South Coast Air Quality Management District
Annual Emissions Reporting
(AER)

Help and Support Manual
for the
AER Reporting Tool

Revised May 2023

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INTRODUCTION

The Annual Emissions Reporting (AER) Program provides facilities that are subject to Rule 301(e) with a new computer tool (AER Reporting Tool) to estimate emissions for criteria pollutants (VOC, NOx, SOx, CO and PM), Specific Organic Compounds (HFC & HCFC) and toxic air contaminants/ozone depleting compounds (TAC/ODC) and prepare the annual emission reports.

AER Reporting Tool Features

Work at your own pace - Users can stop a session anytime. Entered and saved data is automatically stored and will remain in the South Coast AQMD's central database. Users will be logged out automatically if a session is inactive for a long period.

Security - Only registered users will be able to use the AER Reporting Tool. Facility ID# and PIN Code are required to access facility information.

Flexibility - The AER Reporting Tool allows a single user to access multiple facilities with separate ID#'s and PIN codes. Likewise, multiple users can concurrently work on different sections of an emission report for a single facility.

Ease of Access - AER Reporting Tool is a web-based program that allows users access to the reporting process using a personal computer from anywhere with an internet connection. Please check "Internet Browser Requirements" below for compatibility.

Ease of Navigation - Users can navigate to different sections of an emissions report and check the reporting progress.

Emissions Sources - The AER Reporting Tool uploads permitted equipment as Emission Sources (ES). The permit profile contains devices identified by ES# and, sometimes, other information such as Permit Device ID (starting with D, C or E), Permit Number (Permit NO), Application Number (A/N).

Default Emission Factors - The AER Reporting Tool contains default emission factors for certain limited types of operations/processes/equipment. Additional default factors are available in a separate guidance document posted on the South Coast AQMD AER web page. Default emission factors should only be used when source-specific data is not available or report is qualified and submitted as Abbreviated Report in case 2022 and future data year reports.

Importing of Tank Emissions – Users may import batch emissions data from liquid storage tanks using EPA's TANKS format. Storage tanks must be properly identified with the ES# matching those listed in the facility permit profile. Detailed guidelines are available on the AER web page on how to import the results into the AER reporting tool.

Importing of Previous Year Data - This command is available on the AER Reporting Tool Home Page for importing and merging previous year's emissions data with current uploaded permit profile, with exception to throughput data.

Export to Excel - This command is available for users to export all emission sources and process data into an Excel spreadsheet.

Reporting Emissions from Similar Equipment - The AER Reporting Tool allows the user to build a model for one emission source (i.e., combustion equipment) and apply it to similar emission sources in order to minimize redundant data entry. For detailed instructions and restrictions, see the document titled "Guidelines for Reporting Emissions from Multiple Identical Devices/Equipment."

On-line Help and Support – Available in electronic form. No more hard-copy guidelines to thumb through.

Internet Browser Requirements

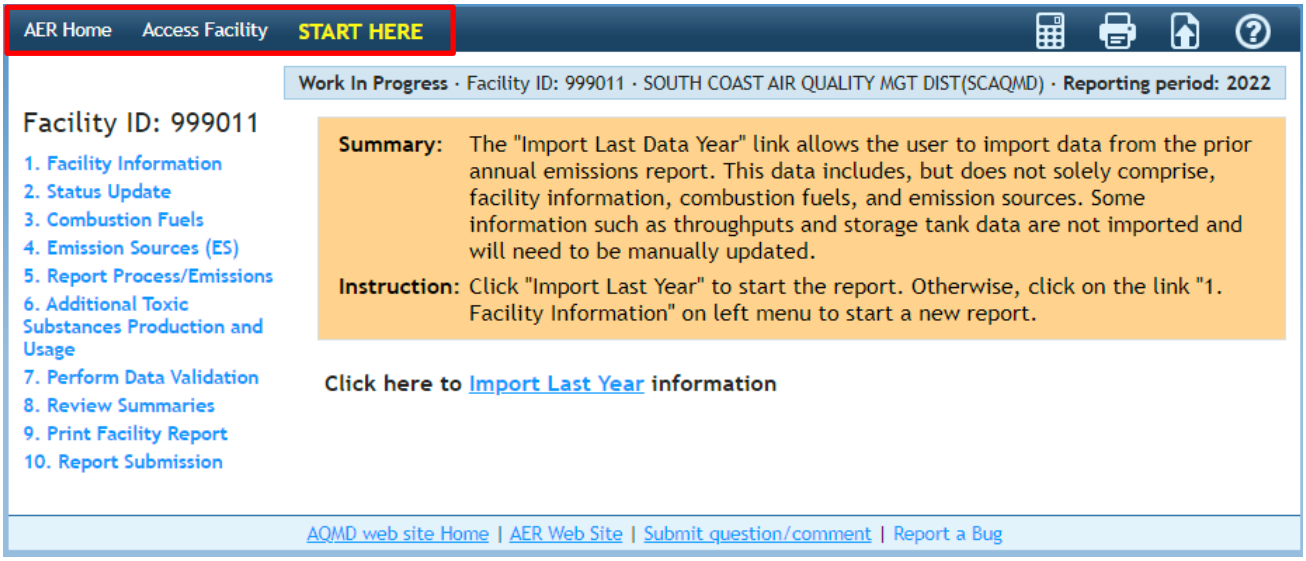
Supported browsers:

- Microsoft Edge
- Internet Explorer
- Firefox, and
- Chrome

Compatibility View must be turned **off** for Internet Explorer users.
Cookies and JavaScript execution must be enabled in the browser.

Toolbar

Every screen in the AER Reporting Tool displays the navigation toolbar along the top of the screen and along the left side of the screen. The links will take users to different parts of the reporting tool.



AER Home - This is the starting point where existing users can log in with username and password (created by the user during the registration process) or request to reset a forgotten password. This page also provides a link so that new users can register to use the tool.

Access Facility - Clicking on this tab will take users to the main page of the AER Reporting Tool where users can select the reporting year to work on or access a different facility.

START HERE- This is the starting page where users can download data from the previous AER (if exists) or navigate to different sections of a facility's annual emission report.

Conversion Calculator Icon Button - It is not an ordinary calculator. Clicking on this icon will open a conversion tool for a limited number of units.

Print Icon Button - Clicking this icon allows users to print the page they are working on, similar to the "print screen" function on most computers. Note: If you wish to print a full list of emission sources from a facility's permit profile, please select the "Print Preview" button on the Emission Source (ES) Classification page, instead of the printer icon.

Upload Supporting Documentations Icon Button - Clicking on this icon will open a tool for uploading supporting documents in electronic form. There is no limit on the number of documents for uploading. Each file must be 5 megabytes (MB) or less.

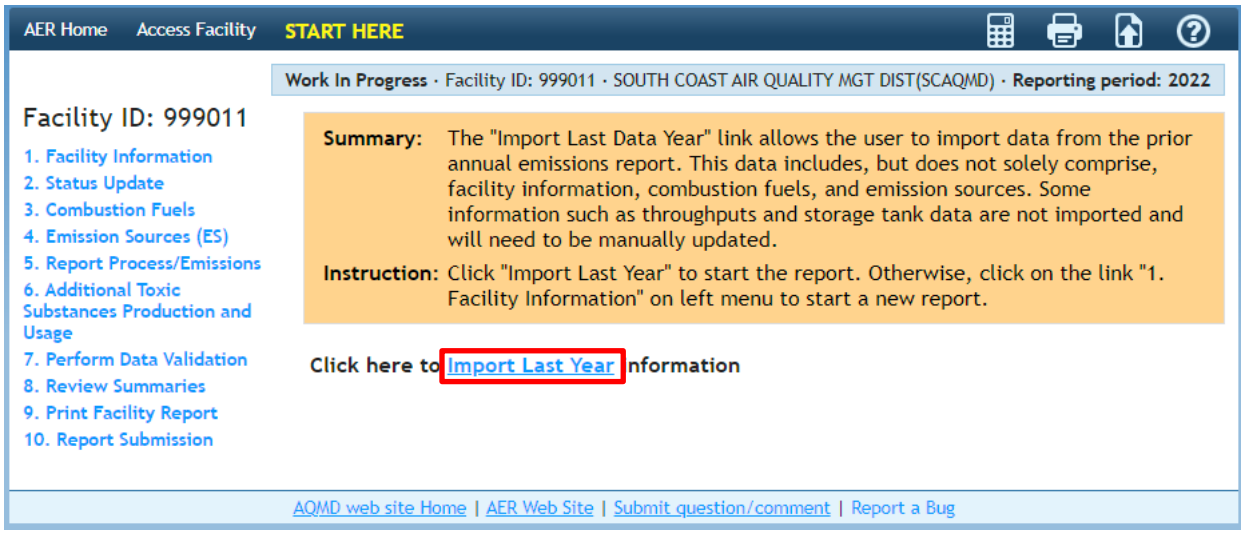
Help and Support - Clicking on this icon will open the AER Reporting Tool Help and Support Manual, which contains detailed instructions on how to use the web tool as well as a listing of default emission factors for select equipment/ processes.

Import Data from Last Year Link

Clicking the START HERE link on the brown menu bar will take the user to the Facility Home Page.

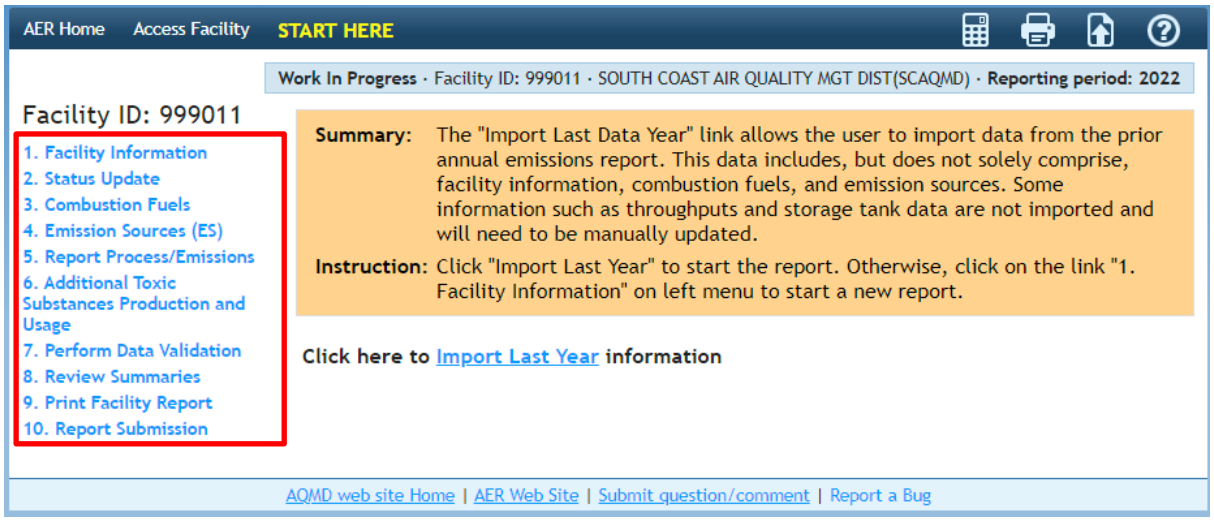
Clicking on the Import Last Year link will import available data from the previous reporting year to the current report.

Note: For first time reporter, facility will not be able to import any information. All permitted devices are preloaded in the AER Reporting Tool the first year a facility is asked to report. However, for any missing or newly permit equipment, it's the reporter's responsibility to manually add these devices.



Left Navigation Menu

Note: The menu will be slightly different for Core CTR and AB2588 facilities comparing to other facilities (Abbreviated reporting). Please refer to those guidelines, which can be downloaded on the AER webpage, for more detailed information.



1. Facility Information - The link on this menu opens the facility information page where users can input facility information, provide facility operational status, and enable special features for the tool to create specialized reports.

2. Status Update - This link opens the Status Update page, which informs the South Coast AQMD about any changes in business operating status.

3. Combustion Fuels - This link opens combustion fuel specification section. This section must be completed before combustion emission sources can be completed in the Process pages.

4. Emission Source (ES) – This link opens the Emission Sources (ES) Classification page. The table with a green table on this page lists all emission sources. Emission sources are also referred to as devices.

5. Report Process/Emissions - This link opens a page containing worksheets based on Emission Source Group Categories (e.g., external combustion, internal combustion, other processes, etc.) as defined by the user in the previous steps. By clicking on the "Open" link next to an emission source on these worksheets, users can begin entering specific data to calculate emissions.

6. Additional Toxic Substances Production and Usage - This link opens a page in which users can report additional toxic and substances production and usage. Note, The Additional Toxic Substances Production and Usage page is included for all facilities. However, applicability guidelines can be found in "Additional Toxic Substances Production and Usage Guidelines" posted in the Guideline Documents section of the main AER webpage.

7. Perform Data Validation - Clicking this link will execute the preliminary quality control procedures and display warnings and errors. Warnings alert users to review the entered data for reasonableness and accuracy. Errors require users to revisit and correct the data. Once all errors have been corrected, users can submit the report.

8. Review Summaries - Clicking this link opens emissions summary pages for criteria pollutants, toxic air contaminants, and associated emissions fees.

- **Criteria Pollutants** - Link for a summary of criteria pollutants emissions.

- **Toxic (TAC/ODC) Pollutants** - Link for a summary of toxic air contaminants (TAC) and ozone depleting compounds (ODC) emissions, including the AER Toxic Fees Breakdown which provides a detailed accounting of toxic emissions and applicable toxics fees.

- **Fees**- Link for summary of emissions subject to fees and associated fees due.

9. Print Facility Report

- **Print Full AER PDF Report (all listed below)** – Clicking on this check box allows the user to select all sections of the AER PDF Report to print.

- **Print Individual PDF Sections** - Clicking on individual check boxes allows the user to selectively generate and print the reports in pdf format for recordkeeping purposes.

- **Excel Reports -** Clicking the Download Report button will export all reported emission sources and process data into an Excel spreadsheet. Clicking on the Download TAC Report button will export all reported TAC emission sources and process data, and associated emission fees into an Excel spreadsheet. The TAC Report also includes facility information, and total and individual summaries of each type of TAC emission fee.

10. Report Submission - Clicking this link opens the report submittal page, where users should perform a final review of emissions data prior to submitting the annual emissions report in electronic form.

- **Request Amendments Button** - Clicking this link will enable users to submit proposed amendments to a submitted report. For detailed instructions, see the guideline document titled, "How to Amend an Annual Emission Report."

General Tips

South Coast AQMD periodically reviews selected Annual Emissions Reports to verify accuracy, completeness, and correct fee payment. Carefully noting the following tips can help minimize possible emission and fee discrepancies:

- Follow all instructions.
- Make sure units of measure are correct. Common conversion factors have been provided in the AER Reporting Tool to assist with unit conversions and emission calculations.
- Document all emission factors other than default factors. Upload documentation with report submittal as needed including, but not limited to: Material Safety Data Sheets; CEMS summary data; South Coast AQMD pre-approved source test results; permit evaluation data or rule/permit emissions limits or BACT emissions requirements.
- Use comment fields as needed to provide additional explanation.

Common Mistakes

Review this list to avoid mistakes when completing your annual emissions report (AER):

- Late submittal due to a delay in issuing the check for emission fees.
  The report is completed on time. However, a delay in issuing the check for emission fees causes the report to be submitted past the deadline, thus incurring a surcharge. Anticipate a delay in approval and issuing of the check from facility's headquarters or central office to avoid a late surcharge.

- Reporting emissions from fuel combustion in mobile equipment such as forklifts, bulldozers, and tractors.
  Emissions from self-propelled on-road or off-road mobile source vehicles should not be reported in this program.

- Reporting liquid fuel (e.g., diesel) in wrong units.
  The default emission factors provided for burning of liquid fuel or fuel dispensing are given in pounds per 1,000 gallons (lbs/1000 gals, or lbs/Mgal). Therefore, please convert all liquid fuel used or dispensed to 1,000 of gallons when using the default emission factors.

- Annual throughput units not consistent with emission factor units.
  Throughput units must be consistent with emission factor units to ensure that emissions are calculated correctly (in pounds). For example, if you report material usage (throughput) in pounds, then your emission factor units should be in pounds of pollutant per pound of material used (i.e.,

lb/lb). If reporting throughput in gallons, then your emission factor units should be in pounds of pollutant per gallon of material used (i.e., lb/gal).

How to Get Help and Support

Support is available from South Coast AQMD staff between 8:00 a.m. and 5:00 p.m., Tuesday through Friday through the following channels.

- **Help Hotline: (909) 396-3660**
  South Coast AQMD staff will be available to provide immediate responses to the extent possible.

- **E-mail: aer@aqmd.gov**
  Always include Facility ID# with inquiries.

- **Internet: http://www.aqmd.gov/home/regulations/compliance/annual-emission-reporting**
  Information relative to the AER Program is incorporated herein. The AER Reporting Tool Help and Support includes specific instructions for each screen, supplemental instructions, tables of default emission factors, etc. In addition, other useful information is available on the web such as the South Coast AQMD rules and Clean Air Solvents.

- **In-Person:**
  Scheduled in-person/virtual appointments may be arranged upon request. Support staff will help you with your questions on how to enter your data into the Annual Emissions Reporting system. There is no charge for this service. However, support staff cannot enter the data and submit the report for facility. Please call the AER Hotline at (909) 396-3660 or email to aer@aqmd.gov. Appointment times are limited and usually fill up rapidly the last three weeks before the reporting deadline.

How to Submit a Completed AER

Submitting a completed report is done entirely online.

Once the AER has been reviewed for completeness and verified for accuracy, the user should run Data Validation to ensure that all warnings are reviewed and there are no errors. If all errors have been corrected, and warnings have been reviewed, users should navigate to the Report Submission Process and complete the following steps:

1) Click on the "Generate AER Submission Report" button, which will create one pdf and two Excel files of your completed report. Once the reports have been generated, please review the final documents prior to submittal.

2) Following report generation, users will be routed to the Certify and Submit Generated AER Report page. Once the final report has been reviewed, check the three boxes indicating "I have read and accepted this document" in Step 1 on the Certify and Submit Generated AER Report page.

   - If any corrections to the AER are deemed necessary upon review, proceed to Step 2 and click the "Cancel Generated Report & Modify Report Data" button to return to the AER data entry module. Note: Clicking this button will only delete the pdf and Excel files generated in the previous step and will not delete any entered AER data.

3) At Step 2, read the South Coast AQMD Certification Statement, then check the two boxes acknowledging and agreeing with the Certification Statement.

4) Next, for security and identity verification purposes, you are required to enter your user password and facility pin code.

5) Finally, click on the "Certify & Submit AER Report" button to electronically deliver the AER data to the South Coast AQMD database. A confirmation email will be generated by the AER Reporting Tool and sent to the AER user.

   Once the report has been submitted, you will be redirected to the online payment portal, where you can pay your emission fees (if any) via credit card or e-check. The online payment option is only available to you for the initial submittal and when total emission fee for the submitted report is less than $300,000.

   If you prefer or are required to pay via check, please print the "AER Payment Voucher" and include it with your check. Mail the AER Payment Voucher along with any fee payments to the South Coast AQMD in the provided envelope. If a different envelope is used, please mail the required forms and fees to the following address:

   South Coast Air Quality Management District
   Annual Emission Reporting Program
   File No. 54493
   Los Angeles, CA 90074-4493

   If a messenger service is used (or hand delivered), the package should be delivered to Cash Management at South Coast AQMD Headquarters at the address listed below in Diamond Bar on or before 5:00 p.m. on the last day of the filing period. Please note that South Coast AQMD is closed on Mondays.

   South Coast Air Quality Management District
   ATTN: Cash Management
   Annual Emission Reporting Program
   21865 Copley Drive
   Diamond Bar, CA 91765-4178

How to Amend an Annual Emission Report

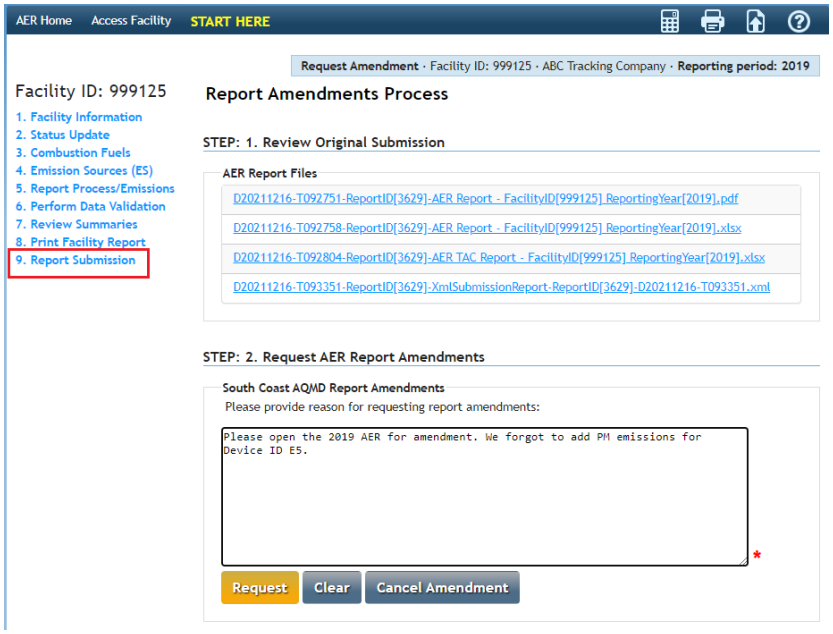
Please refer to the "How to Amend an Annual Emission Report" Guideline.
For amending report prior to DY 2019, refer to "How to Amend an Annual Emission Report Prior to DY2019" Guideline.

How to Amend Calendar Year 2019 or Later Annual Emission Reports Using the AER Reporting Tool

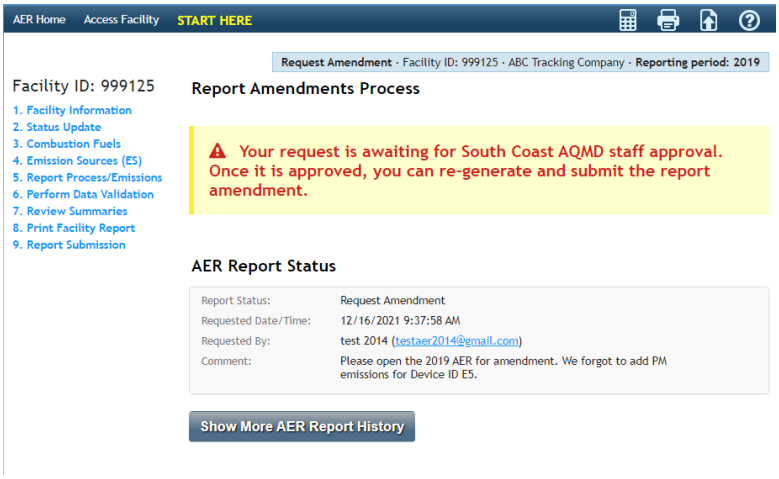
Amendments to the 2019 AERs or later can be made within the AER Reporting Tool.
Note the "Request Amendment" option will not appear until emission fees have been paid.

1. Click on Report Submission on the right-hand menu of the AER Reporting Tool and press the Request Amendments orange button.

2. Enter the reason for your amendment in the text box and click the gold request button (see screenshot above).



3. You will see a confirmation note on the screen. You will be sent an email confirming the amendment submittal and be assigned an AER staff member who will assist you with the amendment process.



Review of the amendments can result in any of the following actions:

- **Additional Fees** – Additional fees are subject to the surcharge provisions and time frame outlined earlier under the "Underpayment Surcharge" section. Emission data will be updated accordingly after the amendment has been verified.

- **Refund** - A refund may be made as a result of the amendment only if a written claim for refund is filed with South Coast AQMD within one year and seventy five days from the official due date,). However, the facility emissions will be updated accordingly, after the amendment has been verified.

- **Denial** - As a result of South Coast AQMD evaluation, the amendment or fee refund may be denied. This action can be appealed to the Fee Review Committee. See "Other Fee Issues" in Help and Support manual.

Any questions regarding amending AERs can be emailed to AER staff at aer@aqmd.gov or by calling the AER Support Hotline at (909) 369-3660.

Non-Payment/Late Payment Surcharge

If no fee payment is received by South Coast AQMD or postmarked by the deadline of the reporting period, a surcharge shall be assessed and the emission fee due shall be increased as follows:

When payment is received late:	**Emission fees and surcharge due are as below:**
• Less than 30 days,	Unpaid fees +5%
• 30 to 90 days,	Unpaid fees +15%
• 91 days to one year,	Unpaid fees +25%
• More than one year,	Unpaid fees +50%*

* Based on fee schedules in effect at the time the emissions occurred.

If emission fees are paid on time, but the amount paid is determined to be underestimated, total fees due shall be calculated as follows:

Within one year after the seventy-fifth (75th) day from the official due date:

If the payment was	**Underpayment and surcharge due are as below:**
• Less than 90% of amount due,	Underpayment + 15%
• 90% or more of the amount due,	Underpayment + 0%

After one year and seventy five days from the official due date, all underpayments as determined by the District or as disclosed by the facility will be assessed a 50 percent surcharge on the underpayment, calculated based on the fee schedules in effect when the emissions actually occurred.

