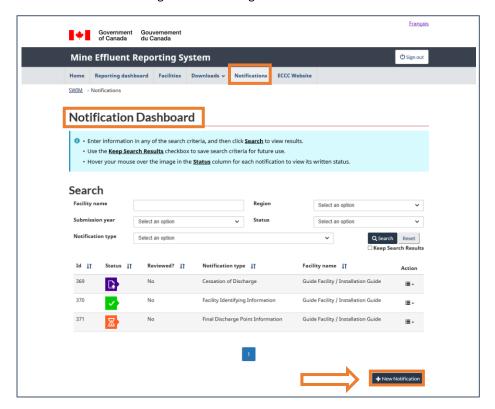


Figure 8-3: Notification List

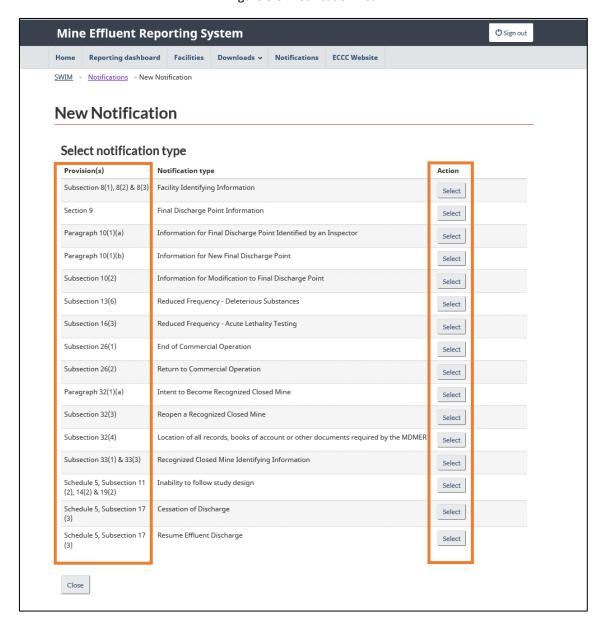


Figure 8-4: Notification Facility Selection

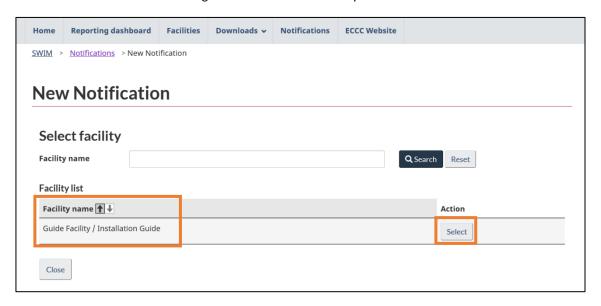
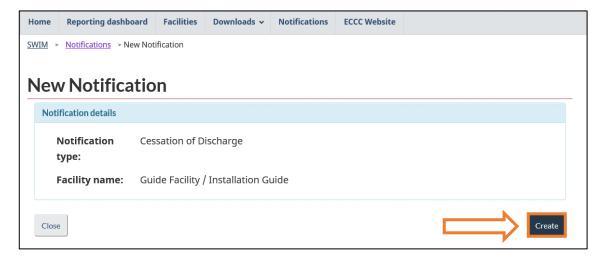


Figure 8-5: Creating New Notifications



8.2 Completing & Saving Notifications

Once a notification has been created, the user will need to review and provide the necessary information to satisfy the requirements (Figure 8-6). Once the information has been entered, the notification must be saved by clicking the <u>Save</u> button located at the bottom right of the page.

Selecting Dates: Certain notifications require the user to input a date (Figure 8-6) relating to the details in the notification. The notifications relating to the <u>end of commercial operation</u>, <u>return to commercial operation</u>, <u>cessation of discharge</u>, <u>resuming discharge</u>, <u>intention to become a recognized closed mine</u>, and <u>date subject to MDMER</u> have dates which are linked to the facility operating statuses within the **Facilities** tab (Figure 3-5). These dates will only appear if they have been added to the **Facilities** tab; for more information, please consult Chapter <u>3.1 Facility Information</u>.