Refund Request

Rule 301(e)(9)(B) requires all requests for refund of overpayment of emission fees be submitted in writing. A written request can be in the form of letter, email, Facility Status Update, or a negative fee figure as calculated and displayed on Fees Due Summary. Refund requests are considered valid if submitted within one year and seventy-five days from the official due date**. Note that credit from previous year cannot be applied toward the current year's Annual Emissions Report fees.**

Other Fee Issues

Facility may contact the South Coast AQMD Fee Review Committee for the following matters:

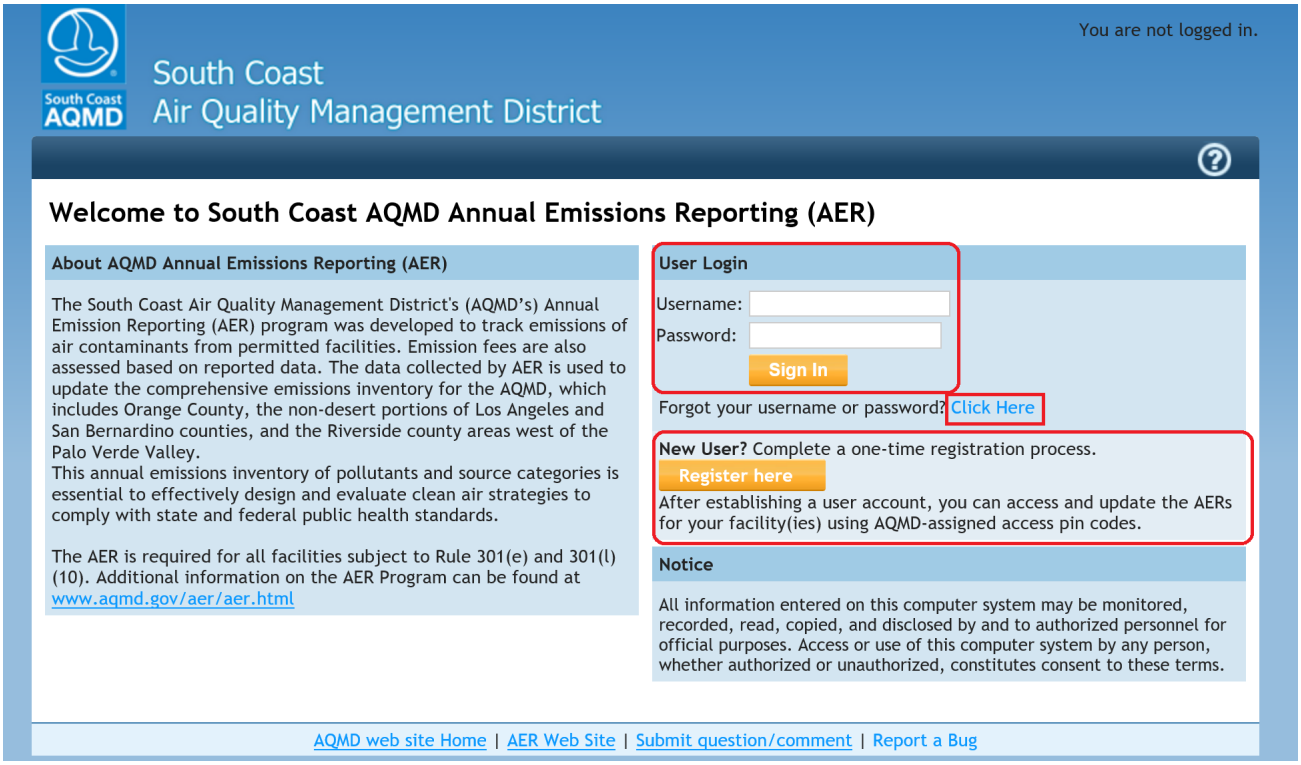
- Financial hardships;
- Alleged District billing or fee errors; and
- Surcharges assessments.

Coordinator for the Fee Review Committee can be contacted at (909) 396-3529. More information relative to Fee Review Committee can be found at the following web page: http://www.aqmd.gov/home/permits/fees

Questions related to billing or payment may be direct to South Coast AQMD Finance Billing Services toll free at 866-888-8838 from inside California, or call (909) 396-2900.

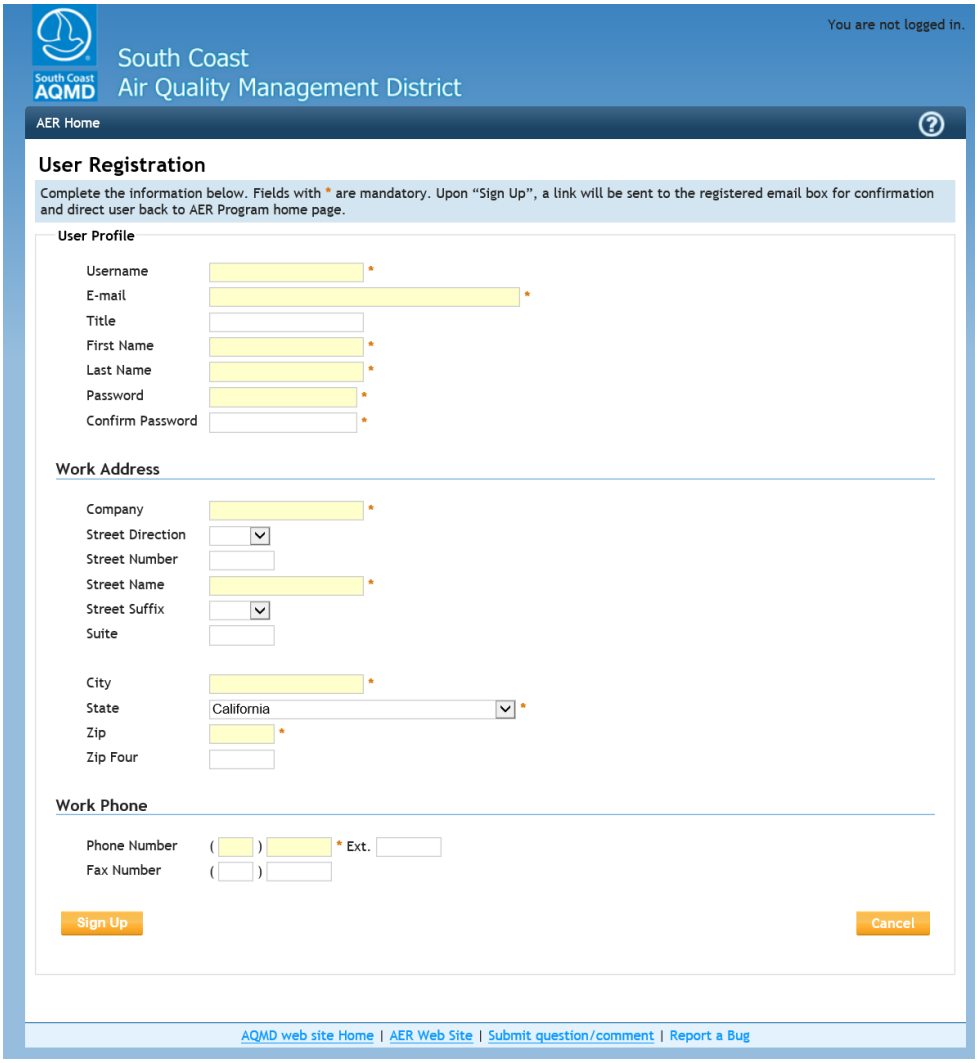
GETTING STARTED

This section includes instructions and procedures for accessing the AER Reporting Tool. The following screen displays the place where new users can start the registration process; existing users can log in or request to reset Password or find the Username, if forgotten.



New User Registration

New users are required to register to access the AER Reporting Tool. Clicking on the "Register here" button will bring user to the registration screen as shown below. Note that fields marked with an asterisk (*) are mandatory and user's email must be a **valid and unique email** for communication and tracking purposes. During registration, users will create their own individual USERNAME and PASSWORD.



Upon "Sign Up", the tool will acknowledge the registration with a summary as shown in the next section.

Registration Summary

Create User Complete

Ana Bree user profile has been created.

Please close this screen. To complete the AQMD AER registration process, please click-on the link sent to the provided E-mail Address: that will confirm you e-mail address and bring you back to the AQMD AER web application.

Username: Anabree
E-mail: breeanablazicevic@gmail.com
Title:
First Name: Ana
Last Name: Bree

Work Address

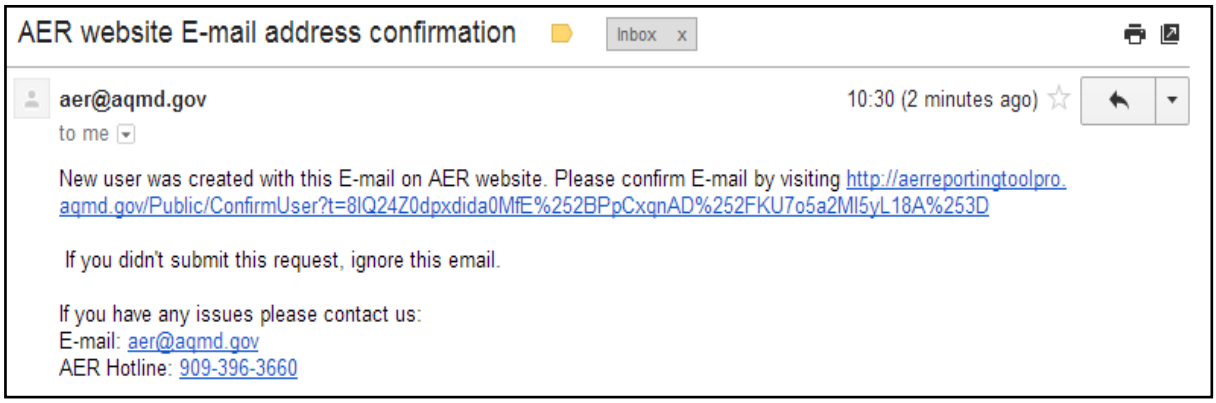
Company: ABC
Street Number:
Street Name: Beach
Street Suffix: BLVD
Street Direction:
Suite:

City: Huntington Beach
State: CA
Zip: 92647
Zip Four:

Work Phone

Phone Number: 714 596-8837 Ext.
Fax Number:

An email with link for confirmation of the registration will be sent to the valid email address in the user profile as illustrated in the image below. The link for confirmation will stay active for **72 hours.** It is essential that the user confirms the registration within the allotted time. Upon confirmation, the tool will activate user account and direct user back to the AER Program home page.



Existing User Log-In

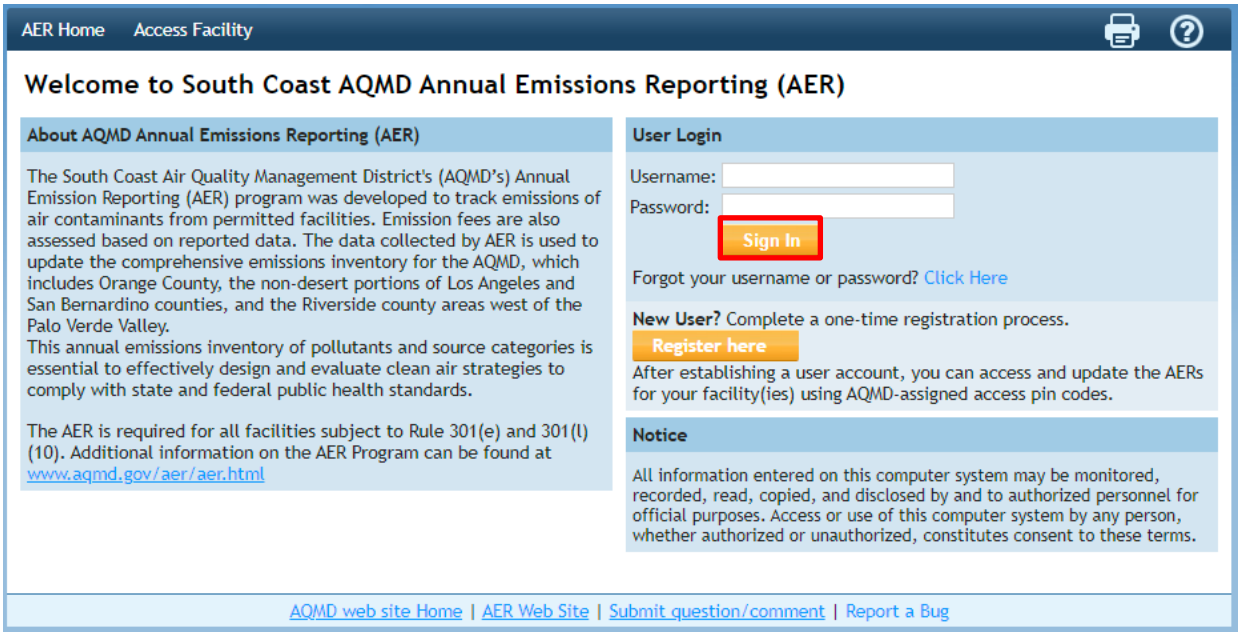
Once registered, returning users can log into the AER Reporting Tool using the registered Username and Password. For problems with LOG-IN, please contact program Help and Support via an e-mail to **aer@aqmd.gov,** or call the AER Help and Support Hotline at 909-396-3660.

Resetting Password

The tool also allows user to reset a password, if forgotten. Note that the requestor must provide the registered email address as shown in image #1 below; otherwise, the tool will display an error message as shown in image #2 below.

To reset your password, click on the blue link "Click Here".

Image #1



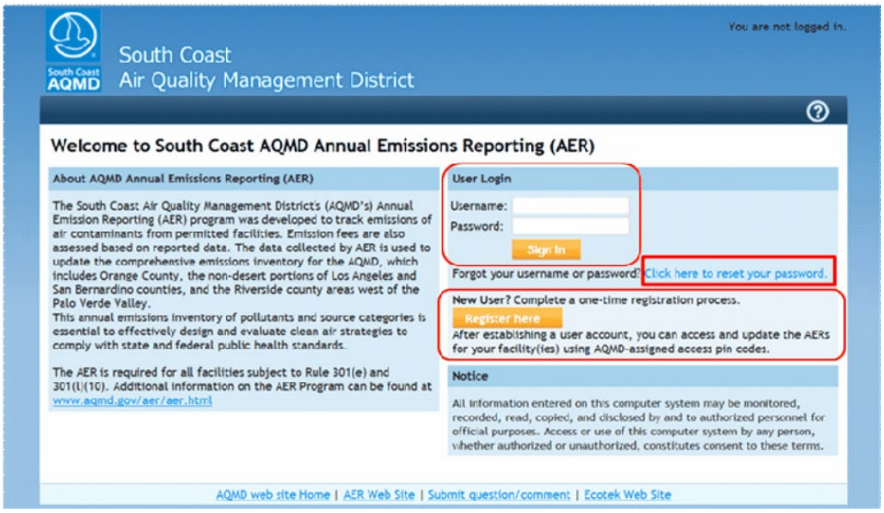


Image #2

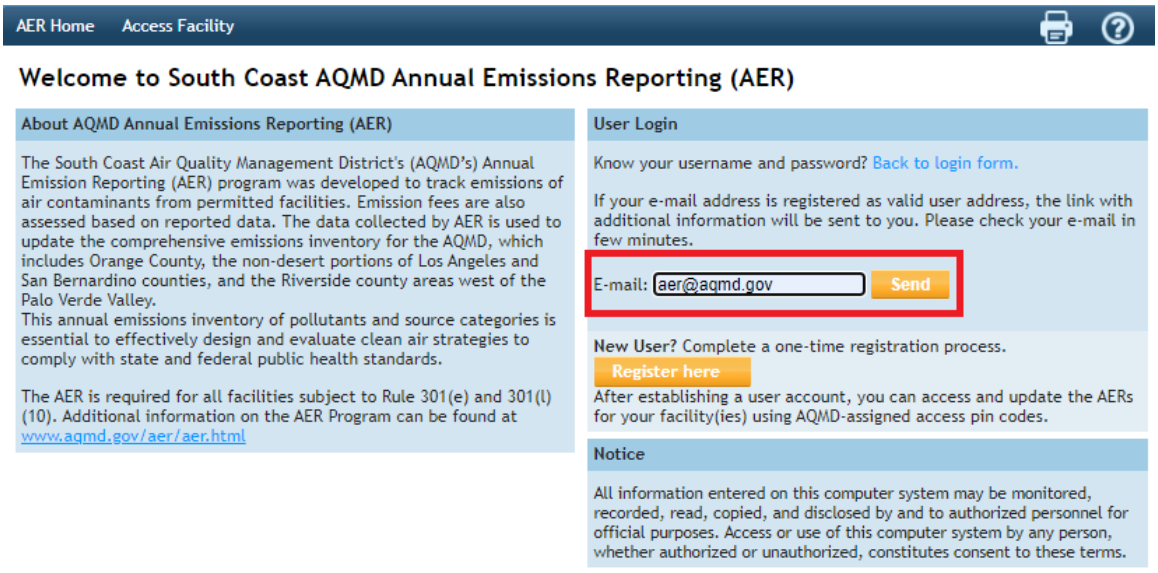
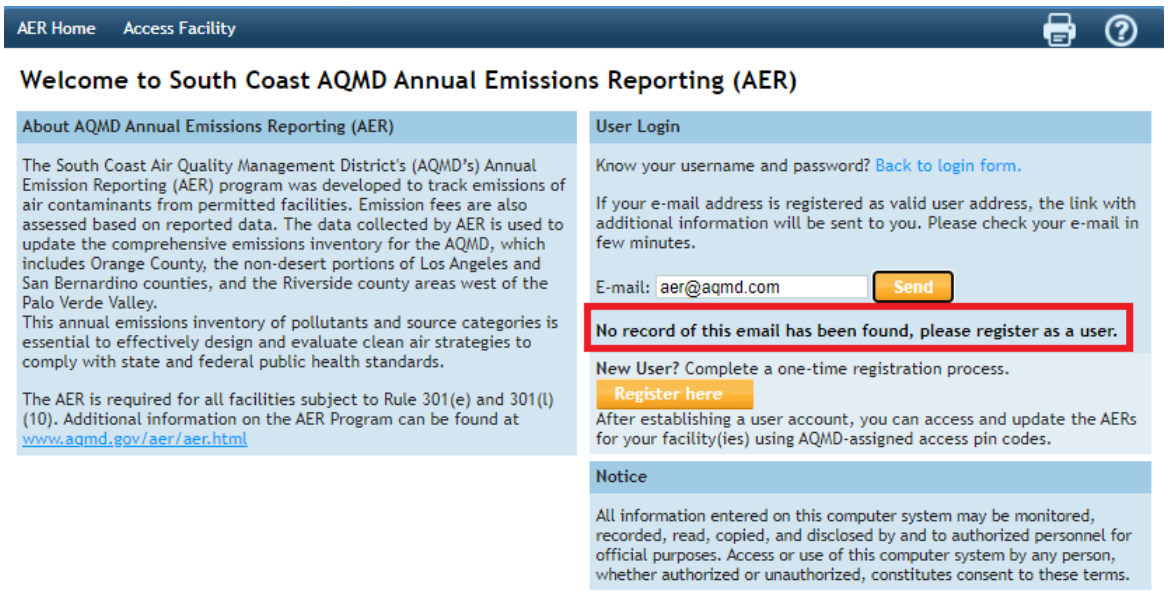


Image #3



Once the registered email address of the active user is entered, a link with a reset password token will be sent to the requestor's email as shown.

Here is a sample of email with link to reset password. NOTE that the registered Username is also included in the email.

AER web site retrieve password token

aer@aqmd.gov

Sent: Fri 3/14/2014 9:18 AM

To: bblazicevic@ecotek.com

A password reset was requested for account with username: bblazicevic.
If you didn't submit this request, ignore this email.
Your password can be reset by visiting http://aerreportingtoolpro.aqmd.gov/Public/ResetPassword?t=JC3Vi1S60dtLhLa8yJDNaQbPTZhVknUVtyq%252FzvzOBwzhpVM58%252Bkn6E%252FeM4XEFZ%252B%252B

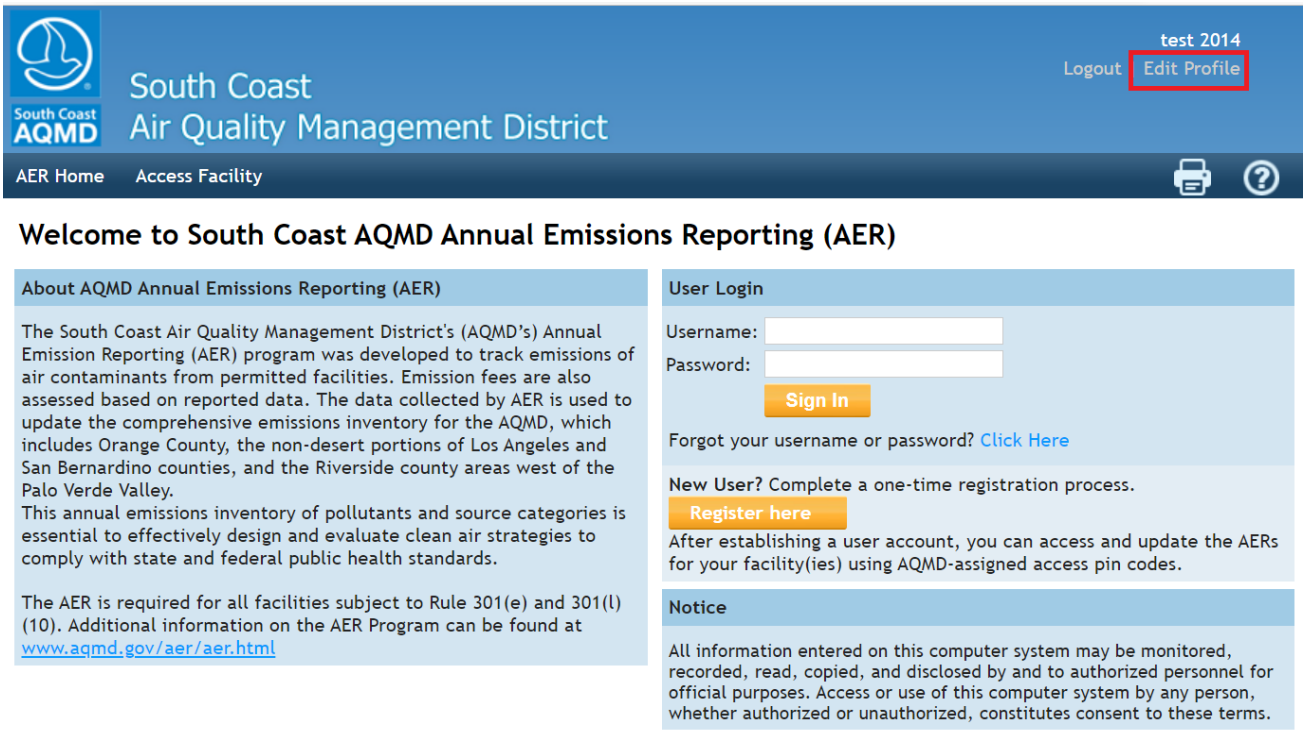
If you have any issues please contact us:
E-mail: aer@aqmd.gov
AER Hotline: 909-396-3660

Clicking on the link included in the email will take the user to the password reset screen as shown below.

Once your password has been reset you can login in with your username and new password by clicking the AER Home button on the top left corner.

Update User Profile

Users can always update their User profile by following the "Edit Profile" link under Username at the top right corner of the tool as shown. Make sure to always "Save" any changes.

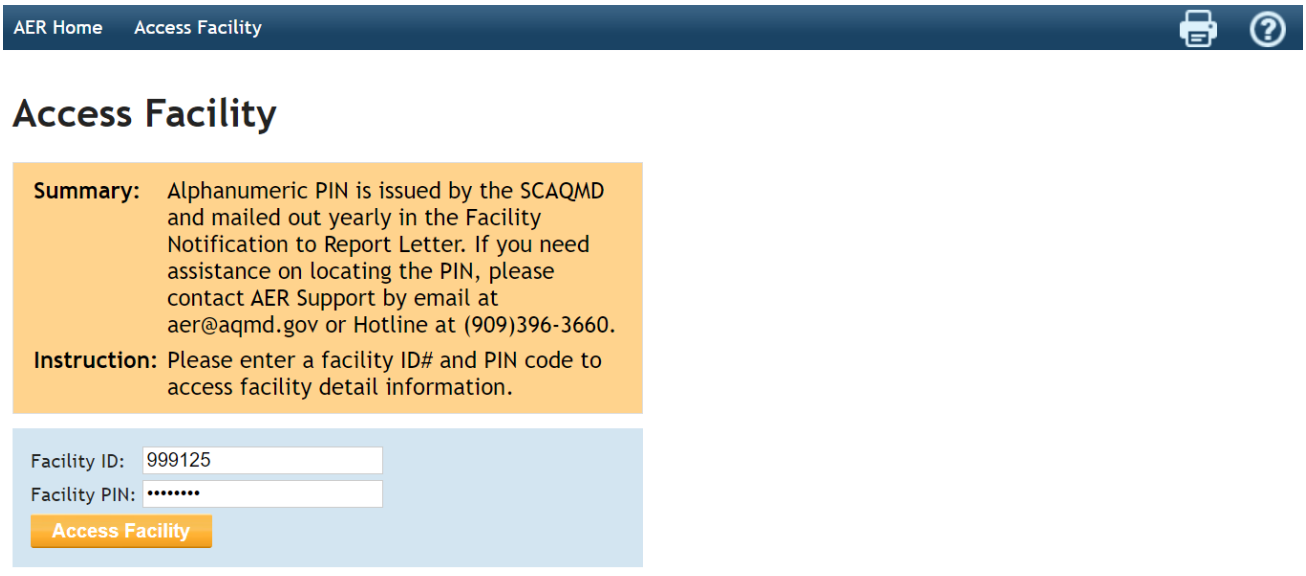


ACCESSING THE FACILITY'S AER AND COMPLETING THE REPORT

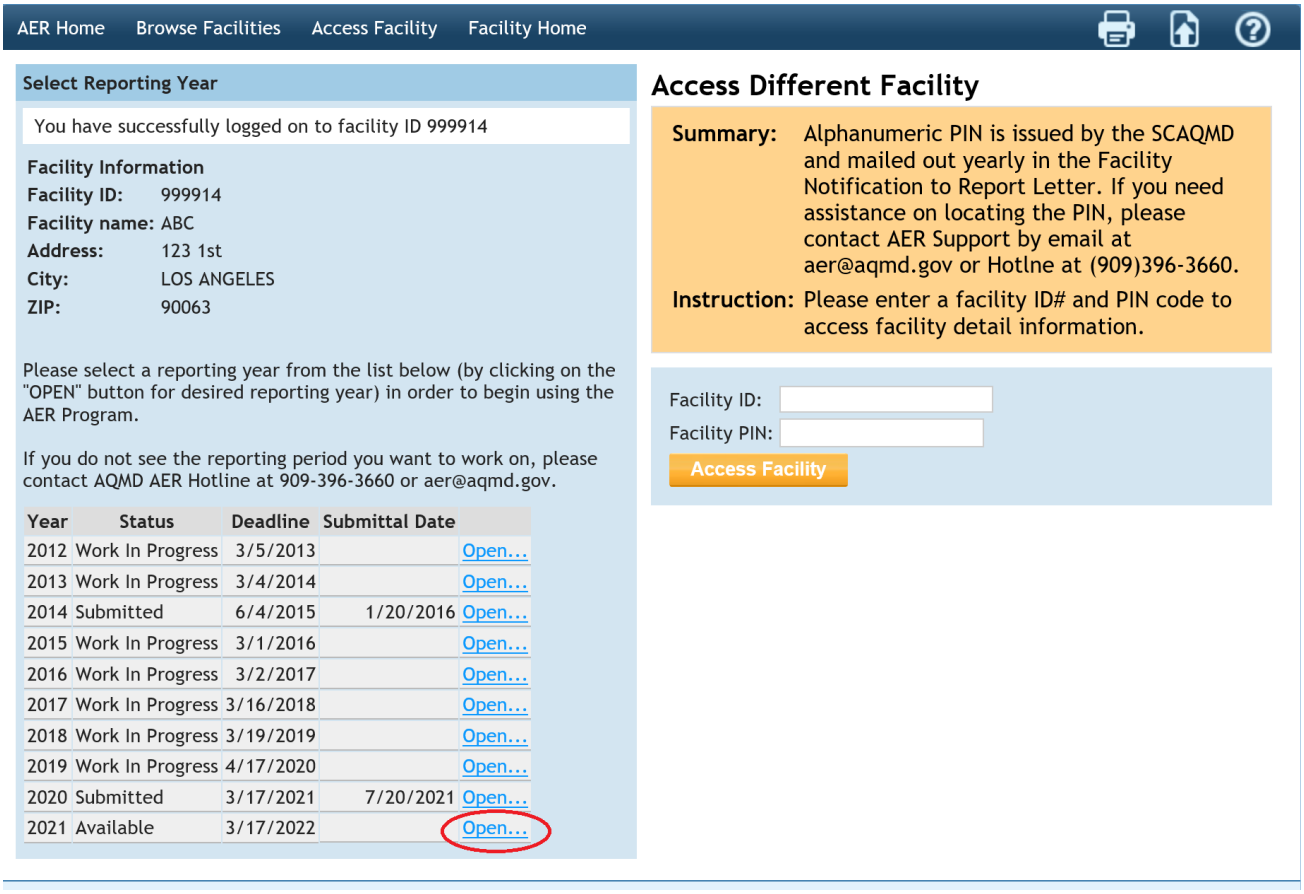
This section contains information and instructions for accessing facility information, entering emission data, preparing, and submitting the reports.

Accessing Facility Data

Accessing facility data for preparing and reporting emissions requires two important pieces of information: Facility ID# and PIN code. The combination of ID# and PIN serves as a key to open the gate for accessing the facility permit profile where emission data can be reported for each device. PIN codes are issued by the South Coast AQMD for each Facility ID and must be entered exactly as presented.



Upon successful access to a facility's information, the tool will open the facility's home screen where the facility's basic information such as ID#, name, and address are presented. User can access the facility's device level emission data for a specific year by clicking on the "Open…" link adjacent to the desired reporting year, as shown below. At any time, the user can access a different facility by entering the Facility ID# and PIN on the "Access Different Facility" section located on the right side of the screen, as shown below. Please note that users may not work on more than one facility at a time. Attempting to enter data for multiple facilities simultaneously (e.g., attempting to access more than one facility by logging in using multiple browser tabs/windows at the same time) may result in data loss or other system errors.

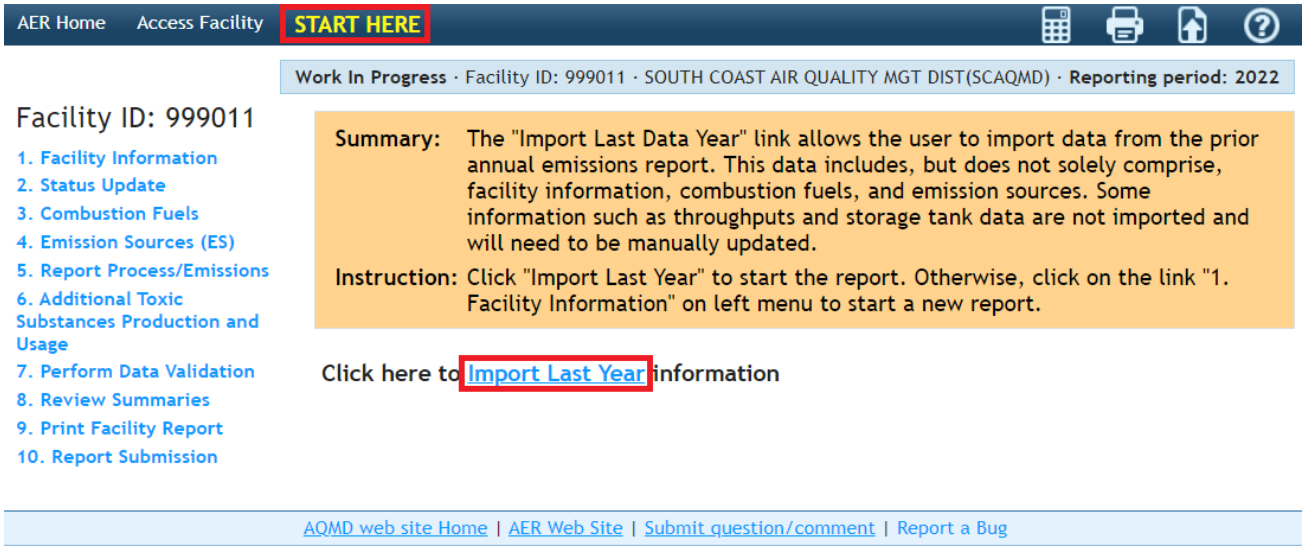


Facility Home

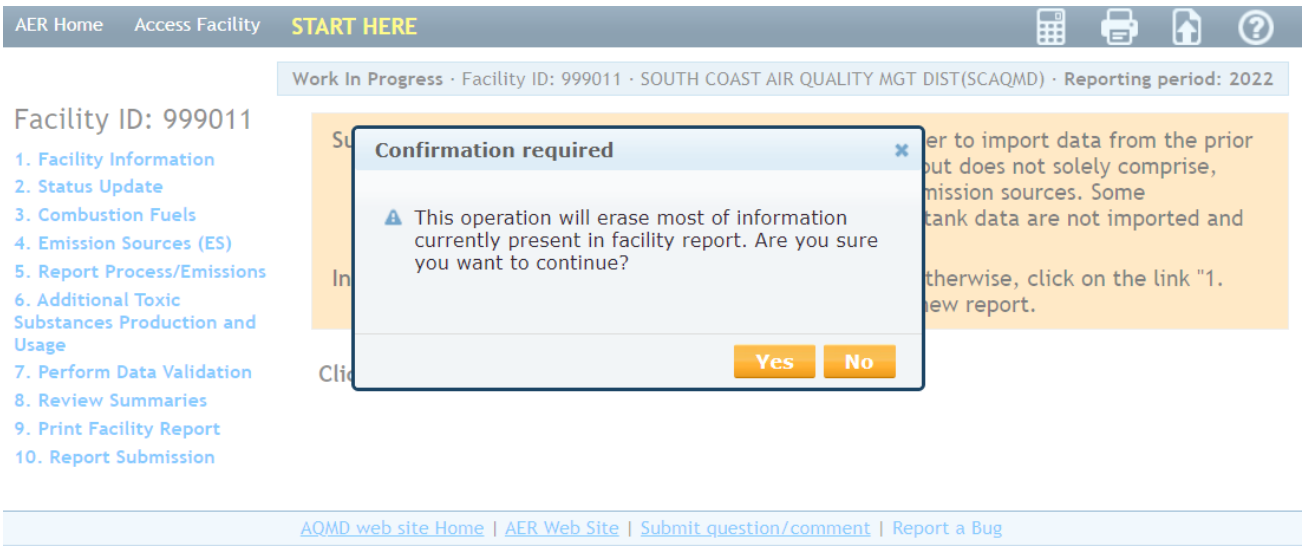
The START HERE page allows users to import information from previous AERs. User's that want to use data imported from the previous reporting year should click on the link "Import Last Year" info. A previous AER must have been submitted using the AER Web Tool to use the data import feature.

Importing Previous Year Data

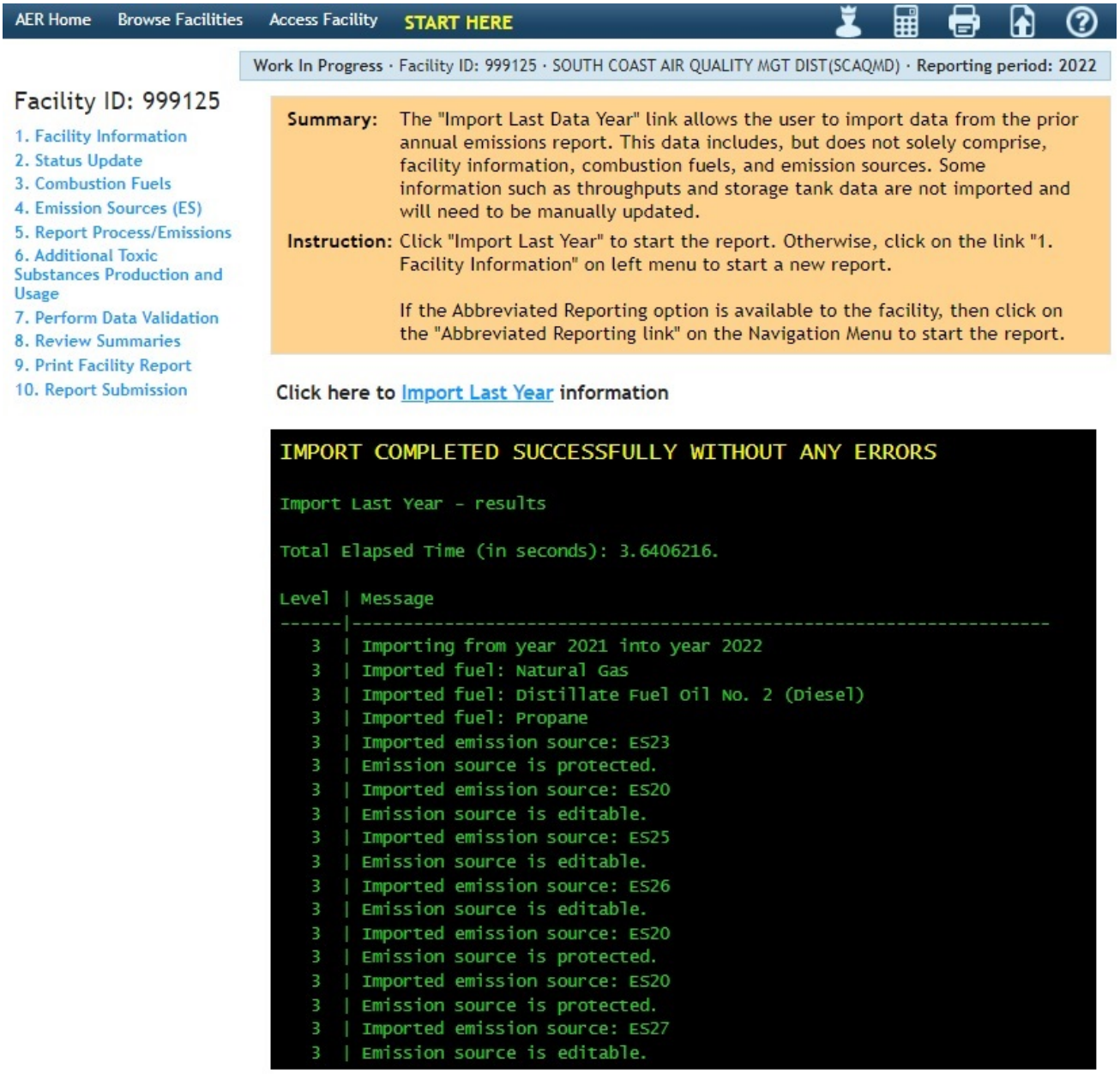
A previous AER must have been submitted using the AER Web Tool in order to use the data import feature. In the following Facility Home screen, click the link to "Import Last Year" to import the Reporting Structure from the previous year's AER.



A pop-up message will warn the user that importing last year's data will erase any data entered in the current year. Click "Yes" to continue with Import:



A report will be provided once the data is successfully imported:

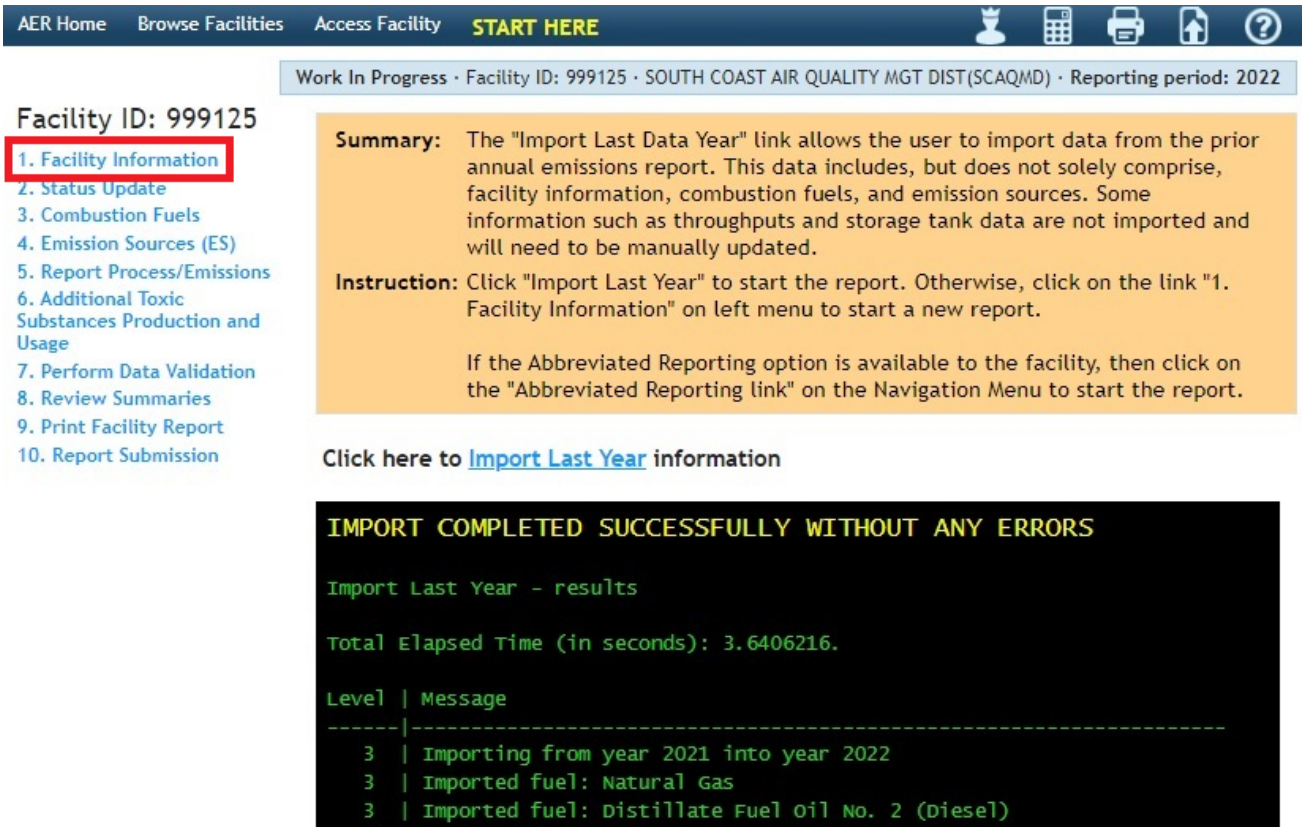


During uploading of facility's permit profile, the current permit profile is compared to the previous year data and the matching emission sources (ESs) are assigned the same AER Device ID (ES number). ESs are matched first by Permit Device ID, then by Application Number (A/N) and the indicator for ESs uploaded from facility permit profile last year.

During import, all data from "last year" will be imported **except**:

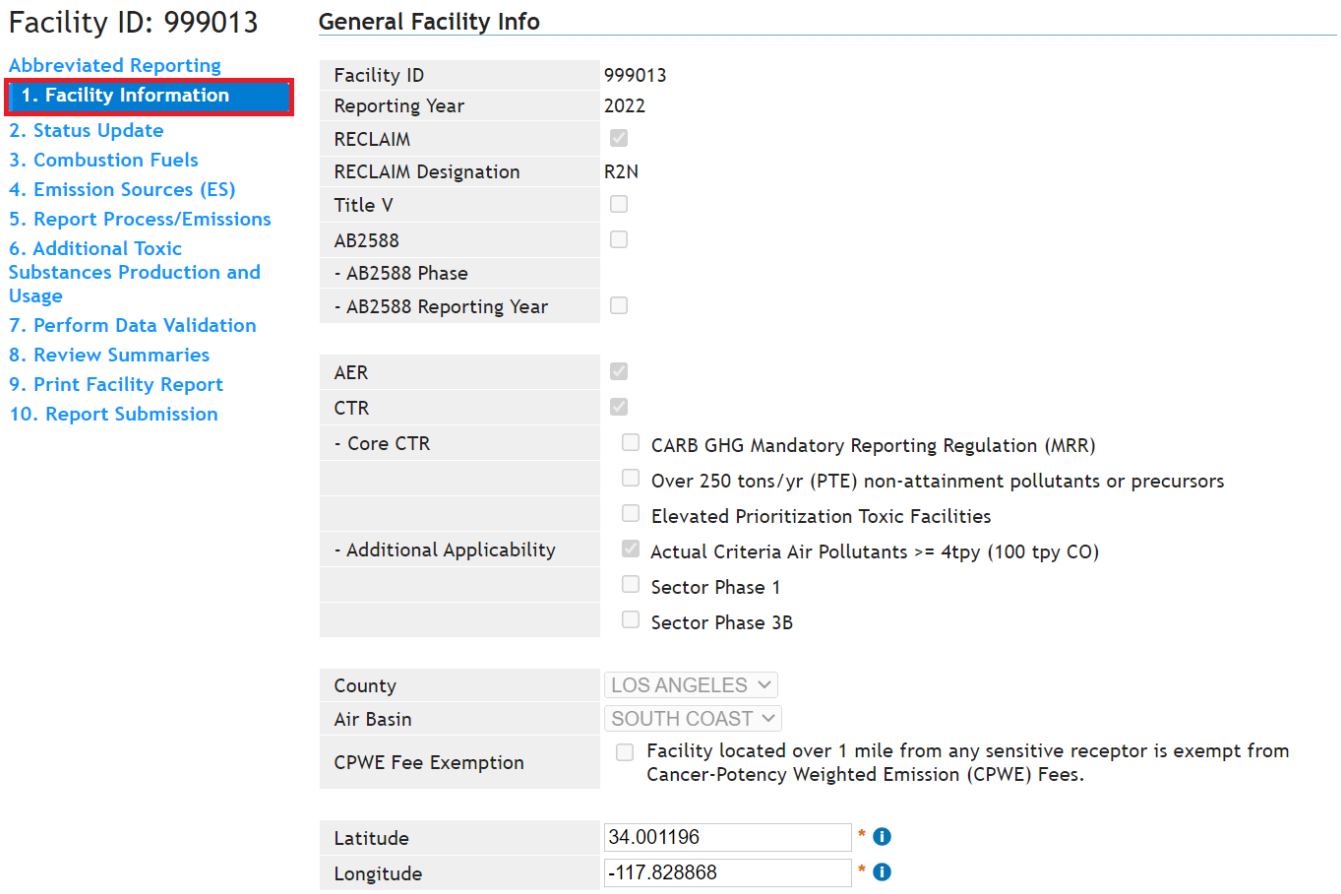
- Throughput,
- Proposed NAICS for Next Year in Facility Information,
- Proposed SIC for Next Year in Facility Information,
- Status Code in Facility Information,
- Status Code Year if any, in Facility Information,
- Facility Status Update data,
- Fee Summary installments and postmark date,
- Imported EPA TANKS process data (ES data is imported, but all process data is blocked),
- Any data on Upset Worksheet.

After importing data from last year, click on the 1. Facility Information link in the left-side menu to begin updating data for the current reporting year.

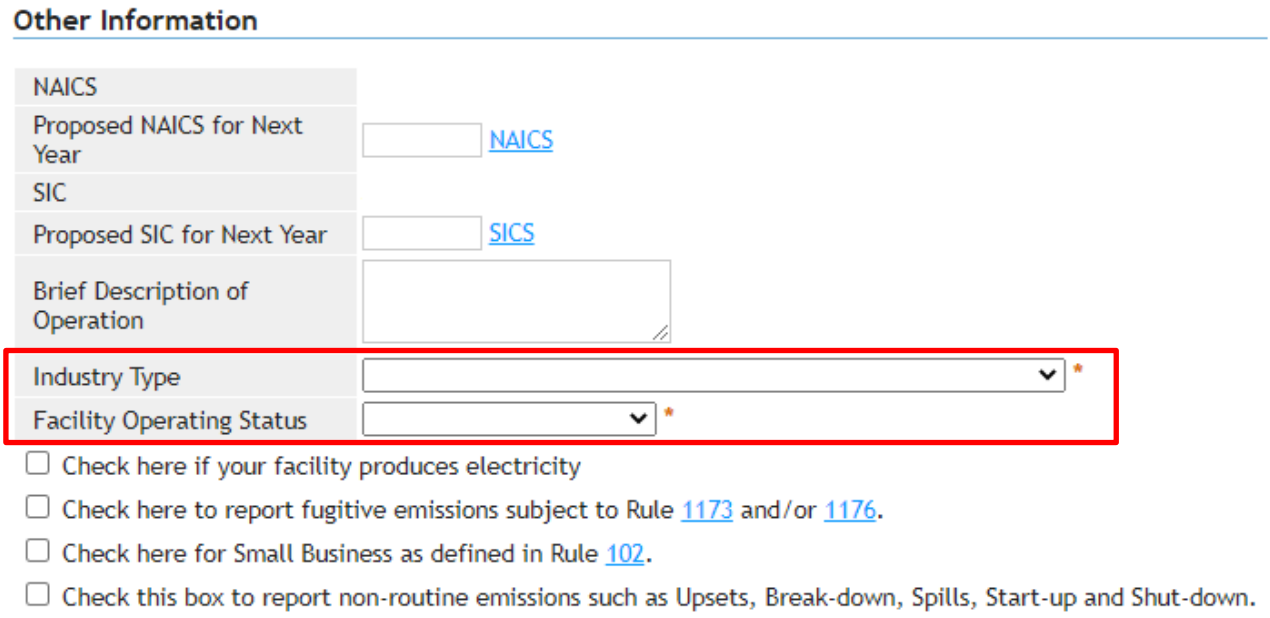


1. Facility Information

The following screen will be displayed after clicking on the "1. Facility Information" link on the navigation menu located at the left side of the screen. This page contains the facility's general information that is extracted from the South Coast AQMD Permitting database. It also identifies the facility as subject to various programs: local (i.e., RECLAIM), state level (i.e., CTR, AB2588), and federal level (i.e., Title V). Please verify the equipment location address and enter the Mailing Address (if different from equipment location). Notify South Coast AQMD if any errors or discrepancies are noted in the "Equipment Location" section. Note that all fields marked with a red asterisk (*) are mandatory and must be completed before submitting the report.