Adding Files/Notes: To add files, click <u>Browse</u> and then select the file. Files which have been uploaded and saved will be visible in a table located above the <u>Save</u> button (Figure 8-7). To delete/download files that have been added to the notification, click on the <u>Action</u> icon. A note is required when completing a notification; within the textbox, please provide a short description of uploaded documents and any further information that would be beneficial to reviewers. You cannot format the note (e.g., there are no options for bolding or italicizing, and using the enter key to space a notification is not recognized by the system).

Saving: Clicking <u>Save</u> will return the user to the "Notification Dashboard", saving the notification data, notes, and uploaded documents.

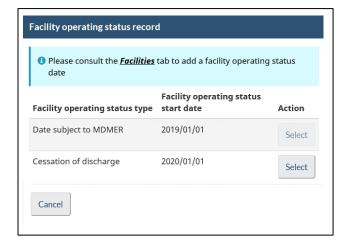
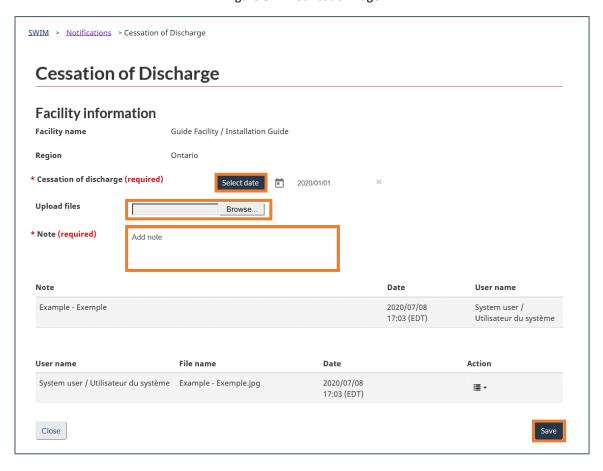


Figure 8-6: Notification Date Select

Figure 8-7: Notification Page



8.3 Editing, Submitting, and Deleting Notifications

To **edit, submit, or delete** a notification, you must return to the "Notification Dashboard" and click on the <u>Action</u> item on the right-hand side of the page (Figure 8-8). A full list of actions for each notification status is available in Table 8-2.

Notifications that are In-Progress or Completed can be **edited** anytime prior to submission.

Selecting <u>Submit</u> for a notification will open the submission confirmation page (Figure 8-9). Please note that only notifications marked completed can be submitted. Once submitted, notifications can be viewed/printed using the same <u>Action</u> button mentioned above, on the right-hand side of the page.

Deleting a notification will remove it from the dashboard entirely. Notifications which have been submitted **will not** have the option to be deleted, as seen in Table 8-2.

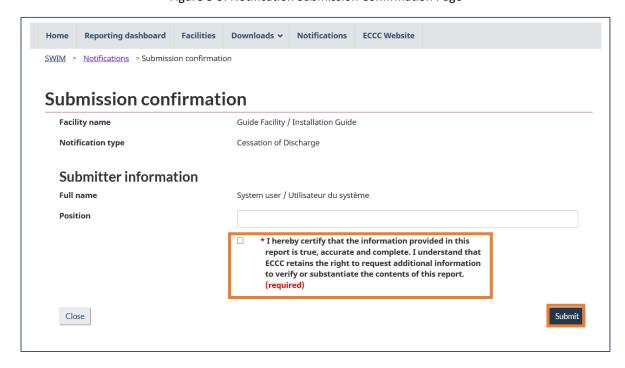
After submission, you will receive an email indicating that the notification has been submitted in MERS. Once the notification has been reviewed by ECCC, you will receive an email stating that an update is available.

After review, the new status of the notification will be available in the <u>Status</u> and <u>Reviewed?</u> columns in the" Notification Dashboard" (Figure 8-8). Following review, the notification would remain in "submitted" status if no additional information is required. If, following the review, it is determined that additional information is required, the notification will return to the inprogress status. The facility user would action the comments found in the "Note" portion of the notification as applicable (Figure 8-7), saving any updates to the notification with a descriptive note in the "Note" field. The "Note" portion of the notification will be the location of the history of correspondences and exchanges as necessary (Figure 8-7). The user would then resubmit the notification for ECCC review. Note that this verification process will continue in MERS until no additional information is required.