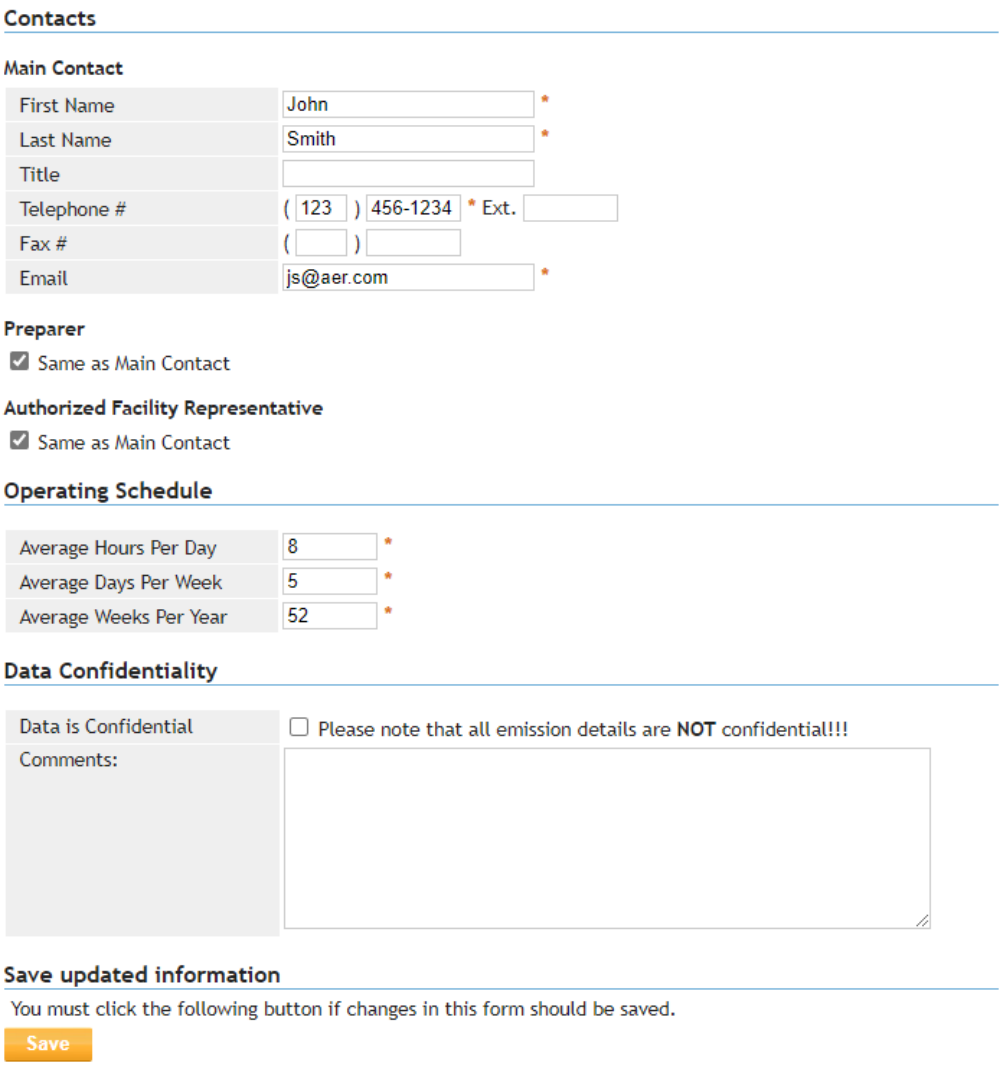


The "Other Information" section requires the user to enter additional information relative to the facility's operations. It also provides options for the user to further classify facility's activities as well as types of information or emissions to be tracked, including non-routine emissions (upsets, spills, startups and shut-down)**. Note that fields with a red asterisk are mandatory fields.**

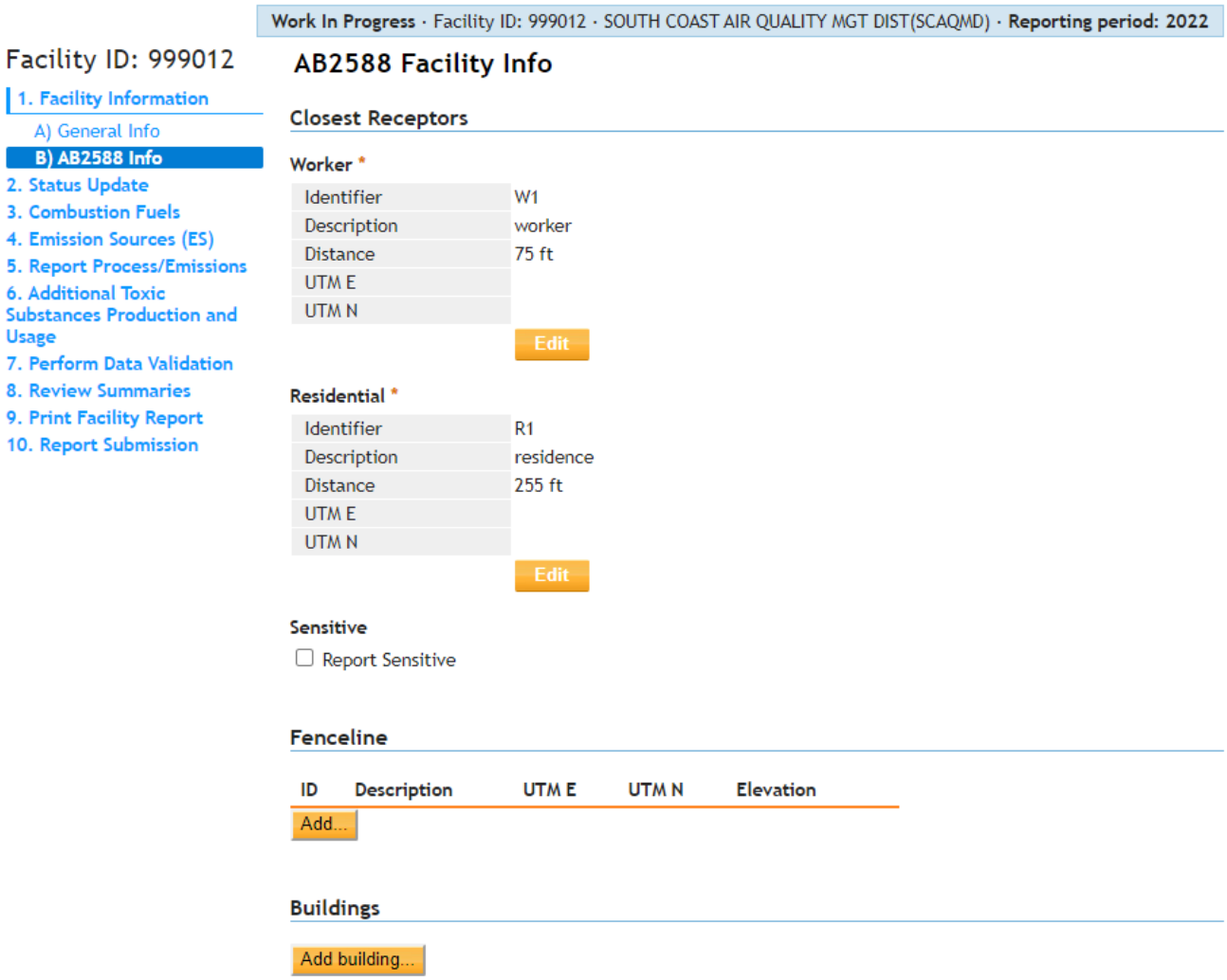


The "Contacts" section provides the user with spaces to enter contact information and the facility's operating schedule. **Information entered on each Facility Information section must be saved (by clicking the "Save" button at the bottom left of the screen) before user can move on the next screen**.

If the preparer and authorized Facility Representative are the same as the Main contact, then the boxes under Preparer and Authorized Facility Representative can be checked.



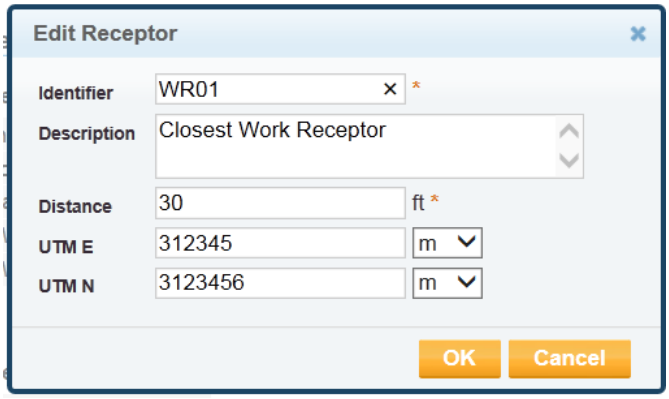
The following screens are designated for facilities that are subject to quadrennial reporting of toxic air contaminants (TACs) under California's AB2588 program. The information will help South Coast AQMD staff in estimating the facility's Priority Score.



Residential and Worker Receptors (mandatory):
Facilities preparing their quadrennial update (once every four years) for the AB2588 Program must provide the distance (in feet) from their facility to the nearest residential and worker receptors. Clicking on the "Edit" or "Add" button will pop up a data entry screen as shown in the following images.

- **Identifier (mandatory):** User defined IDs for the receptors, max four characters. For example, RR01, WR01, etc.
- **Description** (non-mandatory): User defined description of the receptor. The purpose of the description is to help user document facility's entered data.
- **Distance (mandatory):** Distances in **feet** from the primary emission source to the nearest residential and worker receptors.
- **UTM E & UTM N** (non-mandatory): Universal Transverse Mercator (UTM) coordinates (East and North) if available and known. Units can be either meters or kilometers.

Receptor data sample:

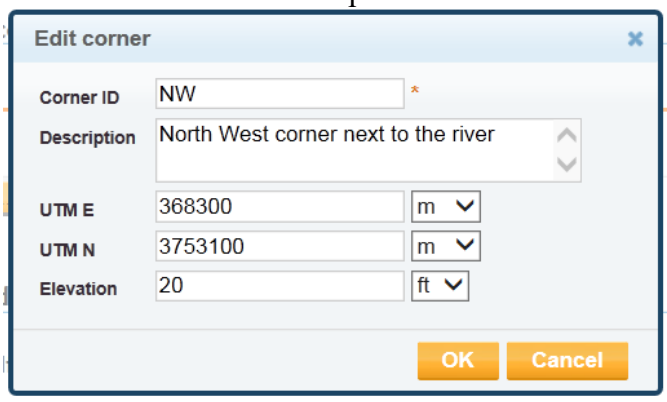


Fence Line and Building Information (non-mandatory)

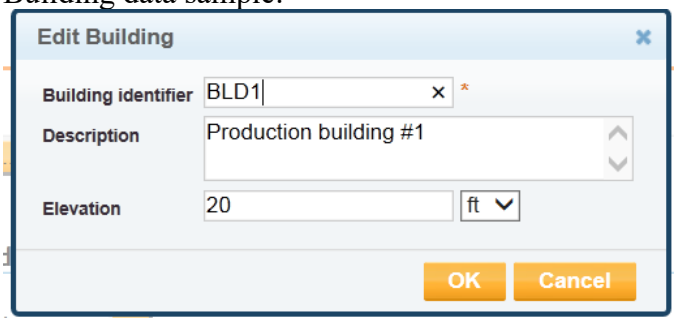
Although not required, users can enter their facility's property boundary (or fence-line) and building information for dispersion modeling.

- **Building Identifier, Corner ID & Descriptions, and Tier** are to be defined by user.
- **UTM E & N coordinates** must be entered in meters or kilometers.
- **Elevation** above sea level must be entered in feet or meters.

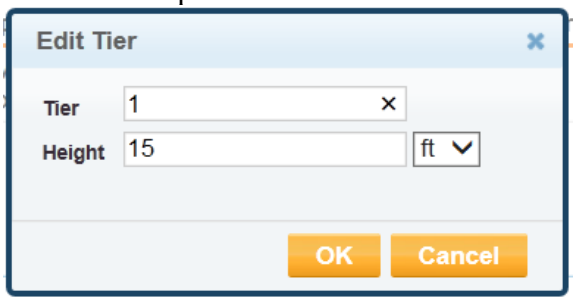
Fence-line corner data sample:



Building data sample:

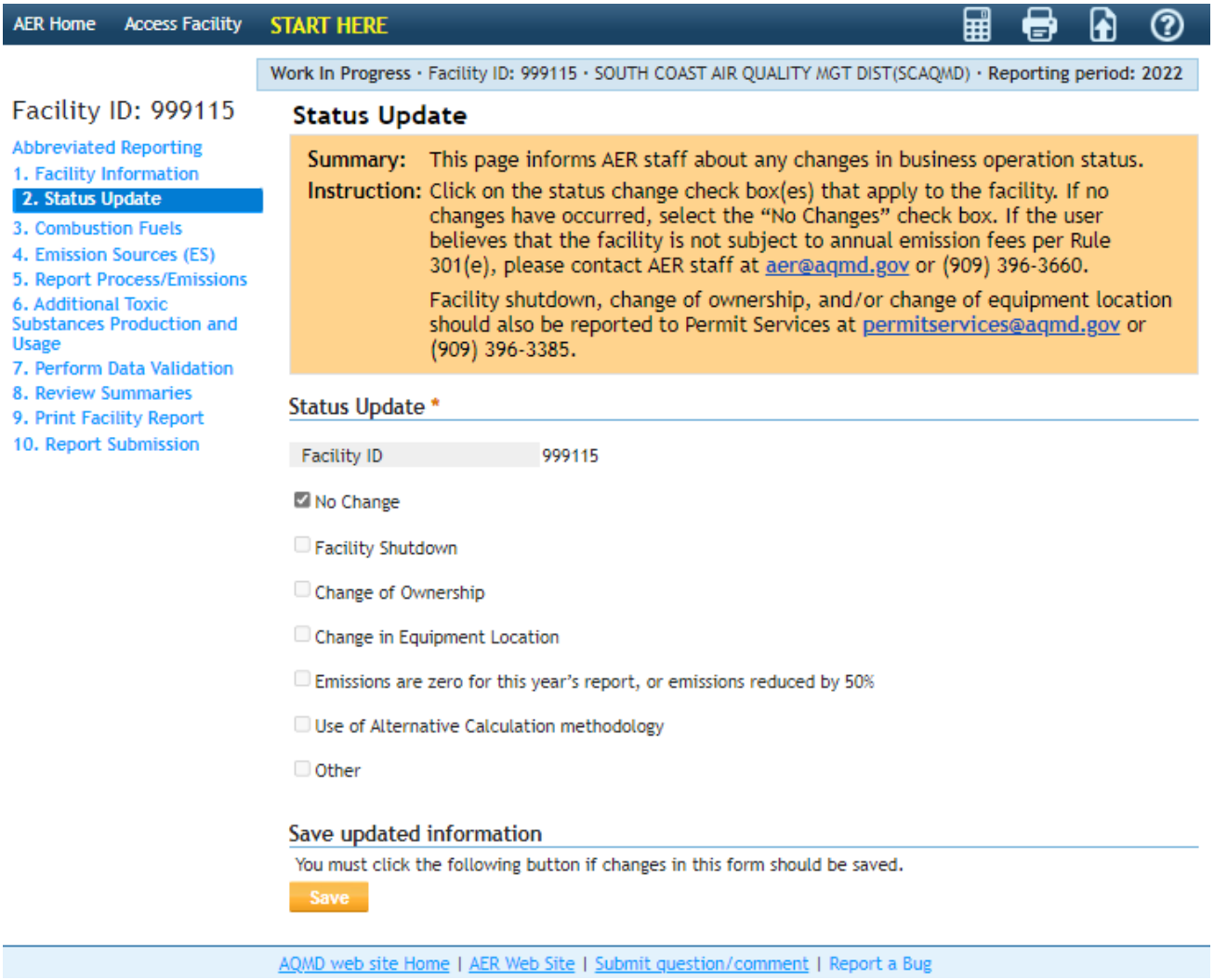


Tier data sample:



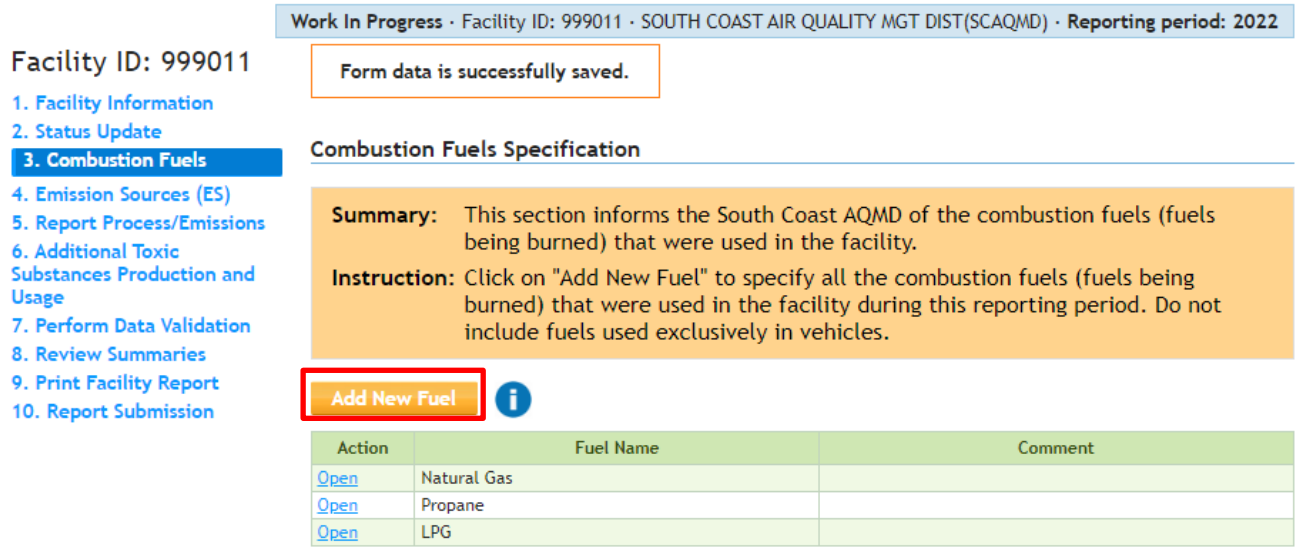
2. Status Update

The next two screens are designated for facilities to report their status changes. If facility had no significant change in operation, check "No Change." If the Fees Due in the Fee Summary is negative (due to paid Installments), an additional section for a Refund Request will automatically be displayed (not shown). Again, data must be saved before user can move on to the next screen.

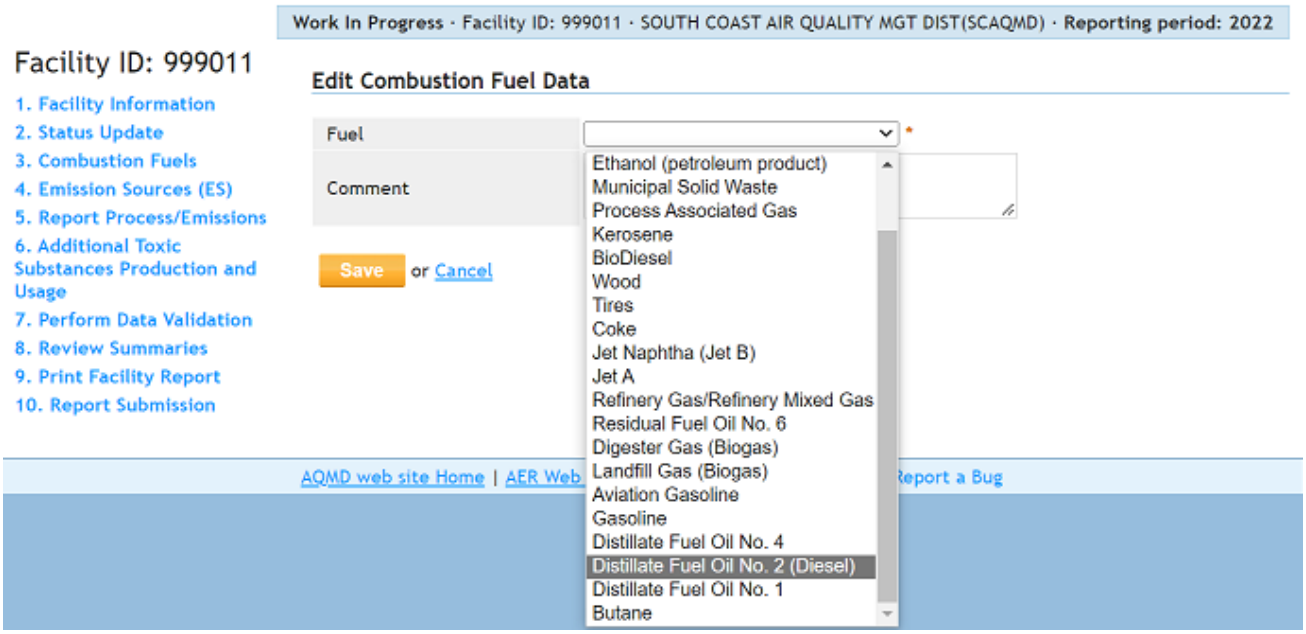


3. Combustion Fuel Specification

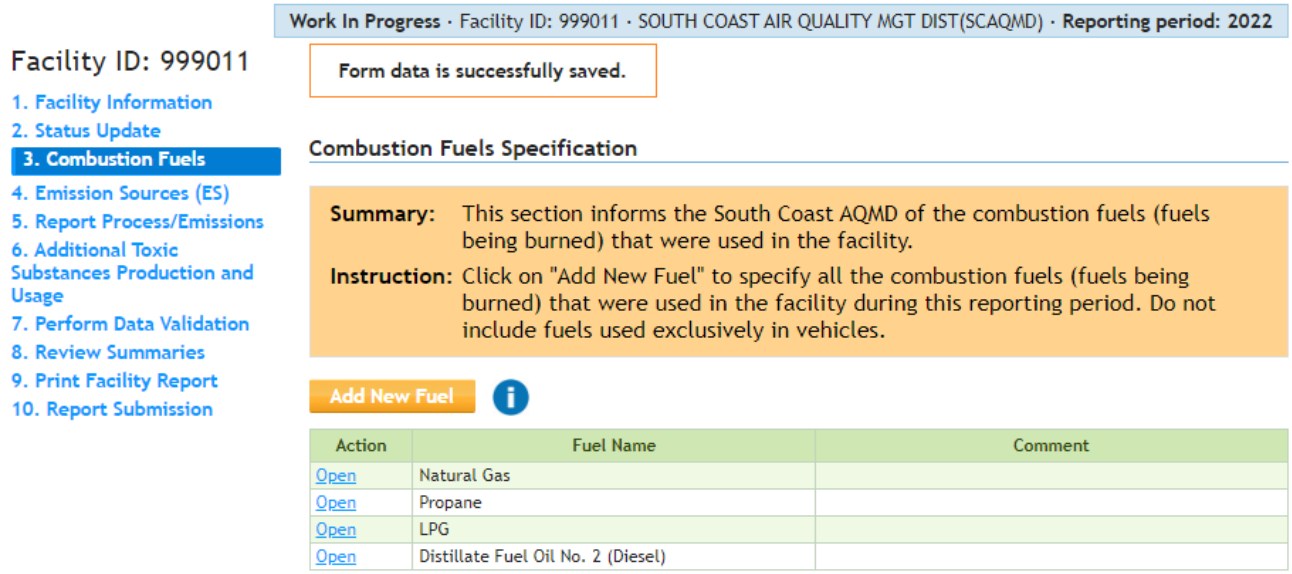
Clicking on the first Bold blue bar (or "OPEN" or "Combustion Fuels" on the left navigation menu) will open a screen that displays the overview of the combustion fuels listed by the facility. To allow the user to build a list of fuels specific to a facility's operations click "Add New Fuel".



Clicking on the "Add New Fuel" link will send user to the "Edit Combustion Fuel Data" screen. Click on the down arrow in the fuel field to see a list of all fuels that are applicable in the South Coast AQMD.

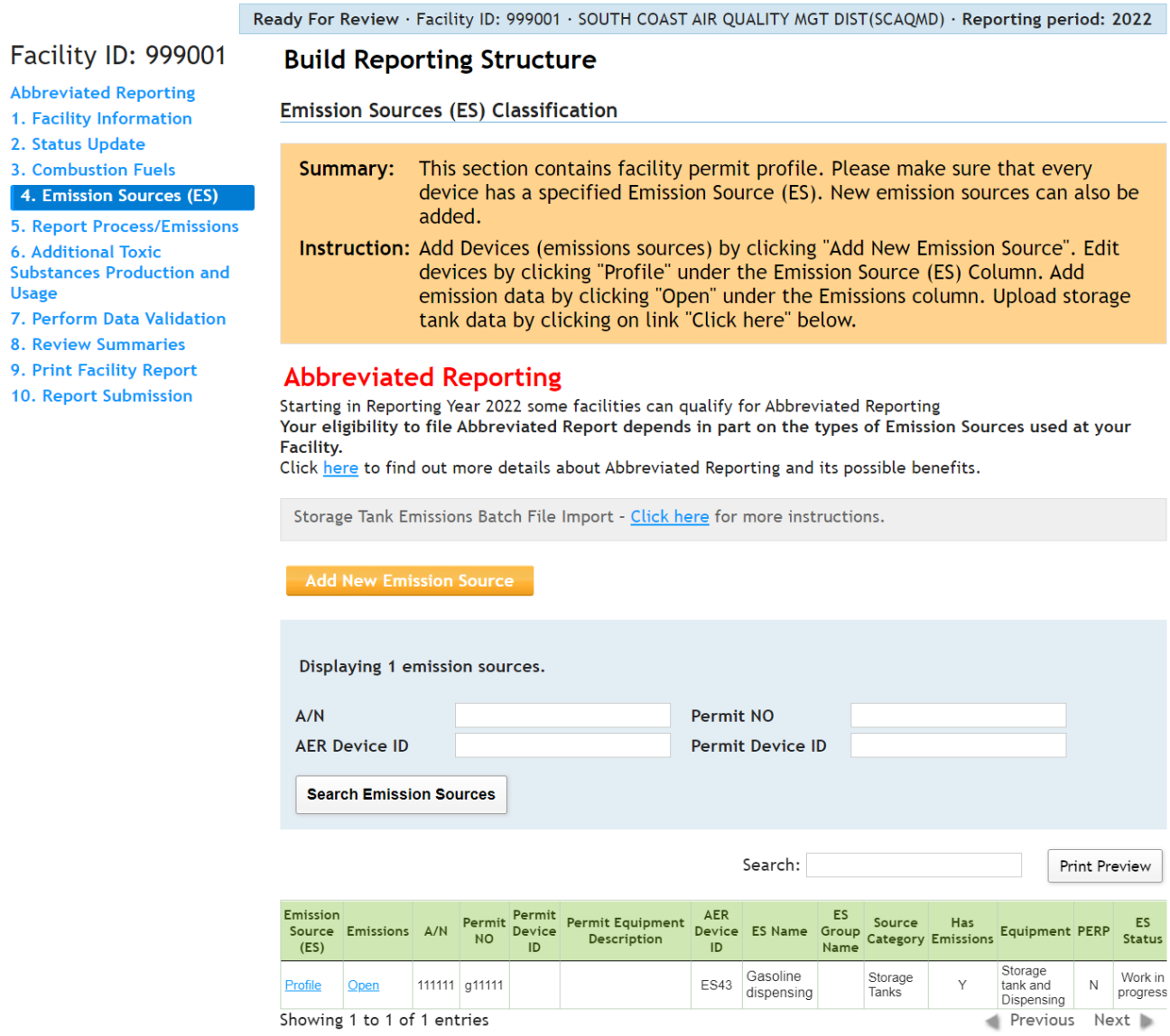


Data must be saved before user can move on to the next section for classifying the emission sources (ES). This can be done by clicking on the "Next" button at the bottom of the screen or following the "Emission Sources (ES)" link on the left navigation menu. Prior to continuing to the next step of data entry, please ensure all combustion fuels used at the facility have been entered on this page. Fuels not included on this page will not be available for selection in other data entry pages.