Français Government Gouvernement of Canada du Canada **Mine Effluent Reporting System** () Sign out Reporting dashboard Facilities Downloads Notifications ECCC Website Notification Dashboard 1 • Enter information in any of the search criteria, and then click Search to view results Use the Keep Search Results checkbox to save search criteria for future use Hover your mouse over the image in the <u>Status</u> column for each notification to view its written status. Search Facility name Select an option Region Select an option Select an option Notification type 369 Guide Facility / Installation Guide 370 No Guide Facility / Installation Guide ≣-371 Guide Facility / Installation Guide

Figure 8-8: Editing, Submitting, and Deleting Notifications

Figure 8-9: Notification Submission Confirmation Page



9 Downloads

The **Downloads** tab is located to the right of the **Facilities** tab. This tab of MERS will allow users to download submitted information, with the option to filter by quarter and year (Figure 9-1).

The **Downloads** tab is composed of four sections; Regulatory information (Figure 9-2), Environmental Effects Monitoring (EEM) data (Figure 9-3), Acute lethality test data (Figure 9-4), and Organization data (Figure 9-5). Table 9-1 below outlines the relevant sections of this guide where the information is extracted for the downloads.

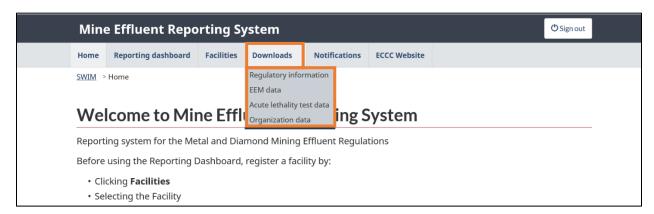


Figure 9-1: MERS Downloads Tab Location

Table 9-1: MERS Download Organization

Regulatory Information		
FDP Monthly Summary	Figure 5-3: Deleterious Substances Report	
Deleterious Substances Report	Figure 5-5: Deleterious Substances Details	
EEM Data		
Effluent Characterization	Figure 6-3: Effluent Characterization Report	
Water Quality Monitoring Reference	Figure 6-9: Water Quality Monitoring for	
,	Exposure/Reference Area Report	
Water Quality Monitoring Exposure	Figure 6-9: Water Quality Monitoring for	
	Exposure/Reference Area Report	
Sub lethal Toxicity Test LC ₅₀	Figure 6-5: Sublethal Toxicity Test LC50 Report	
Sub lethal Toxicity Test EC ₂₅ or IC ₂₅	Figure 6-7: Sublethal Toxicity Test, IC25/EC25 Results	
Acute Lethality Test Data		
Acute Lethality Test and Effluent	Figure 5-31: Effluent Characterization for Failed ALT	
Characterization		
Rainbow Trout - Effluent, Test Facility,	Figure 5-10: Effluent Information – Rainbow Trout and	
Conditions and Reference Toxicant	Daphnia magna	
Test Results	Figure 5-12: Test Facility Information – Rainbow Trout	
	Figure 5-15: Conditions in Effluent Sample – Rainbow Trout	
	Figure 5-17: Common Conditions – Threespine Stickleback	
	and Rainbow Trout	
	Figure 5-27: Reference Toxicant Test Results	
Rainbow Trout - Conditions During	Figure 5-21: Conditions During Test Data - Rainbow Trout	
Test	Figure 5-24: Fork Length and Wet Weight Information –	
	Threespine Stickleback and Rainbow Trout	
Rainbow Trout - Mortality and	Figure 5-19: Conditions During Test – Threespine Stickleback	
Immobility Information	And Rainbow Trout	
Rainbow Trout - Median Lethal	Figure 5-25: Median Lethal Concentration Results –	
Concentration Results	Threespine Stickleback and Rainbow Trout	
Daphnia magna - Effluent, Test	Figure 5-10: Effluent Information – Rainbow Trout and	
Facility, Conditions and Reference	Daphnia magna	
Toxicant Test Results	Figure 5-13: Test Facility Information – Daphnia magna	
	Figure 5-16: Conditions in Effluent Sample – <i>Daphnia magna</i>	
Dankain wasana Candikiana Danian	Figure 5-27: Reference Toxicant Test Results	
Daphnia magna - Conditions During Test	Figure 5-23: Conditions During Tests Data - Daphnia magna	
Daphnia magna - Mortality and	Figure 5-22: Conditions During Test – Daphnia magna	
Immobility Information		
Daphnia magna - Median Lethal	Figure 5-26: Median Lethal Concentration Results – Daphnia	
Concentration Results	magna	
Threespine Stickleback - Effluent, Test	Figure 5-9: Effluent Information – Threespine Stickleback	
Facility, Conditions and Reference	Figure 5-11: Test Facility Information – Threespine	
Toxicant Test Results	Stickleback	
	Figure 5-14: Conditions in Effluent Sample – Threespine	
	Stickleback	
	Figure 5-27: Reference Toxicant Test Results	

Threespine Stickleback - Conditions	Figure 5-20: Conditions During Test Data - Threespine	
During Test	Stickleback	
	Figure 5-24: Fork Length and Wet Weight Information –	
	Threespine Stickleback and Rainbow Trout	
Threespine Stickleback - Mortality and	Figure 5-19: Conditions During Test – Threespine Stickleback	
Immobility Information	And Rainbow Trout	
Threespine Stickleback - Median	Figure 5-25: Median Lethal Concentration Results –	
Lethal Concentration Results	Threespine Stickleback and Rainbow Trout	
Organization Data		
Notification List	Figure 8-1: Notification Dashboard	

Figure 9-2: Regulatory Information Download



Figure 9-3: EEM Data Download

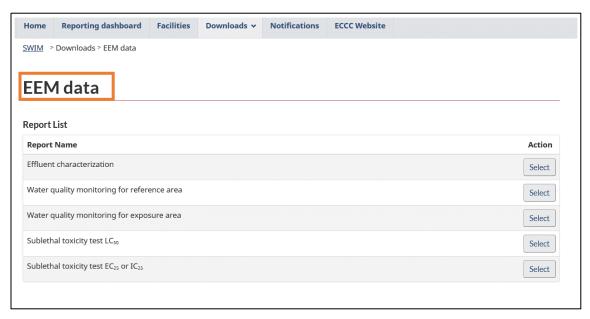


Figure 9-4: Bioassay Data Download

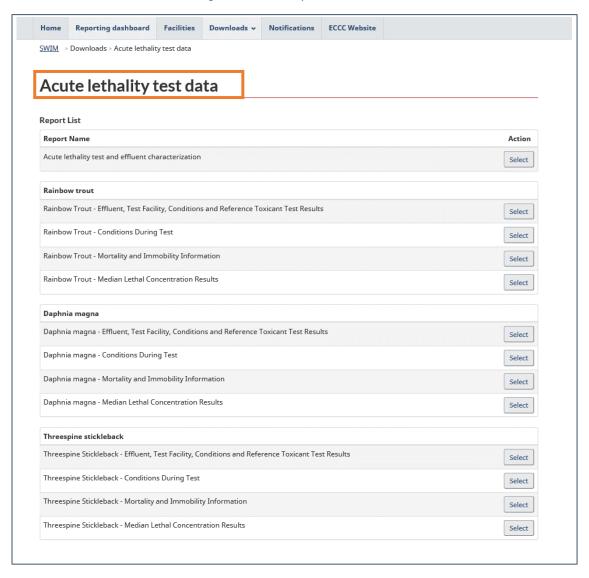


Figure 9-5: Organization Data Download



9.1 Viewing and Filtering Downloads

You can download data in the **Downloads** tab, across facilities that users have been granted access to in MERS. Downloads under the "Regulatory information" and "Acute Lethality Test Data" sections can be filtered by region, quarter and year (Figure 9-6). Downloads which are under "**EEM data"** can be filtered by region and year (Figure 9-7). The <u>View</u> button allows the user to view the data on screen; otherwise, clicking <u>Export to Excel</u> allows the user to download the file in ".xlsx" format.

Figure 9-6: Regulatory Information Download Filtering

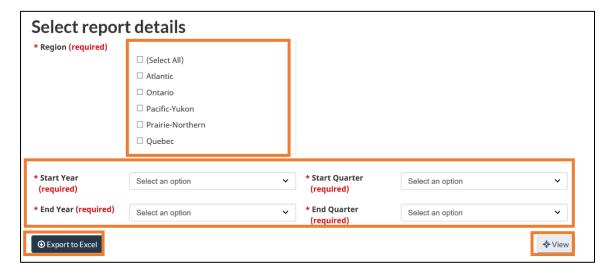


Figure 9-7: EEM Download Filtering