4. Emission Source (ES) Classification

This page allows the classification of emission sources (ES). Click on the "Emissions Sources (ES)" link on the left navigation menu or the second blue bar in the Build Reporting Structure to go to the next screen for an overview of the emission sources at the facility based on South Coast AQMD's permit database. A list of devices is preloaded for each facility. If the list of devices is not available in the South Coast AQMD database, the user must add the devices manually by clicking the "Add New Emission Source" orange button. If the device to be entered has a valid South Coast AQMD permit, it should be referenced using the appropriate permit Application Number (A/N). User can also sort the Emission Sources table by clicking on the header of the column to be sorted. User can sort similar equipment by entering keywords in the "Search" box located above the ES list (e.g., to view a list of only the boilers, enter "boiler" in the search field and the list will display all equipment with the word "boiler" in the permit equipment description). Clicking the "Print Preview" button above the ES list will enable the user to print the entire ES list.



The next few screens provide user with a closer look at different parts of this screen for data entry. The top part of this screen contains one useful tool: Storage tank emissions data import.

Tank Data Import

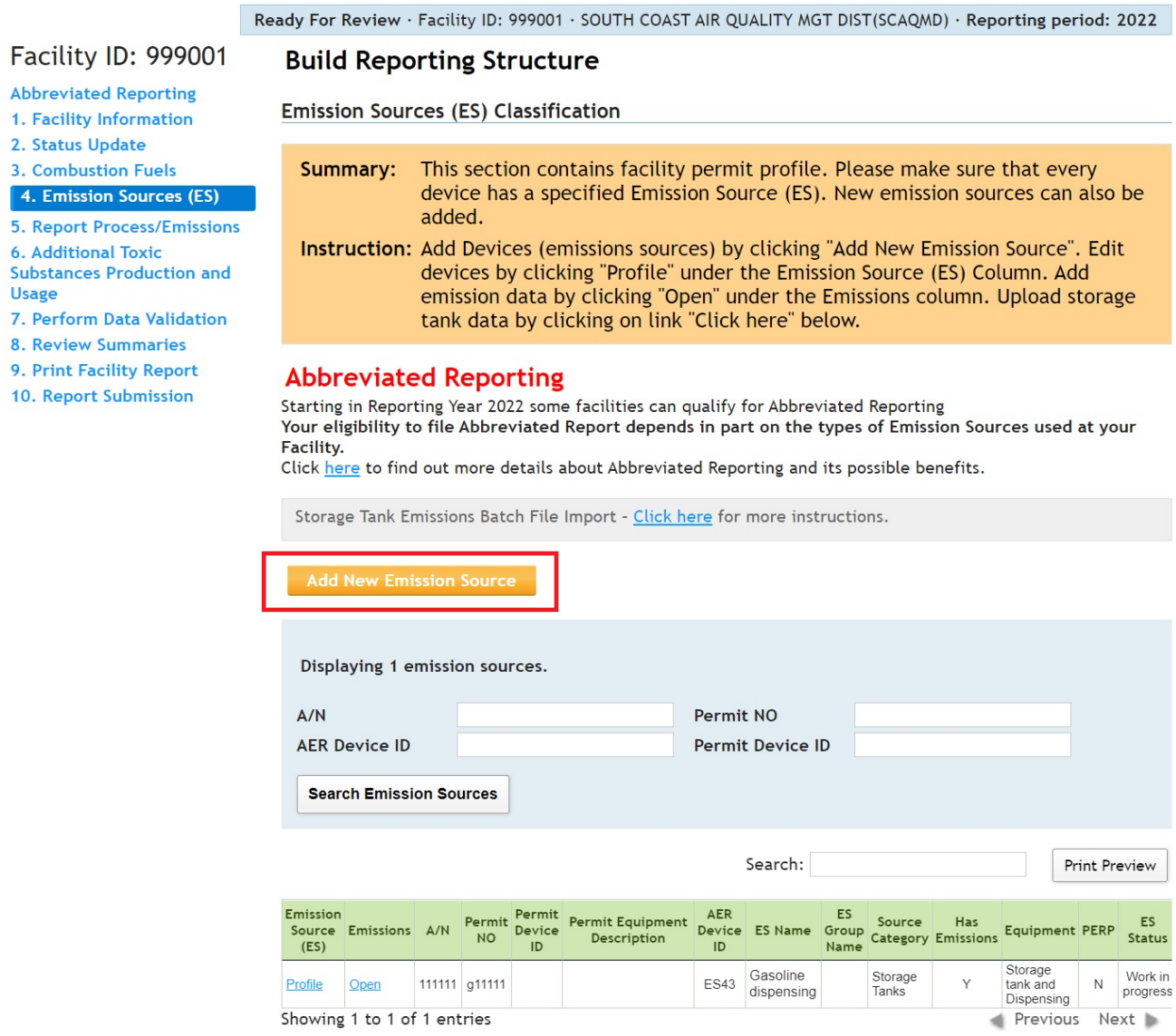
Instructions for importing storage tank data files can be found in "Guidelines for Importing Storage Tank Data into the New AER System" posted in the "Guideline Documents" section of the main AER webpage.

Adding an Emission Source

An Emission Source (ES) can be added for one of the following cases:

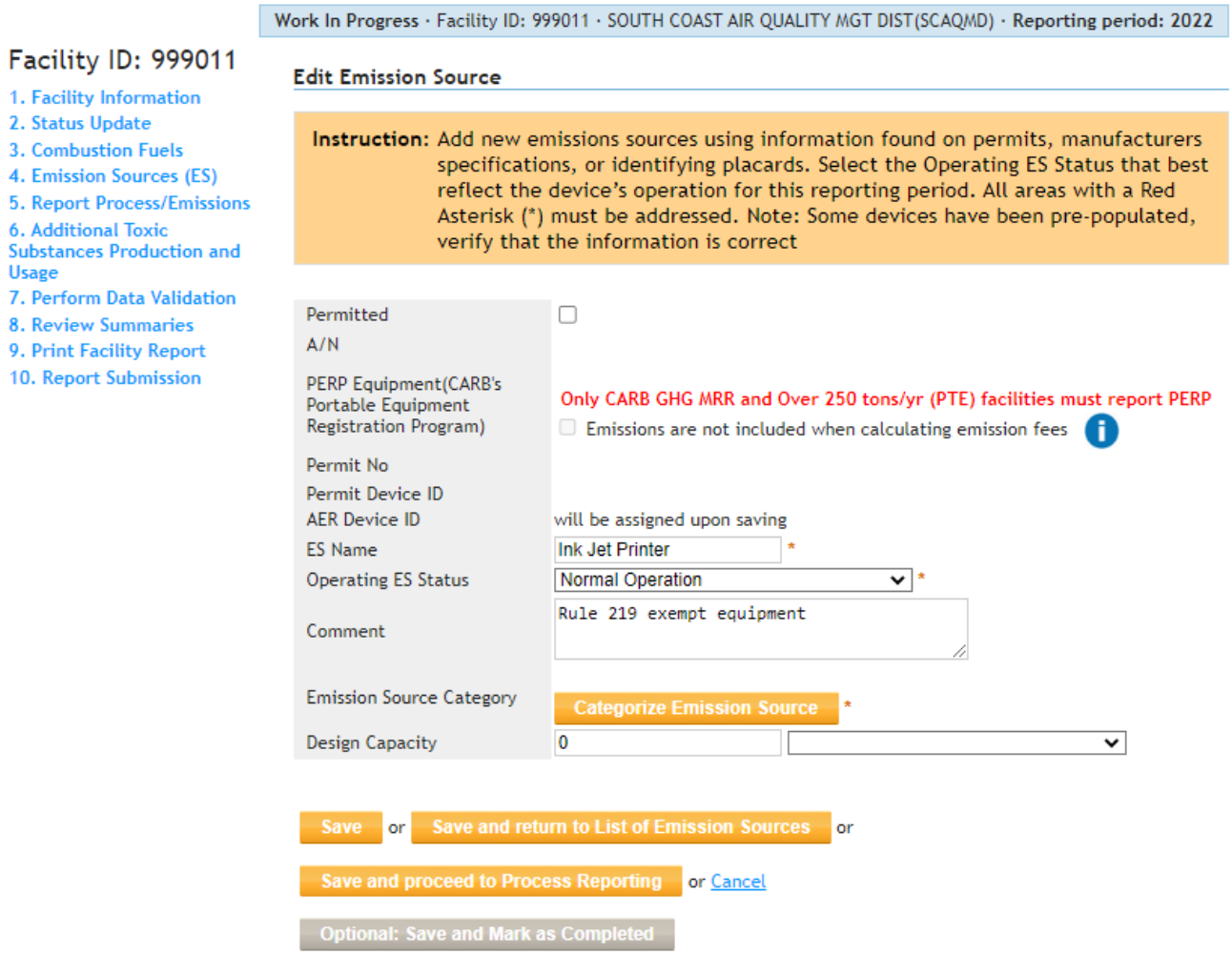
1. Equipment that does not require a written permit (Rule 219) or un-permitted operation,
2. An additional device connected within an existing permit listed in the facility permit profile, and
3. A permitted source that is missing from the facility permit profile.

The examples below illustrate how a facility can add an ES to the facility permit profile. All three cases begin by clicking the "Add New Emissions Source" button at the Emission Sources (ES) Classification screen, as shown in the image below. Clicking the "Add New Emissions Source" button will open the "Edit Emission Source" window.



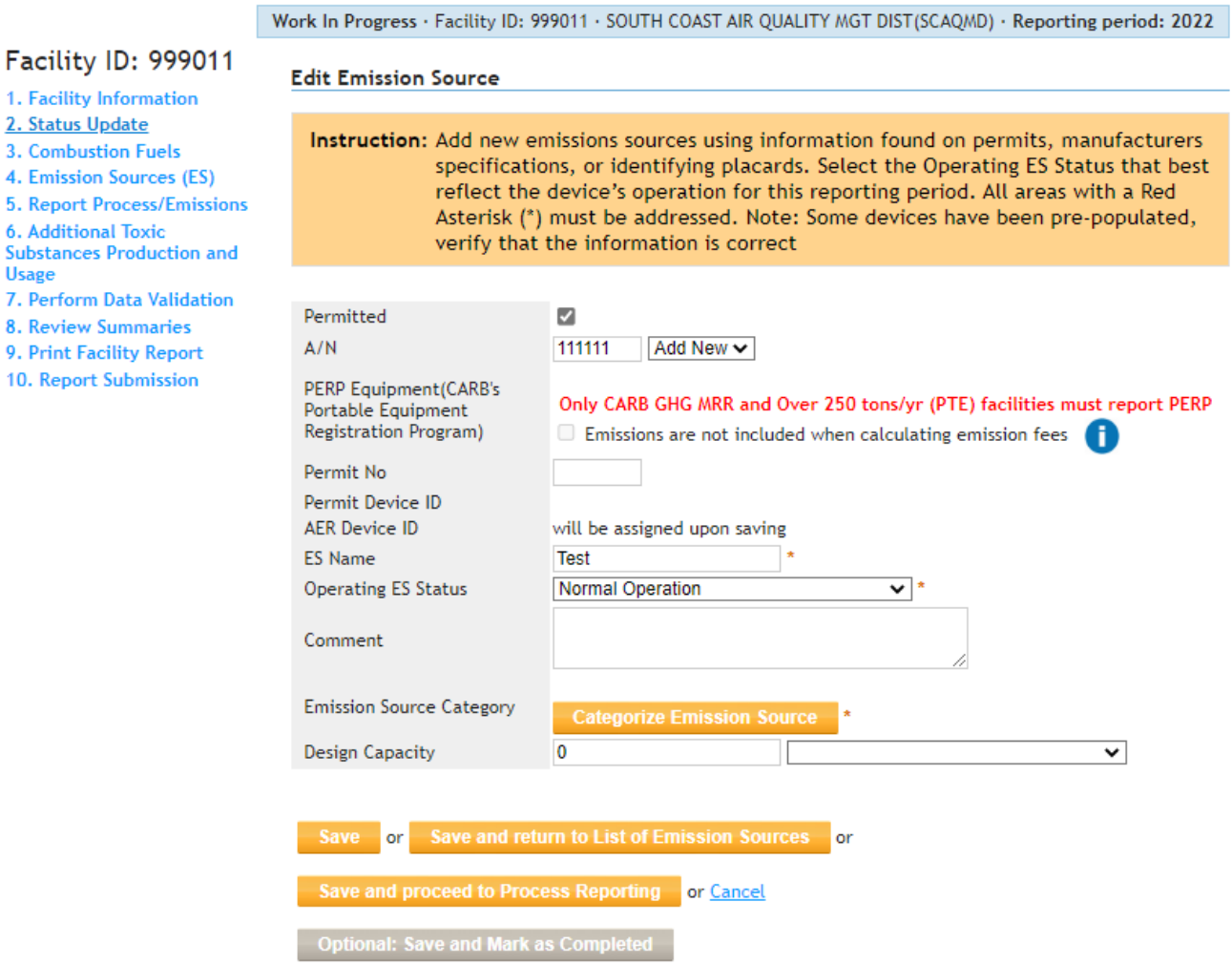
Case 1: Adding equipment that does not require a written permit (Rule 219) or un-permitted operation

In the "Edit Emission Source" window (below), enter the "ES Name" as the Rule 219 equipment name (e.g., Rule 219 - Ink jet printer). Identify the "Operating ES Status" by selecting from the drop-down list. Next, classify the equipment/operation by clicking on the orange button labeled "Determine Emission Source Group Type." Once you have classified the equipment/operation, click "Save and Proceed to Process Reporting."



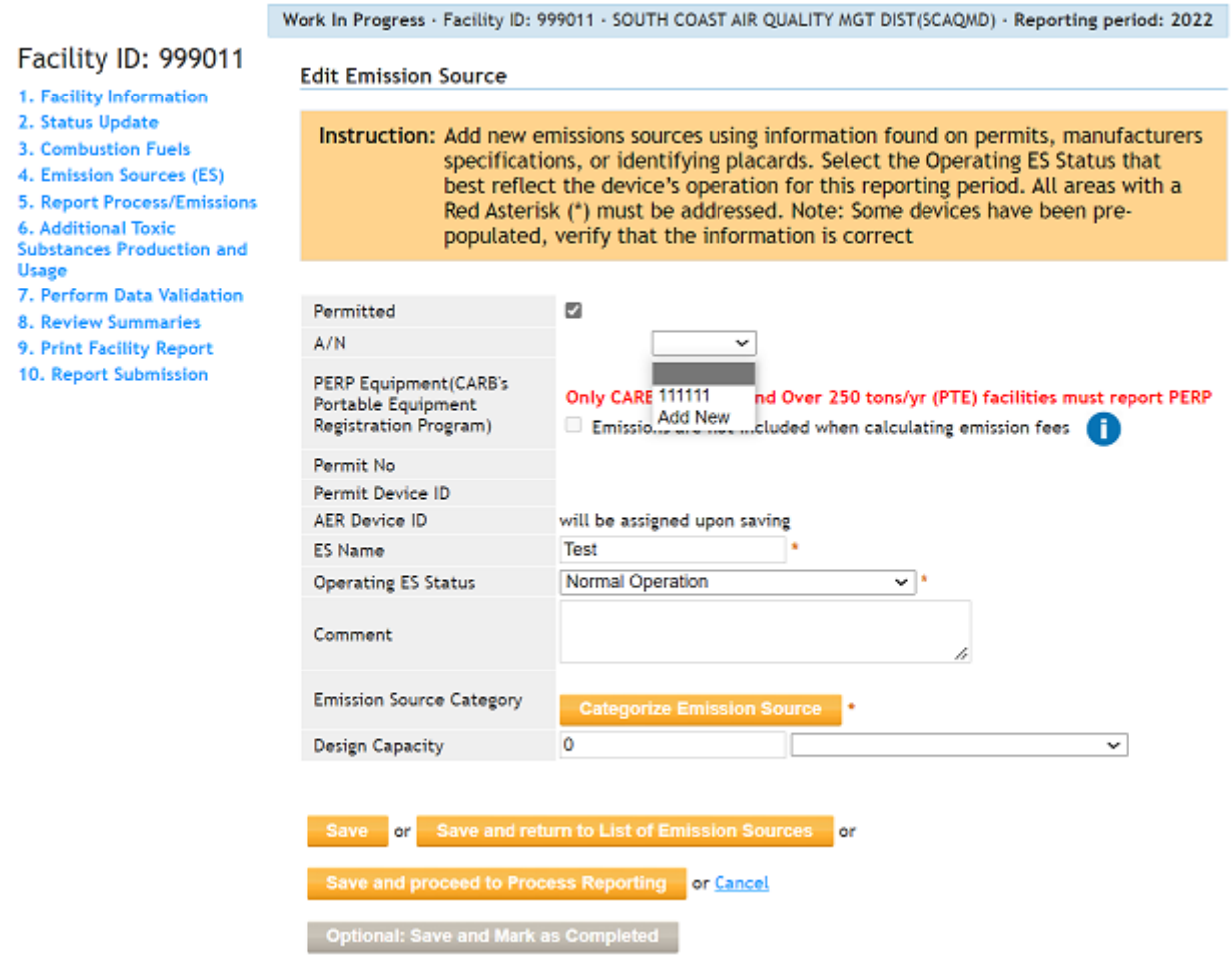
Case 2: Adding a source connected with an existing permit listed in the facility permit profile (i.e., there is more than one device associated with an existing application number.)

An example of when this would be applicable is if there is a permitted control device attached to basic equipment which is not listed in the permit profile. In this example, both devices may be associated with the same permit application number (A/N), but the emissions would be reported under the basic equipment. The "Operating ES Status" for the control equipment should be marked as "Not Generating Emissions." (Note: Some control devices, such as afterburners/oxidizers, will have reportable emissions from fuel combustion). To add the basic equipment in this example, first, in the "Edit Emission Source" window (below), indicate this is connected to a permitted device by clicking the checkbox for "Permitted." From the drop-down list of available permitted devices, select the appropriate application number (A/N) for that device. Identify the operating status, classify the equipment/operation, and then click "Save and Proceed to Process Reporting".



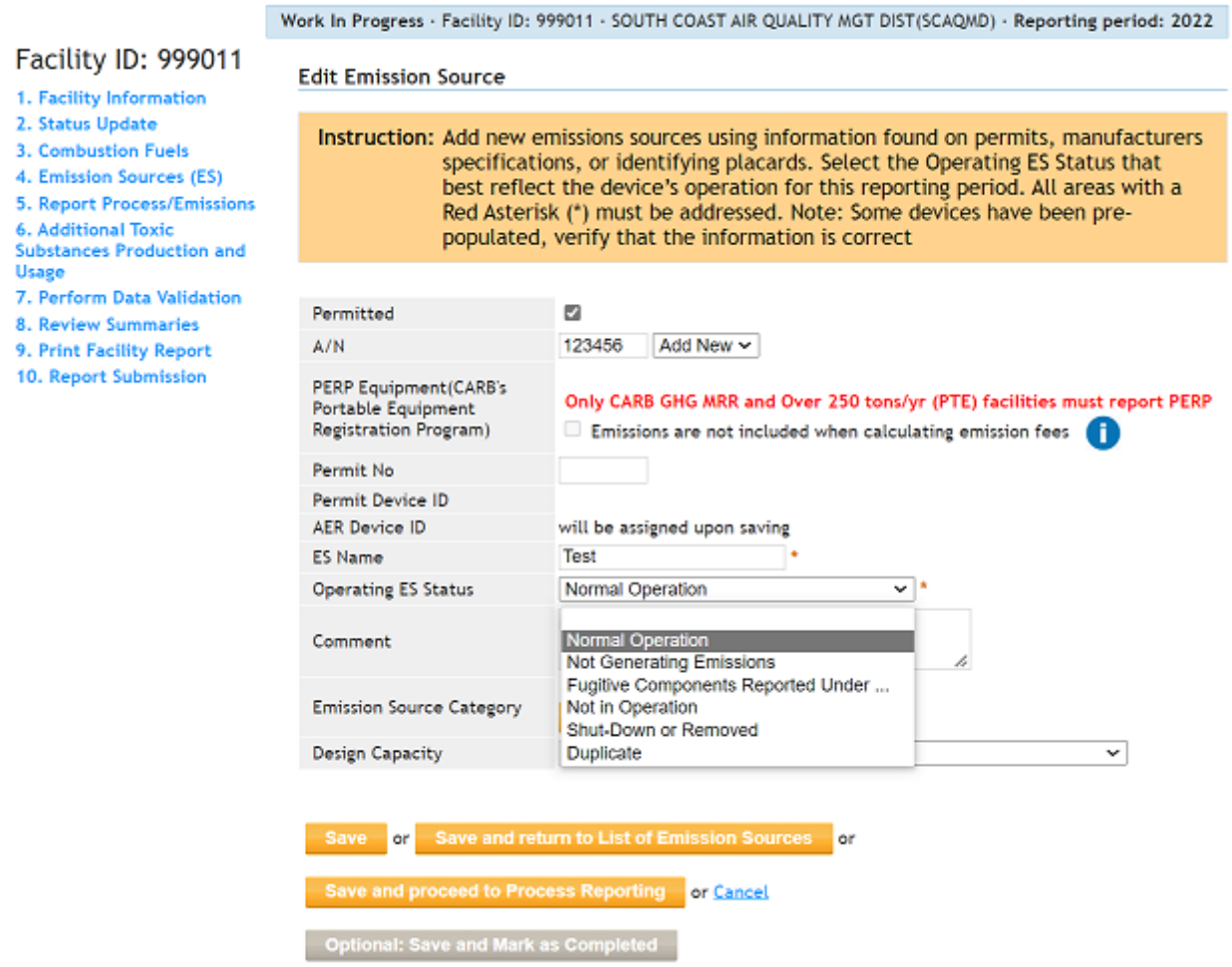
Case 3: Adding a permitted source that is missing from the facility permit profile (i.e., application number is not available in the drop-down list)

In the "Edit Emission Source window (below), indicate (check the box for "Permitted") this is a permitted device; select "Add New" from the drop-down list of application number (A/N) for that device; type in the application and permit number; select the operating status, and emission source group type; then, click "Save and Proceed to Process Reporting."



Defining Emissions Source

Clicking on the "Profile" link in the first column (labelled "Emission Source (ES)") of the Emission Source list will open the "Edit Emission Source" screen for a specific device, as shown below. Note that each emission source is identified by applicable information including Application Number (A/N), Permit Number, Permit Device ID, and AER Device ID as shown in the screen below. The information including Permit Equipment Description is uploaded from the South Coast AQMD permit database. Data entry by user is illustrated in the next several screens.

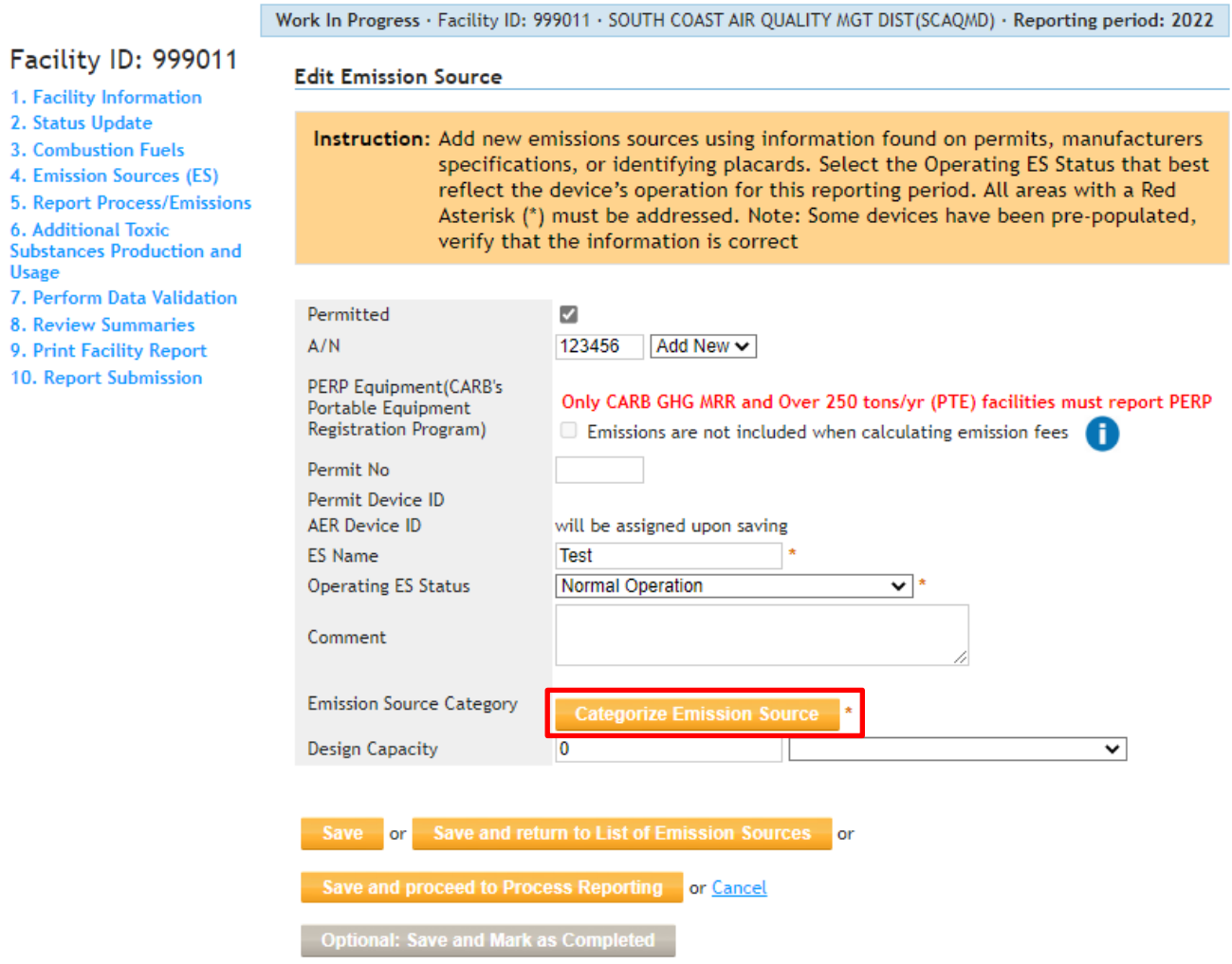


Select an operating status for an ES. The following table defines each Operating ES Status type.

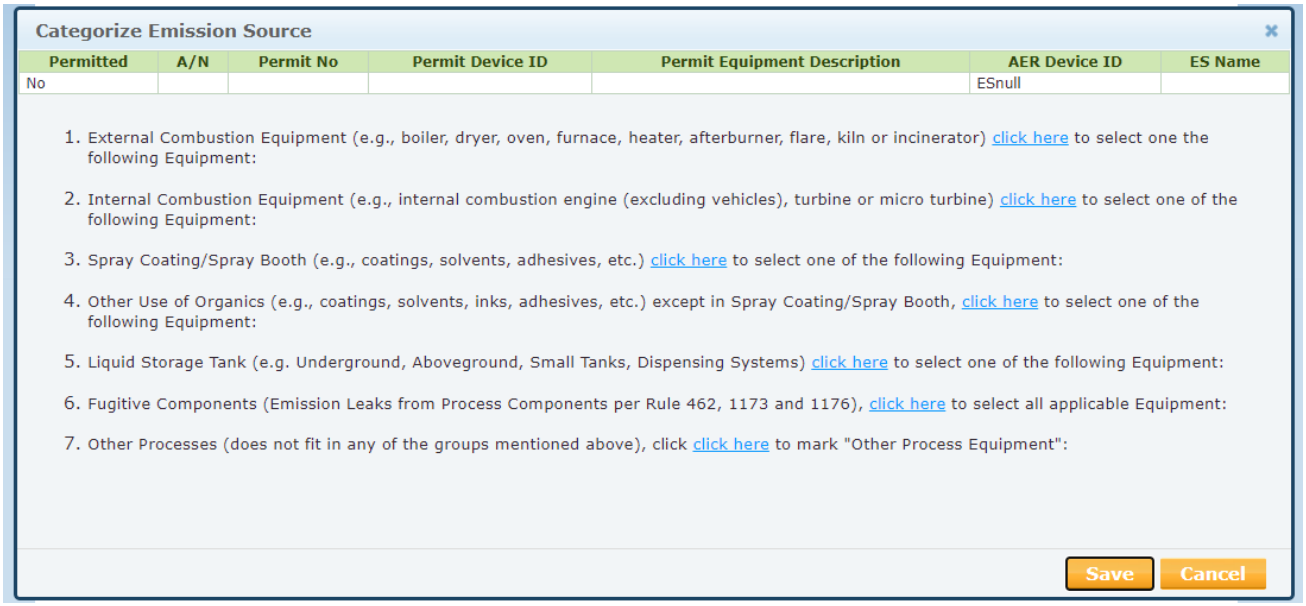
Operation ES Status	Definition
Normal Operation	Operated during the Reporting Period and operation resulted in emissions
Not Generating Emissions	Operated but was not generating emissions
Not in Operation	Did not operate during the reporting period
Shut-Down or Removed	ES permanently shut down or removed prior to the reporting period
Duplicate	Duplicate device (ES) number

For control device that generates emissions (e.g., afterburners, etc.), select ES Status "Normal Operation" and report associated emissions. For control device that does not generate emissions (e.g., absorbers, baghouses, filters, etc.), select ES Status "Not Generating Emissions" (normal operation and not an emission source).

Note that by selecting the first choice, which is "normal operation", the tool offers a button to "Categorize Emission Source". Other selections will not enable this button. The "Comment" field is for user to elaborate the details relative to this device. The "ES Name" field should also be completed to identify any specific information about the device that is not described in the Permit Equipment Description or Comment fields.

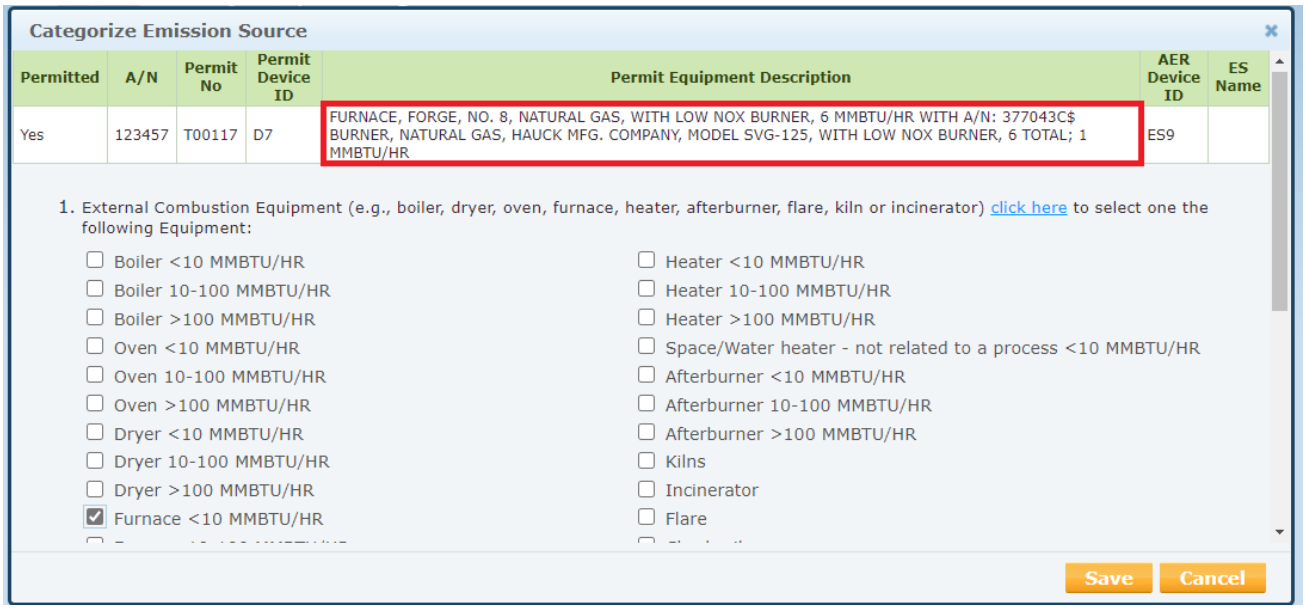


Clicking on the "Determine Emission Source Group Type" button (above) will bring up a screen with 7 category options for the device, as shown below.

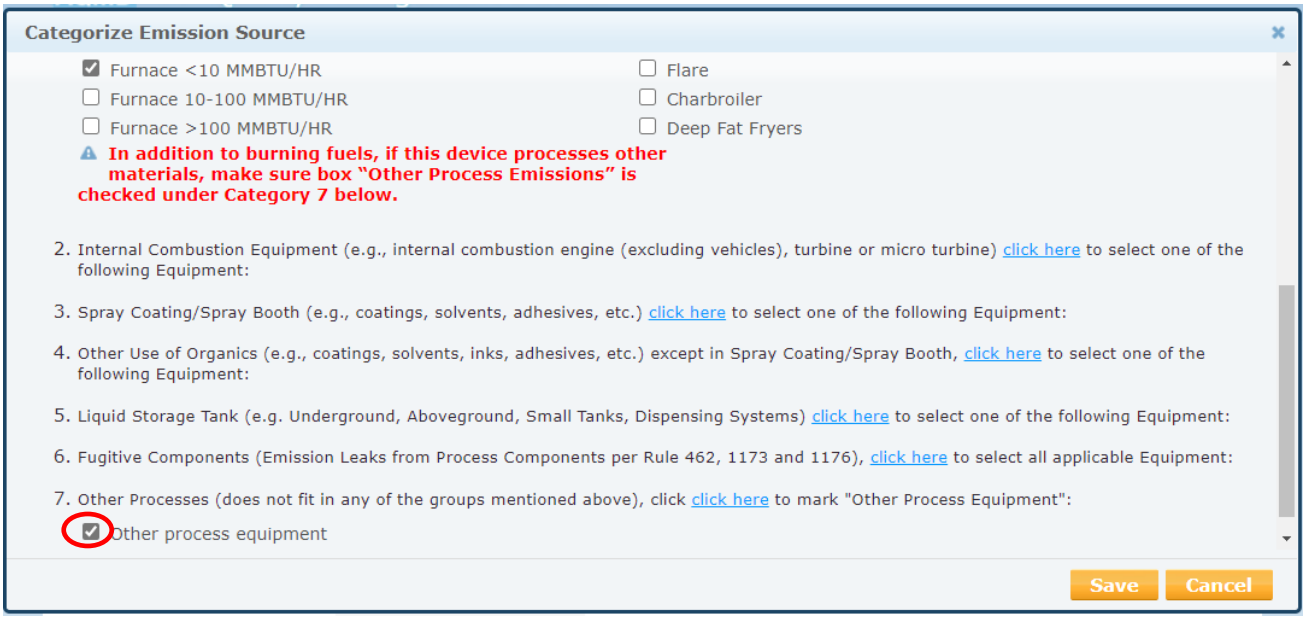


Under category #1, FURNACE is displayed as an external combustion source, which is applicable for this device according to the permit description shown right above the categories list, as shown

above. User then selects "Furnace <10 MMBTU/HR" because this emission source is rated at 6 MMBTU/HR and clicks on "Save" as shown in the image below.



In this example, in addition to burning fuel, this furnace also processes material. User then scrolls down to category #7 and checks the "Other Process Equipment". User can change the selection or cancel the classification with "Cancel" button. Clicking on "Save" button will bring user back to "Edit Emission Source" screen.

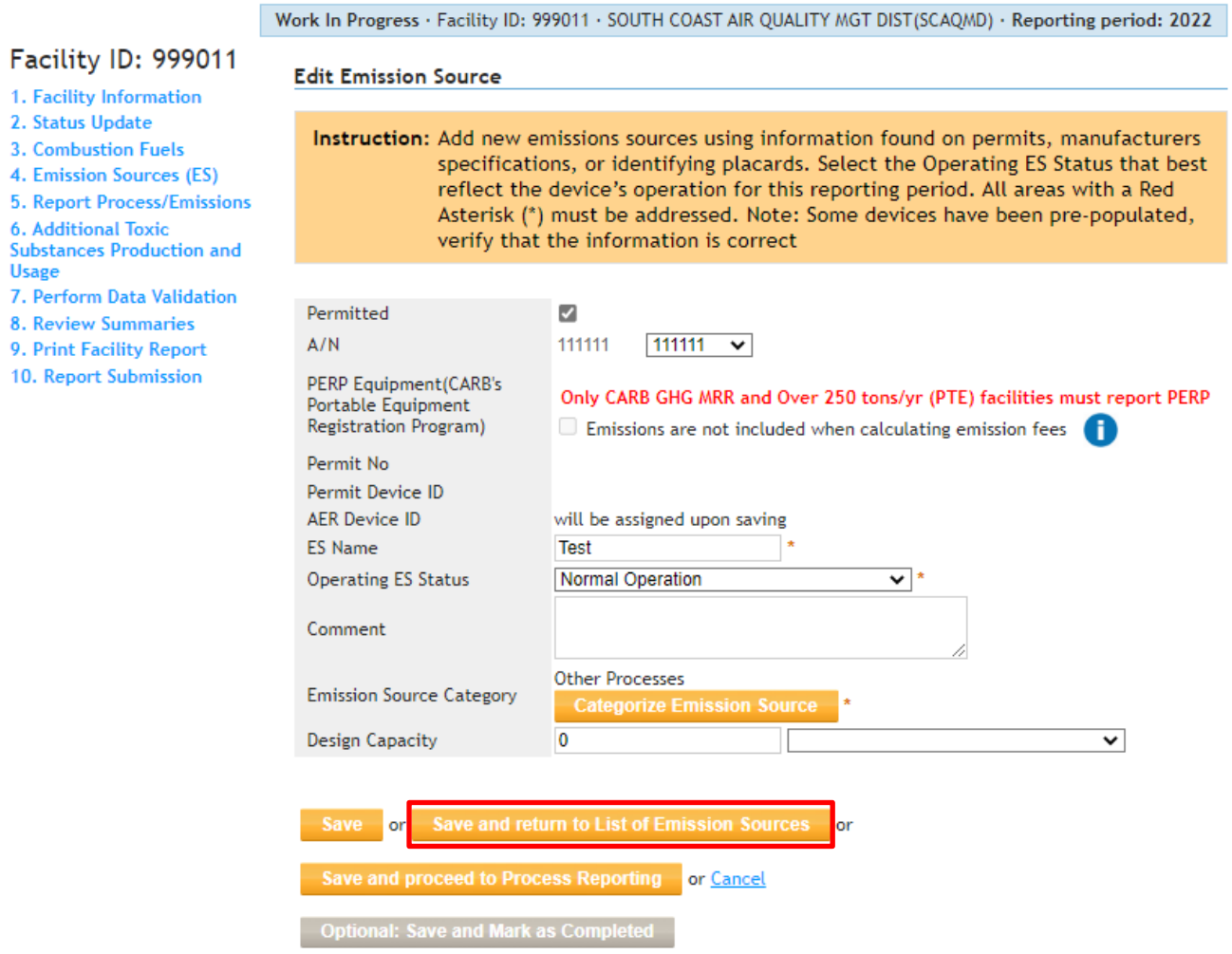


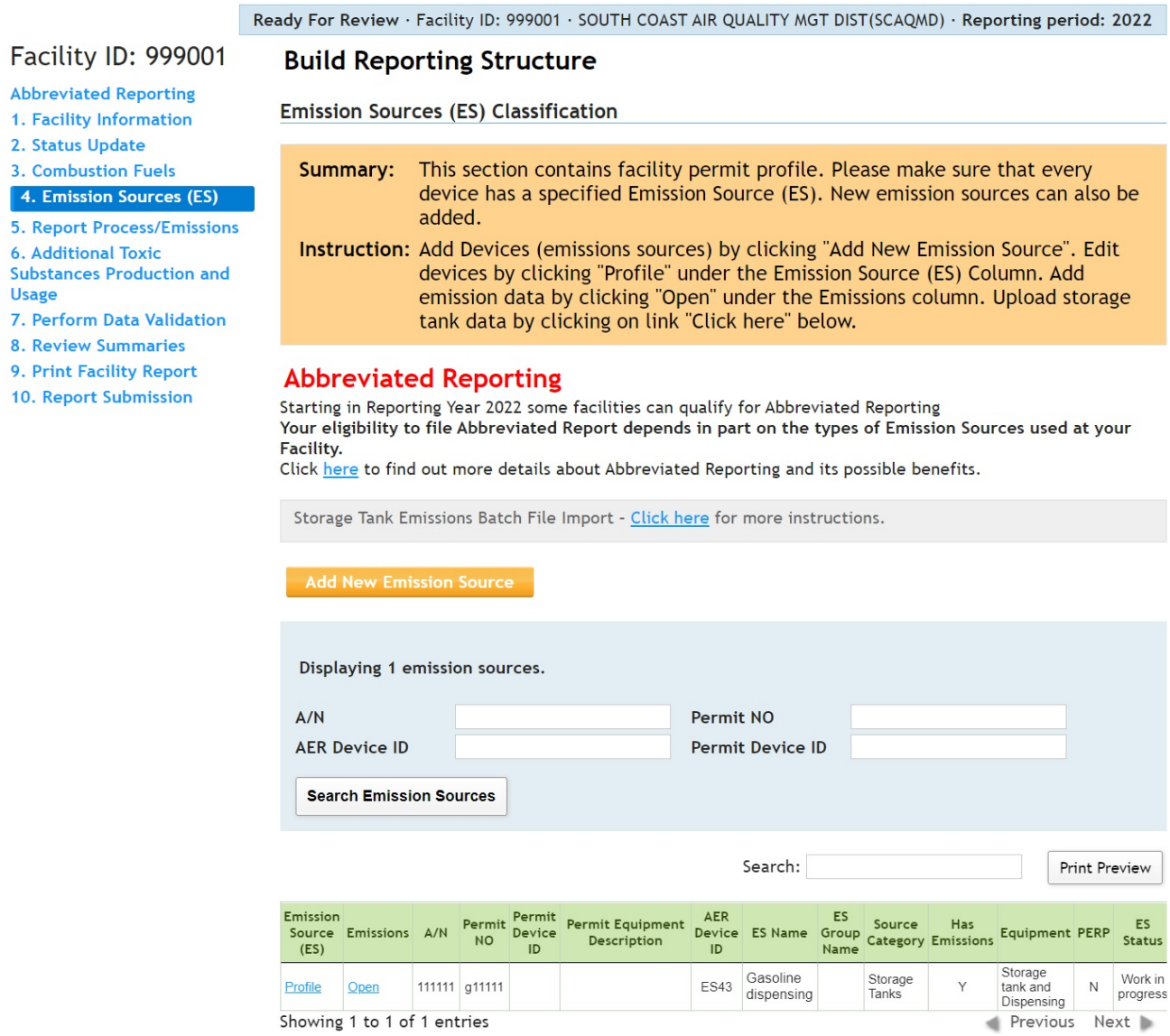
Two Navigation Paths for Process

After defining an ES, the AER Reporting Tool presents two (2) paths (navigation options) for reporting emissions. User can access a Process by:

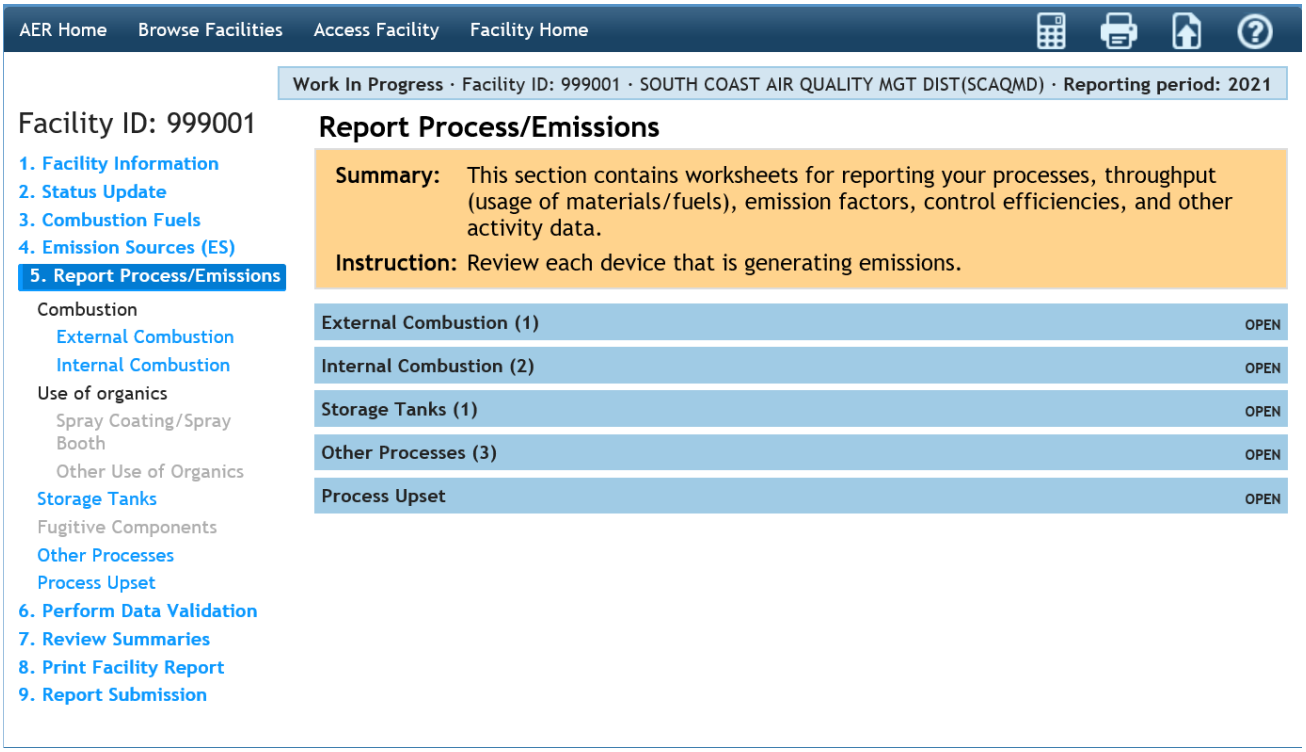
Path #1: Define all ESs first, then go through worksheets and complete all Processes, or
Path #2: Go straight to next step to work on the process and report emissions.

PATH #1 - Save and Return to List of Emission Sources: clicking on this button will save the data and return user to the emission source profile where user can continue with another device prior to starting Process reporting.

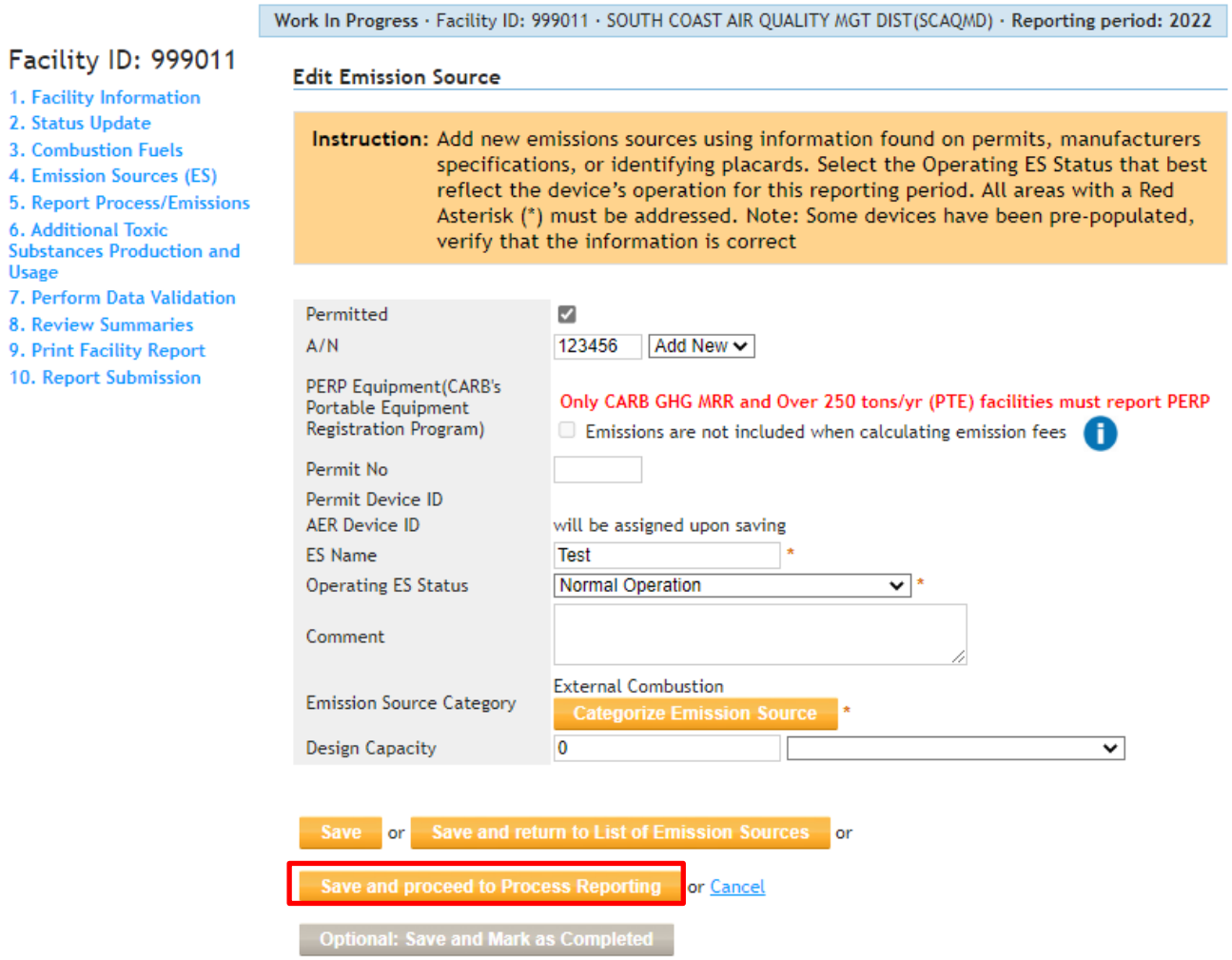


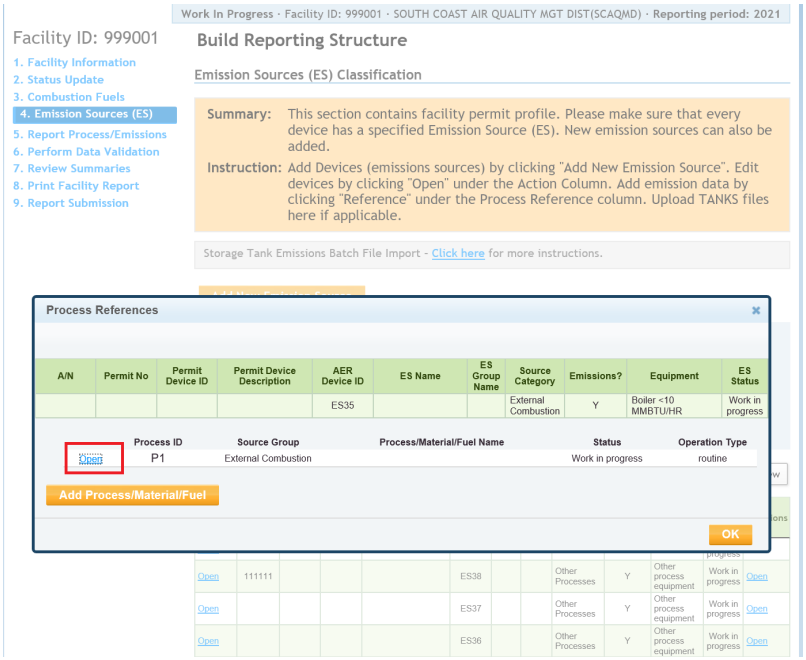

Ready For Review · Facility ID: 999001 · SOUTH COAST AIR QUALITY MGT DIST(SCAQMD) · Reporting period: 2022
Facility ID: 999001
Abbreviated Reporting
1. Facility Information
2. Status Update
3. Combustion Fuels
4. Emission Sources (ES)
5. Report Process/Emissions
6. Additional Toxic Substances Production and Usage
7. Perform Data Validation
8. Review Summaries
9. Print Facility Report
10. Report Submission
Build Reporting Structure
Emission Sources (ES) Classification
Summary: This section contains facility permit profile. Please make sure that every device has a specified Emission Source (ES). New emission sources can also be added.
Instruction: Add Devices (emissions sources) by clicking "Add New Emission Source". Edit devices by clicking "Profile" under the Emission Source (ES) Column. Add emission data by clicking "Open" under the Emissions column. Upload storage tank data by clicking on link "Click here" below.
Abbreviated Reporting
Starting in Reporting Year 2022 some facilities can qualify for Abbreviated Reporting
Your eligibility to file Abbreviated Report depends in part on the types of Emission Sources used at your Facility.
Click here to find out more details about Abbreviated Reporting and its possible benefits.
Storage Tank Emissions Batch File Import - Click here for more instructions.
Add New Emission Source
Displaying 1 emission sources.
A/N
Permit NO
AER Device ID
Permit Device ID
Search Emission Sources
Search:
Print Preview
Emission Source (ES)
Emissions
A/N
Permit NO
Permit Device ID
Permit Equipment Description
AER Device ID
ES Name
ES Group Name
Source Category
Has Emissions
Equipment
PERP
ES Status
Profile
Open
111111
g11111
ES43
Gasoline dispensing
Storage Tanks
Y
Storage tank and Dispensing
N
Work in progress
Showing 1 to 1 of 1 entries
Previous
Next

The tool provides an alternative look at the reporting structures that were built during the process emission source classification. The emission sources are grouped by the selected categories as highlighted in BLUE at both: Report Process/Emissions overview and left navigation menu. By clicking on "Report Process/Emissions" on this screen (or on the left navigation menu), user will be able to see a list of all worksheets that were assigned based on information provided on Emission Sources. As an alternative, user can access emission sources, assigned processes or add new processes from here for reporting emission by categories.



PATH #2 - Save and Proceed to Process Reporting – Selecting this button will save the data and bring up a screen displaying two processes associated with this emission source for immediate reporting: in this sample case P1 for fuel combustion and P2 for processing of material. Clicking on P1 or P2 processes will take user to the applicable worksheet screen(s) for entering emissions data.



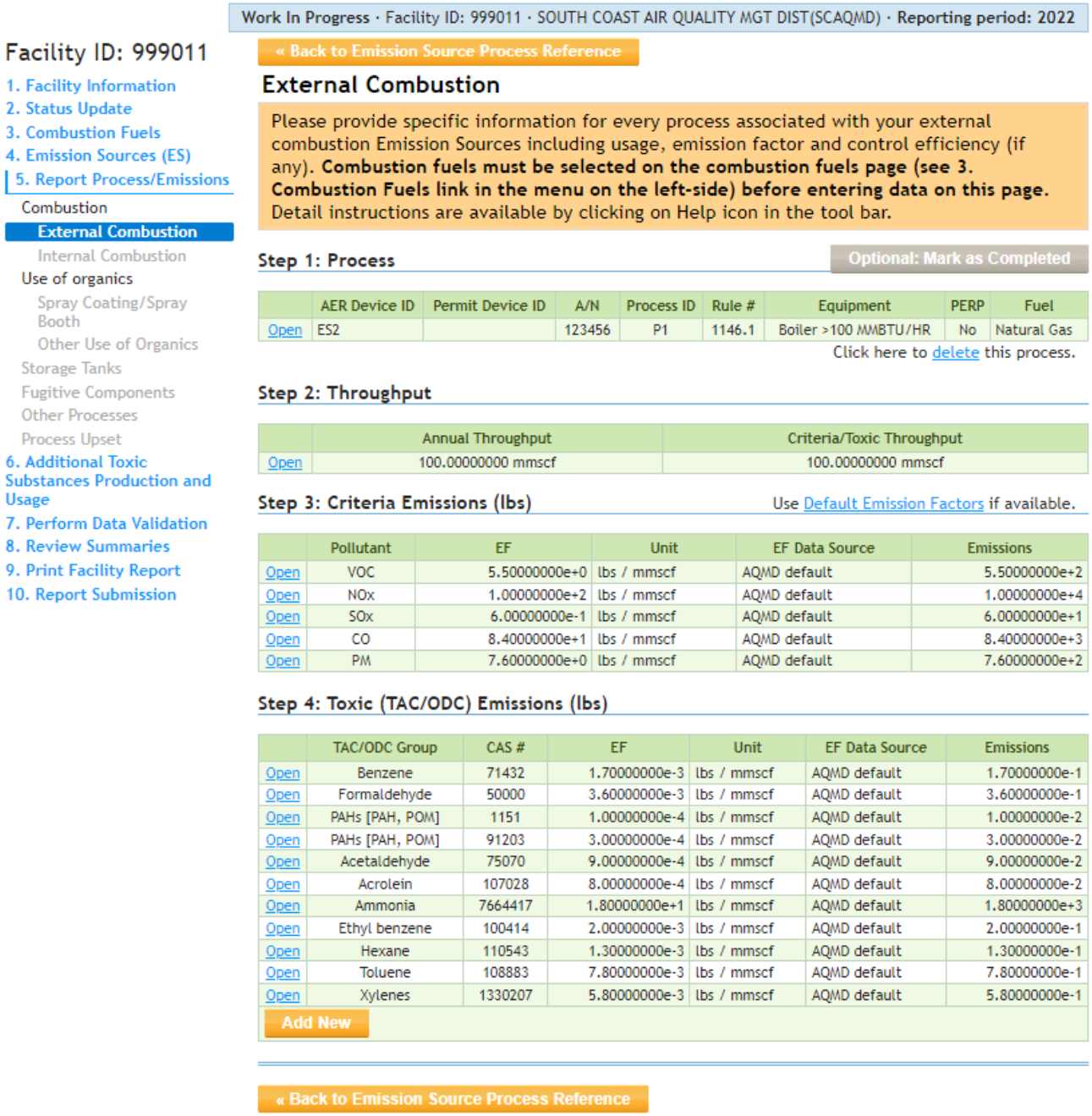


Process/Equipment Samples

Users are recommended to closely follow the examples in the next two sessions that demonstrate the flexibilities of the AER Reporting Tool in reporting emissions from two processes: P1 for fuel burning process where default emission factors are available and P2 for processing of material throughput.

P1 – External Combustion Sample

The tool presents several sections on this screen: Process details, Throughput, Criteria Emissions, and Toxic (TAC/ODC) Emissions. Each section must be completed in sequential order and data must be saved before the start of the next section. **User must select Fuel and throughput units before reporting emissions**. Following the "Open" link will pop up the data entry screen for each section.



Work In Progress · Facility ID: 999011 · SOUTH COAST AIR QUALITY MGT DIST(SCAQMD) · Reporting period: 2022

Facility ID: 999011

1. Facility Information
2. Status Update
3. Combustion Fuels
4. Emission Sources (ES)
5. Report Process/Emissions
   - Combustion
     - External Combustion
     - Internal Combustion
   - Use of organics
     - Spray Coating/Spray Booth
     - Other Use of Organics
   - Storage Tanks
   - Fugitive Components
   - Other Processes
   - Process Upset
6. Additional Toxic Substances Production and Usage
7. Perform Data Validation
8. Review Summaries
9. Print Facility Report
10. Report Submission

« Back to Emission Source Process Reference

External Combustion

Please provide specific information for every process associated with your external combustion Emission Sources including usage, emission factor and control efficiency (if any). **Combustion fuels must be selected on the combustion fuels page (see 3. Combustion Fuels link in the menu on the left-side) before entering data on this page.** Detail instructions are available by clicking on Help icon in the tool bar.

Step 1: Process

Optional: Mark as Completed

	AER Device ID	Permit Device ID	A/N	Process ID	Rule #	Equipment	PERP	Fuel
Open	ES2		123456	P1	1146.1	Boiler >100 MMBTU/HR	No	Natural Gas

Click here to delete this process.

Step 2: Throughput

	Annual Throughput	Criteria/Toxic Throughput
Open	100.00000000 mmscf	100.00000000 mmscf

Step 3: Criteria Emissions (lbs)

Use Default Emission Factors if available.

	Pollutant	EF	Unit	EF Data Source	Emissions
Open	VOC	5.50000000e+0	lbs / mmscf	AQMD default	5.50000000e+2
Open	NOx	1.00000000e+2	lbs / mmscf	AQMD default	1.00000000e+4
Open	SOx	6.00000000e-1	lbs / mmscf	AQMD default	6.00000000e+1
Open	CO	8.40000000e+1	lbs / mmscf	AQMD default	8.40000000e+3
Open	PM	7.60000000e+0	lbs / mmscf	AQMD default	7.60000000e+2

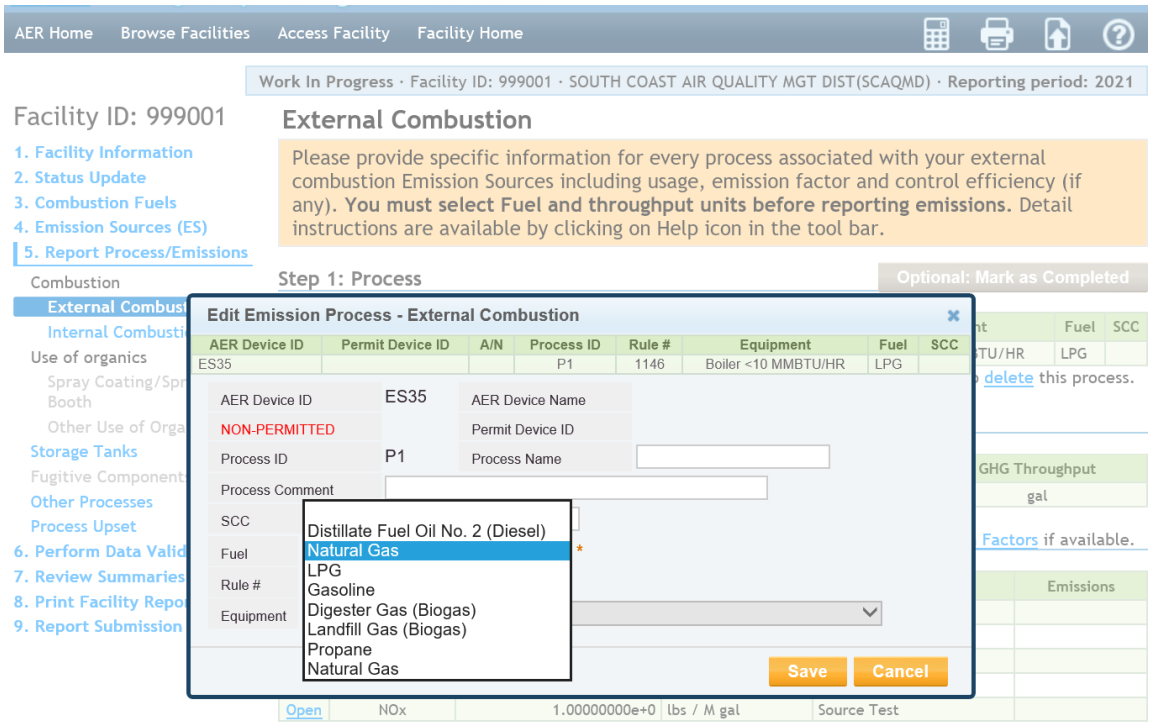
Step 4: Toxic (TAC/ODC) Emissions (lbs)

	TAC/ODC Group	CAS #	EF	Unit	EF Data Source	Emissions
Open	Benzene	71432	1.70000000e-3	lbs / mmscf	AQMD default	1.70000000e-1
Open	Formaldehyde	50000	3.60000000e-3	lbs / mmscf	AQMD default	3.60000000e-1
Open	PAHs [PAH, POM]	1151	1.00000000e-4	lbs / mmscf	AQMD default	1.00000000e-2
Open	PAHs [PAH, POM]	91203	3.00000000e-4	lbs / mmscf	AQMD default	3.00000000e-2
Open	Acetaldehyde	75070	9.00000000e-4	lbs / mmscf	AQMD default	9.00000000e-2
Open	Acrolein	107028	8.00000000e-4	lbs / mmscf	AQMD default	8.00000000e-2
Open	Ammonia	7664417	1.80000000e+1	lbs / mmscf	AQMD default	1.80000000e+3
Open	Ethyl benzene	100414	2.00000000e-3	lbs / mmscf	AQMD default	2.00000000e-1
Open	Hexane	110543	1.30000000e-3	lbs / mmscf	AQMD default	1.30000000e-1
Open	Toluene	108883	7.80000000e-3	lbs / mmscf	AQMD default	7.80000000e-1
Open	Xylenes	1330207	5.80000000e-3	lbs / mmscf	AQMD default	5.80000000e-1

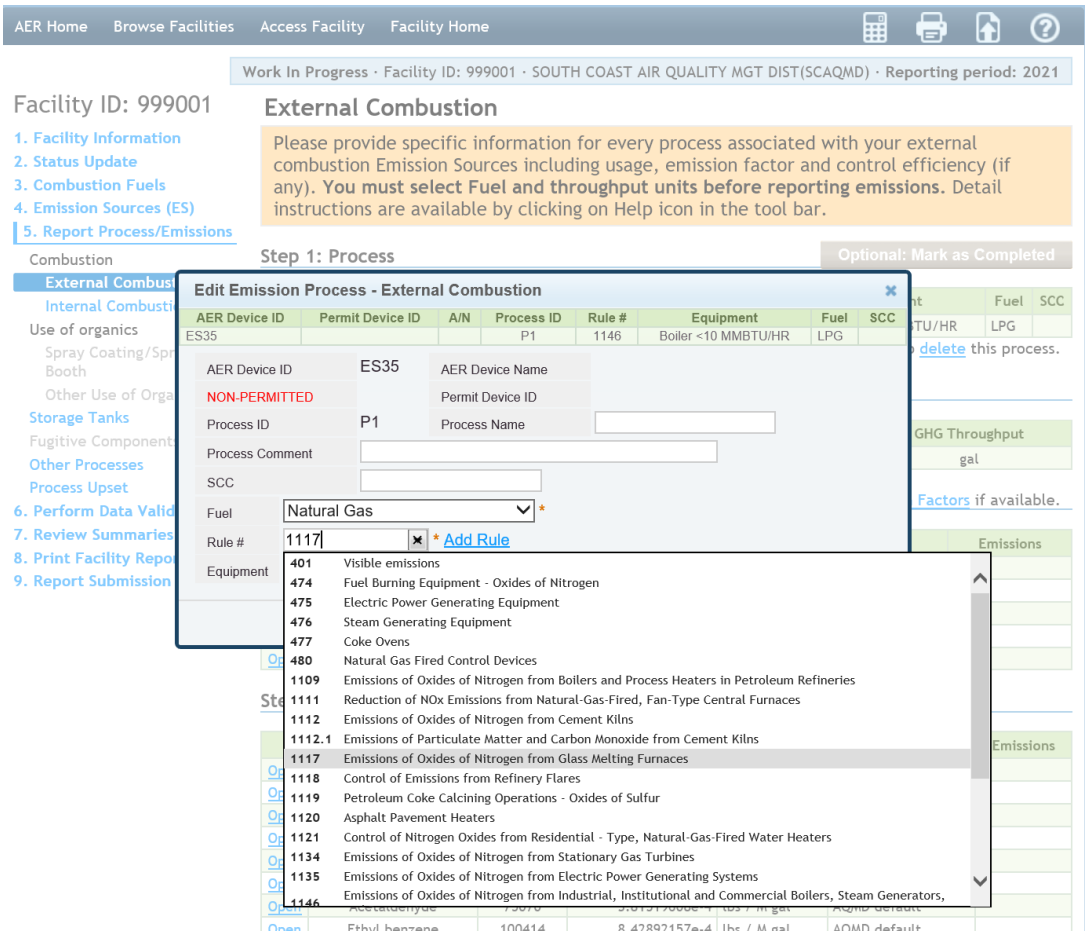
Add New

« Back to Emission Source Process Reference

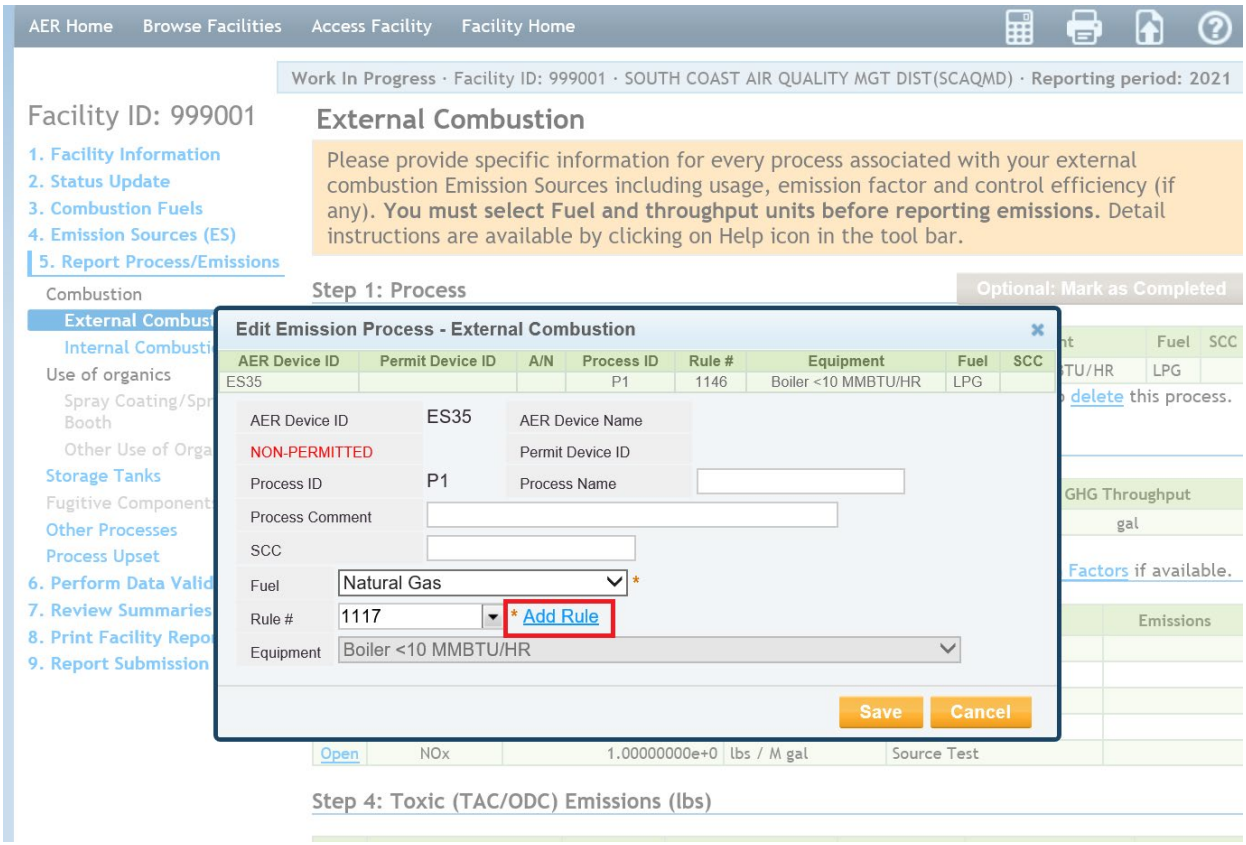
Process Pop-Up window– User enters additional information such as process name and comment. Natural gas is selected as the primary fuel.



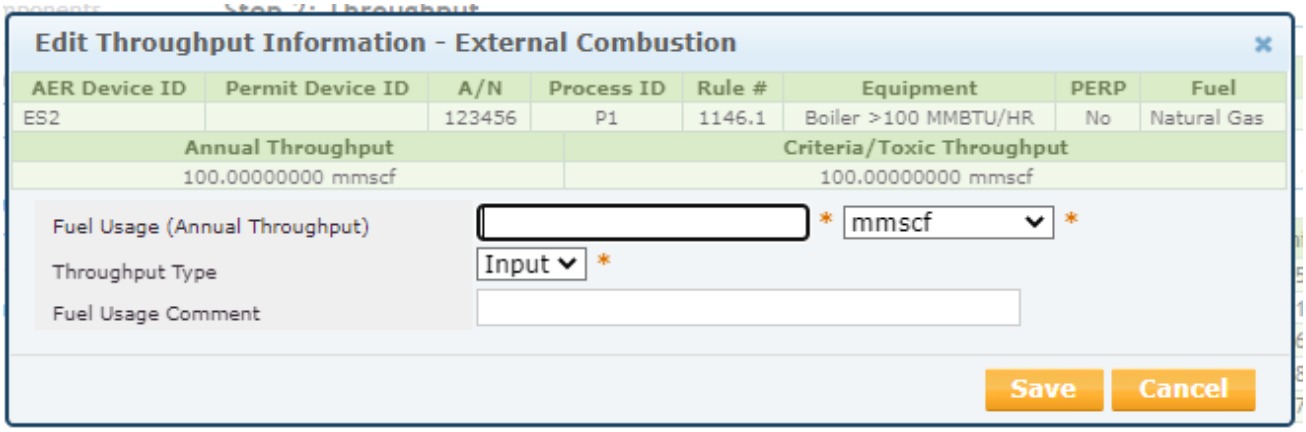
Process Pop-Up window – User selects Rule 1117 for a glass furnace.



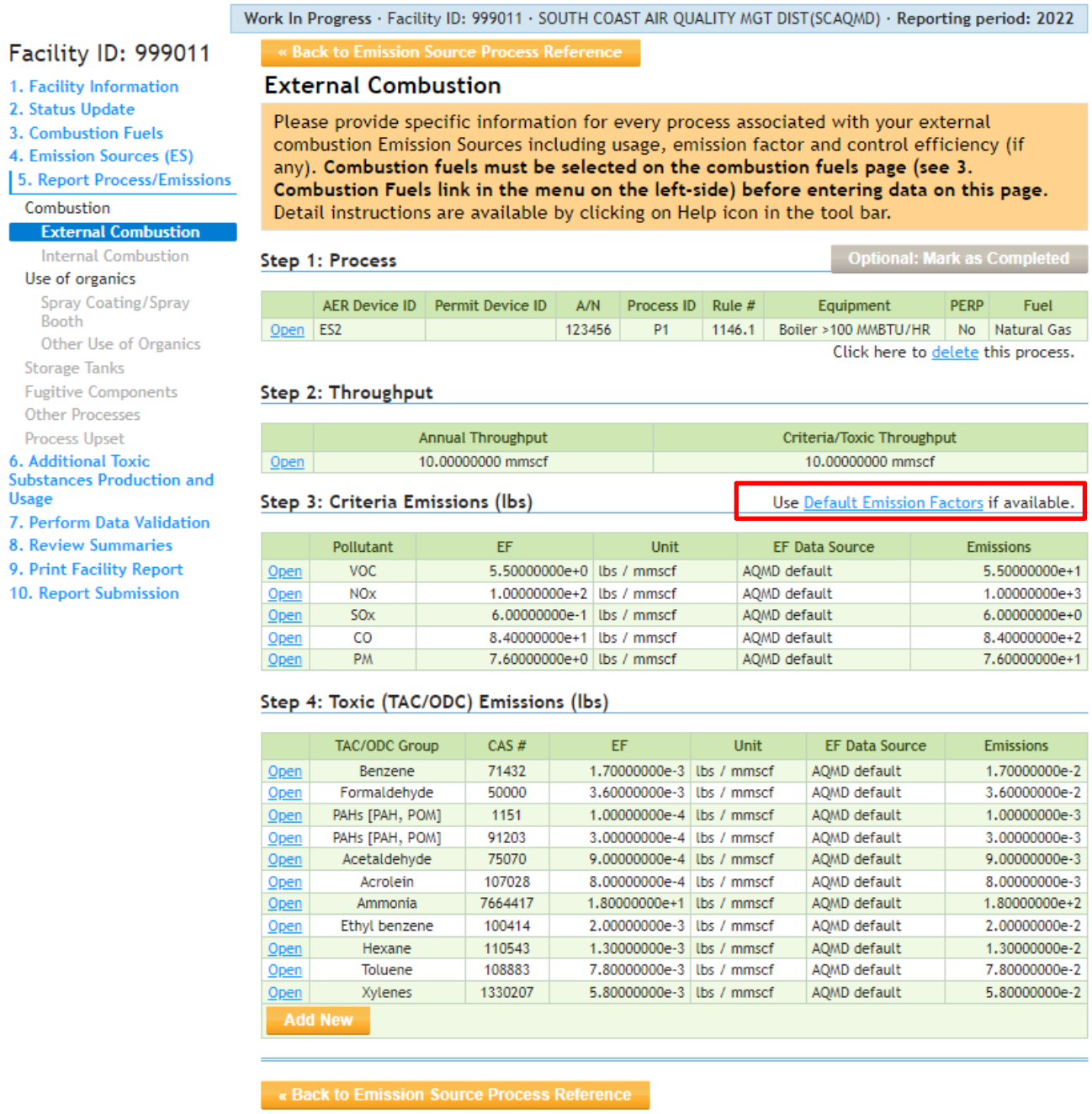
Process Pop-Up window – User can add more rules that are applicable to the operation by clicking on the link.



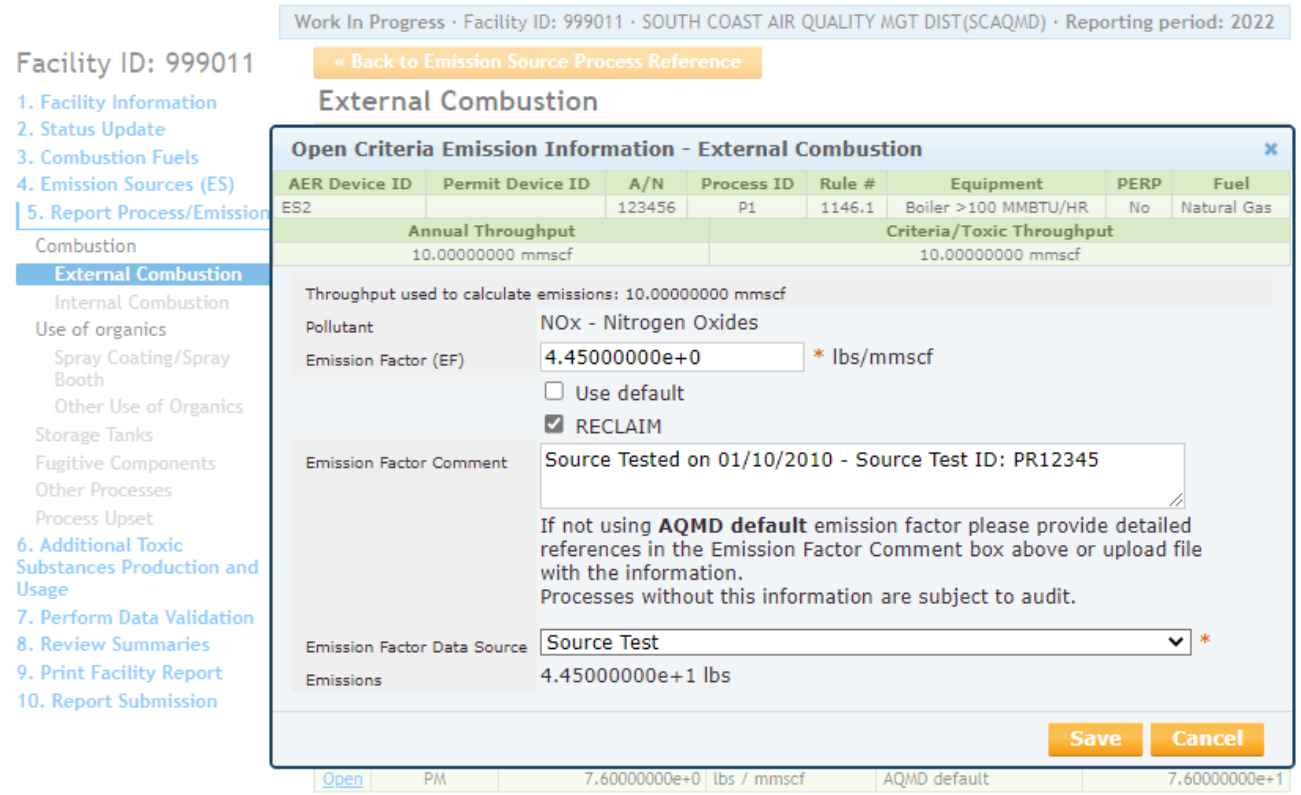
Clicking on "Save" button will bring user back to worksheet for entering throughput.
At the Throughput Pop-Up window, user enters throughput data and selects the proper unit. User can also provide comment on the throughput data. Again, clicking on "Save" button will bring user back to worksheet.



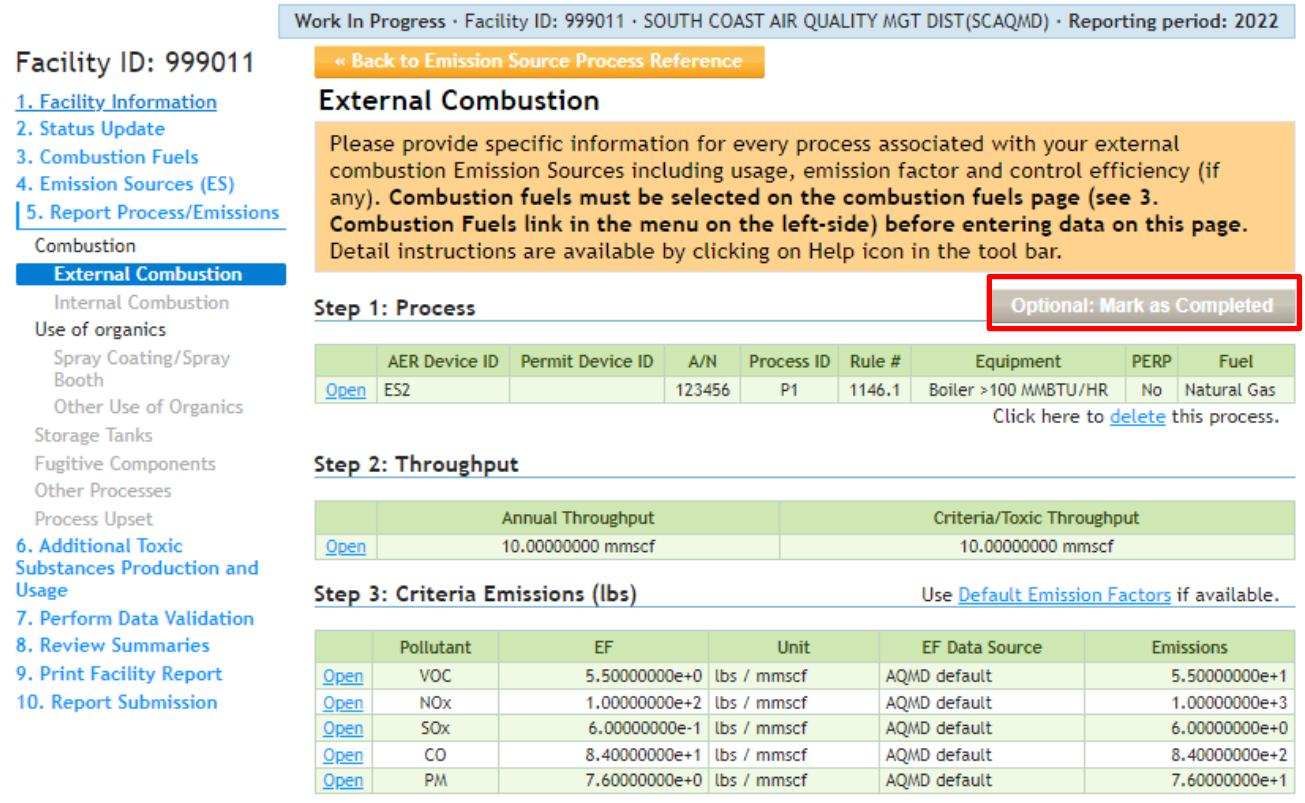
The Webtool will auto-populate all emission factors (EF) with default values. If users modify the EF and want to revert to default values, they can select "Use Default Emission Factors" for the tool to populate available default emission factors and emission calculations for all: criteria and toxics (from fuel combustion) .



Emission Factor Pop-Up window - User can open a pop-up window of an emission factor (NOx in the sample below) to uncheck the "Use default" and enter a specific emission factor. User can also enter comments and must cite the source of emission factor. This can also be done for toxic air contaminants. NOTE that the RECLAIM box is checked for NOx emissions since this facility is classified as RECLAIM.

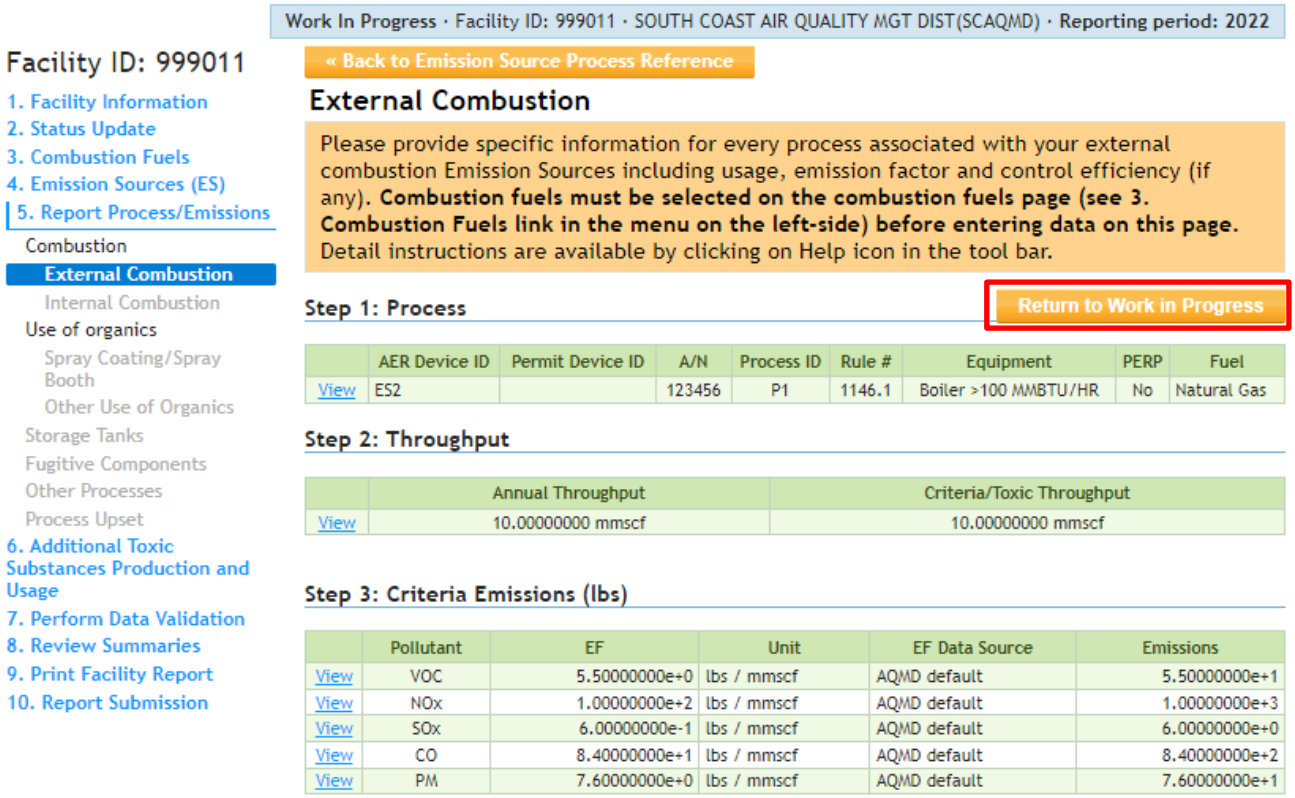


Again, clicking on "Save" button will bring user back to the worksheet. At this point, user has an option to lock up and mark the data as completed for this process by clicking on the GRAY button on the top right corner of the screen.

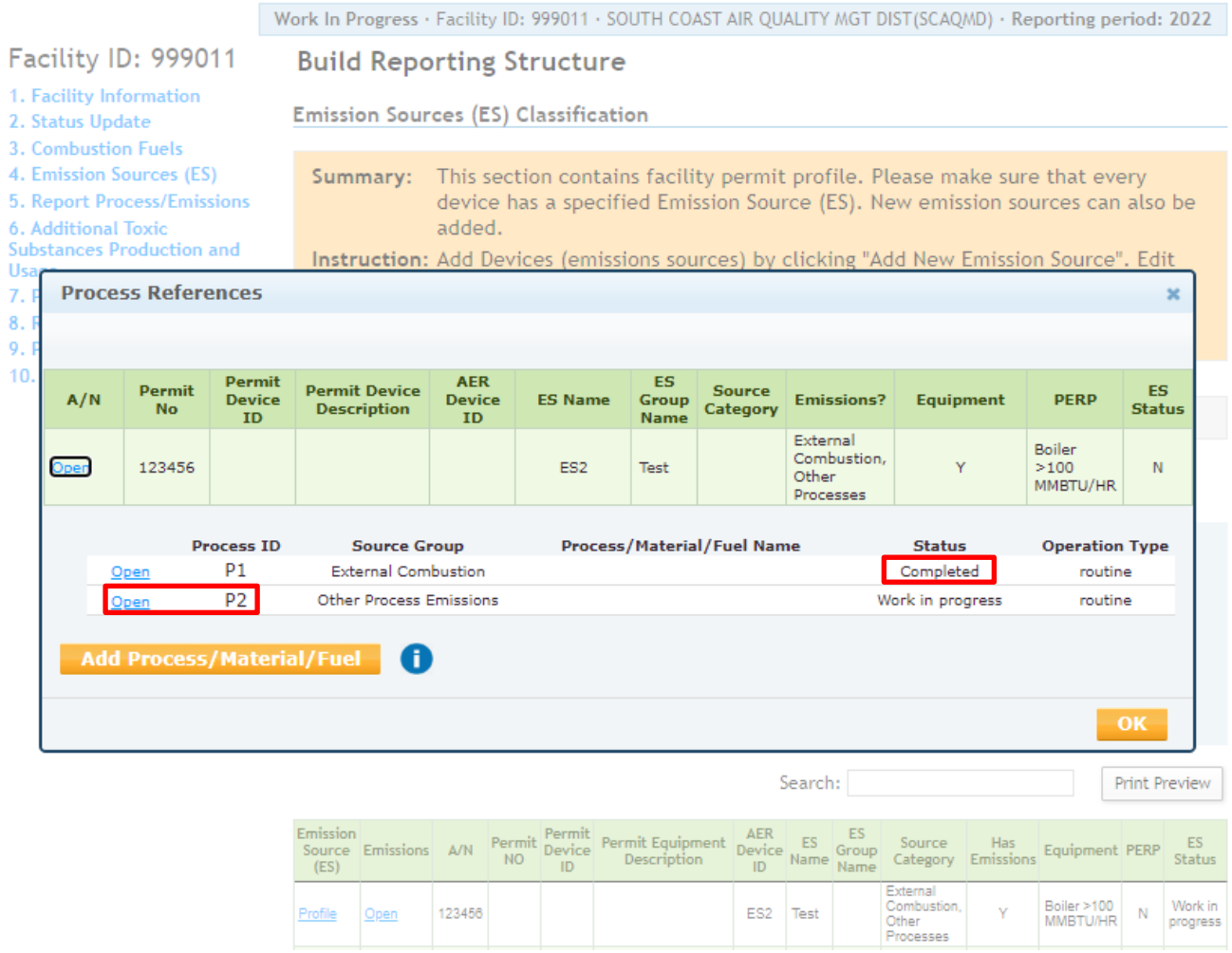


The button will then turn ORANGE and indicate "Return to Work in Progress," as shown in the next image. Note that the links on the left side of each section are now labeled "View" and are no longer

"Open" for editing. User can unlock and return to update the data by clicking on the ORANGE button labeled "Return to Work in Progress."



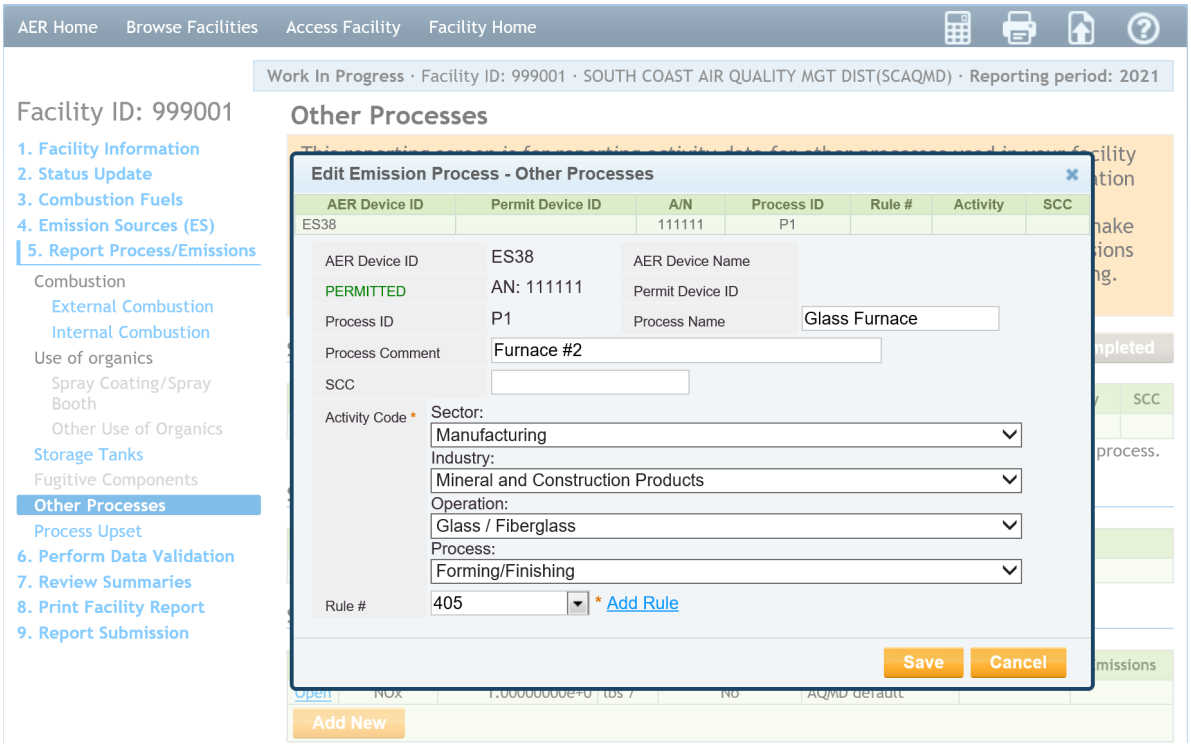
The other ORANGE buttons on the top and bottom of the screen, "Back to Emission Source Process Reference" (above) will bring user back to the pop-up "Process Reference" screen for continuing with other processes.



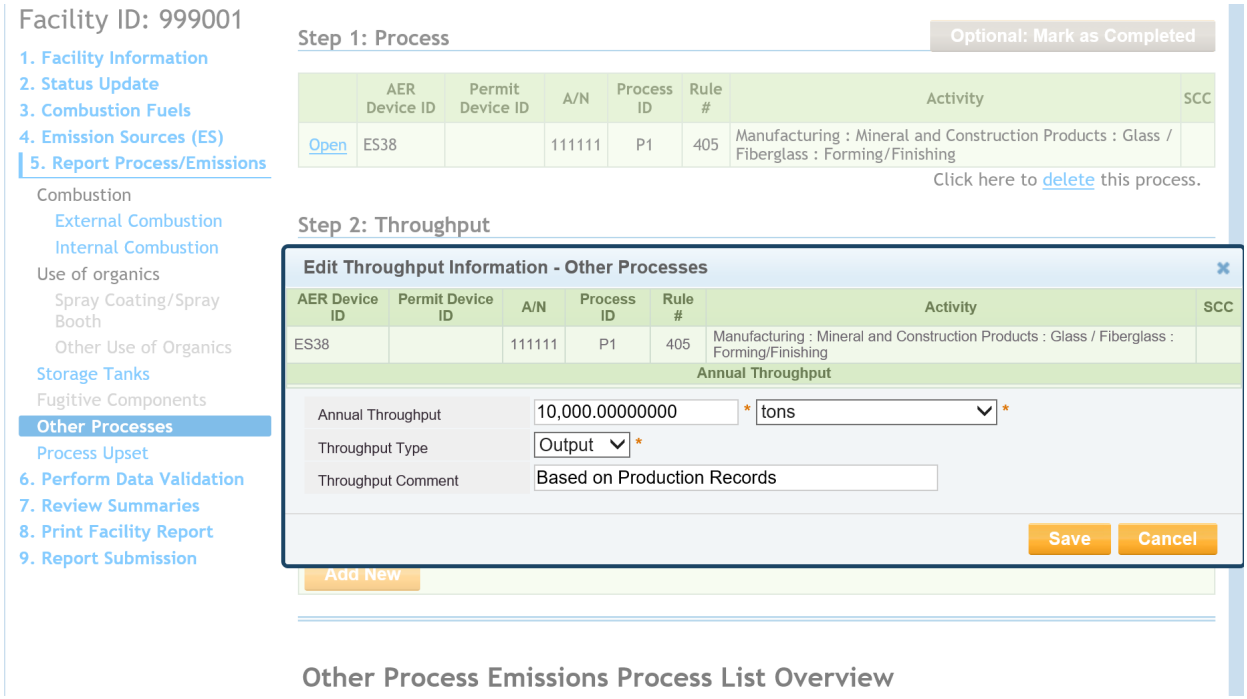
P2 – Other Process Emissions Sample

Clicking on P2 will open 'Other Processes" worksheet for the other process similar to the previous illustration.

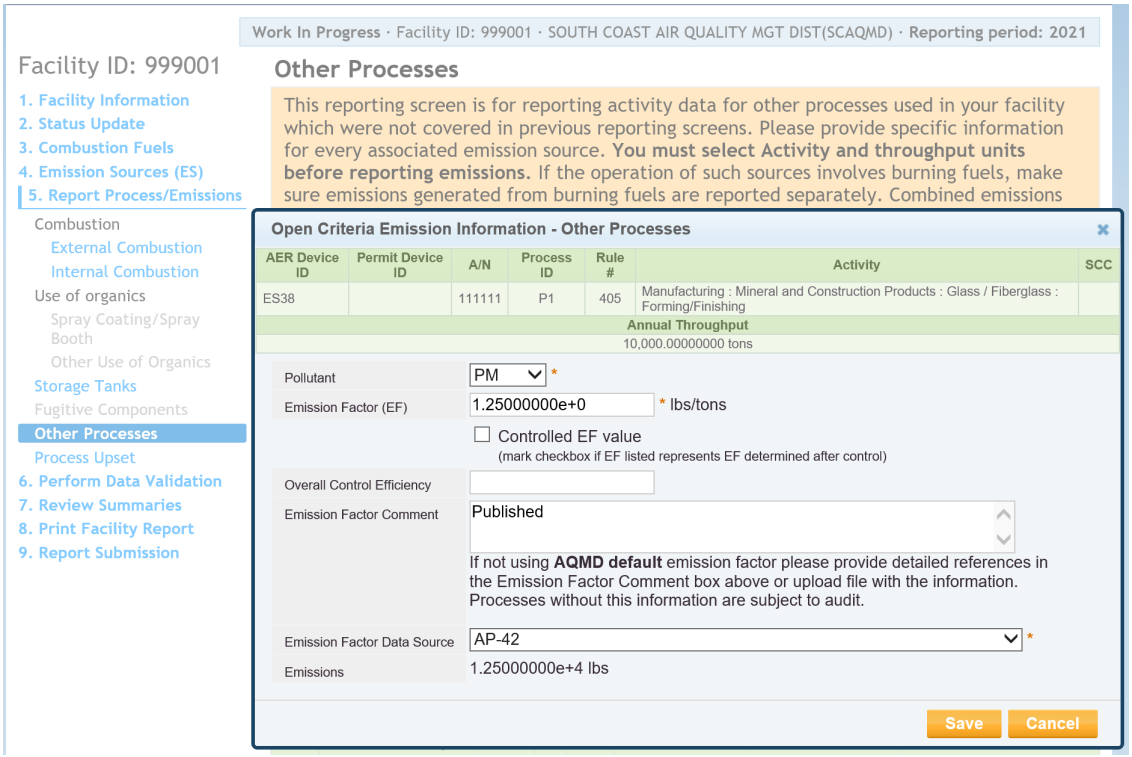
Process Pop-Up window – After providing name and comments on the process, user selects the appropriate items from the drop-down lists to further classify the process. User can list more than one rule that are applicable to this process. Clicking on "Save" button will bring user back to worksheet.



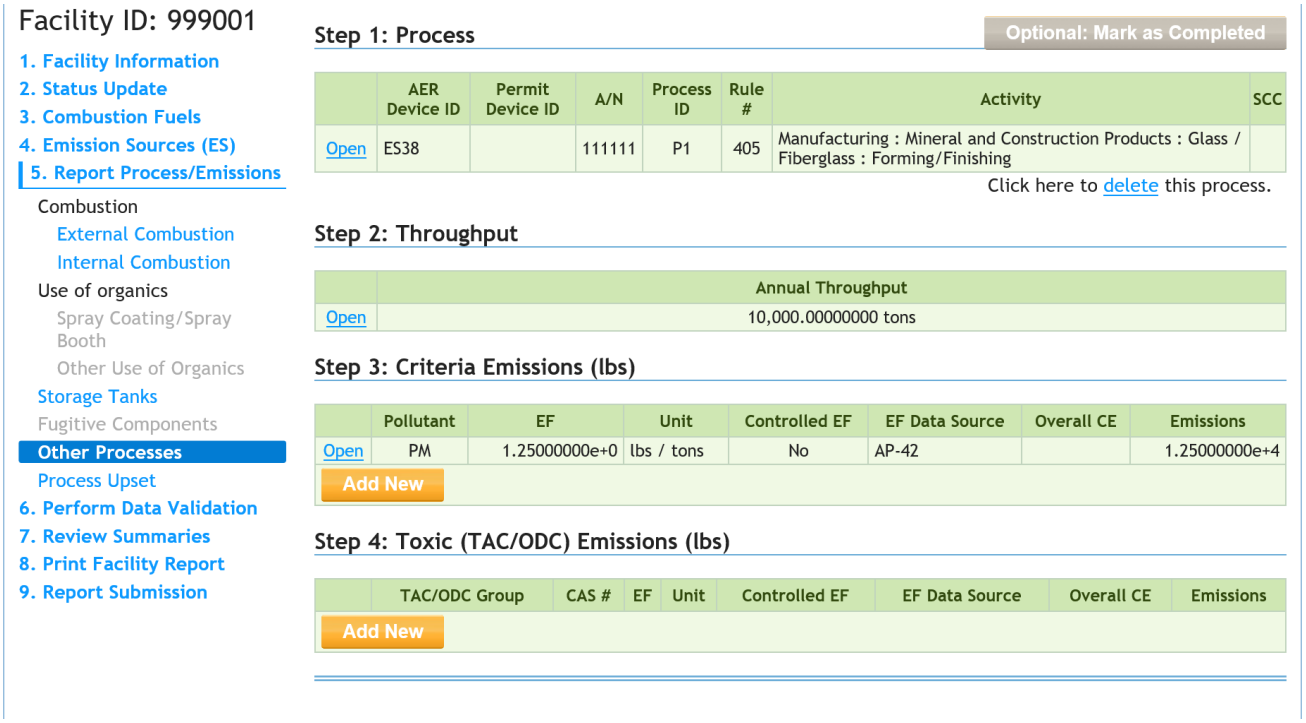
Throughput Pop-Up window – User enters throughput data, selects proper unit, and comments on the throughput data. Again, clicking on "Save" button will bring user back to worksheet.



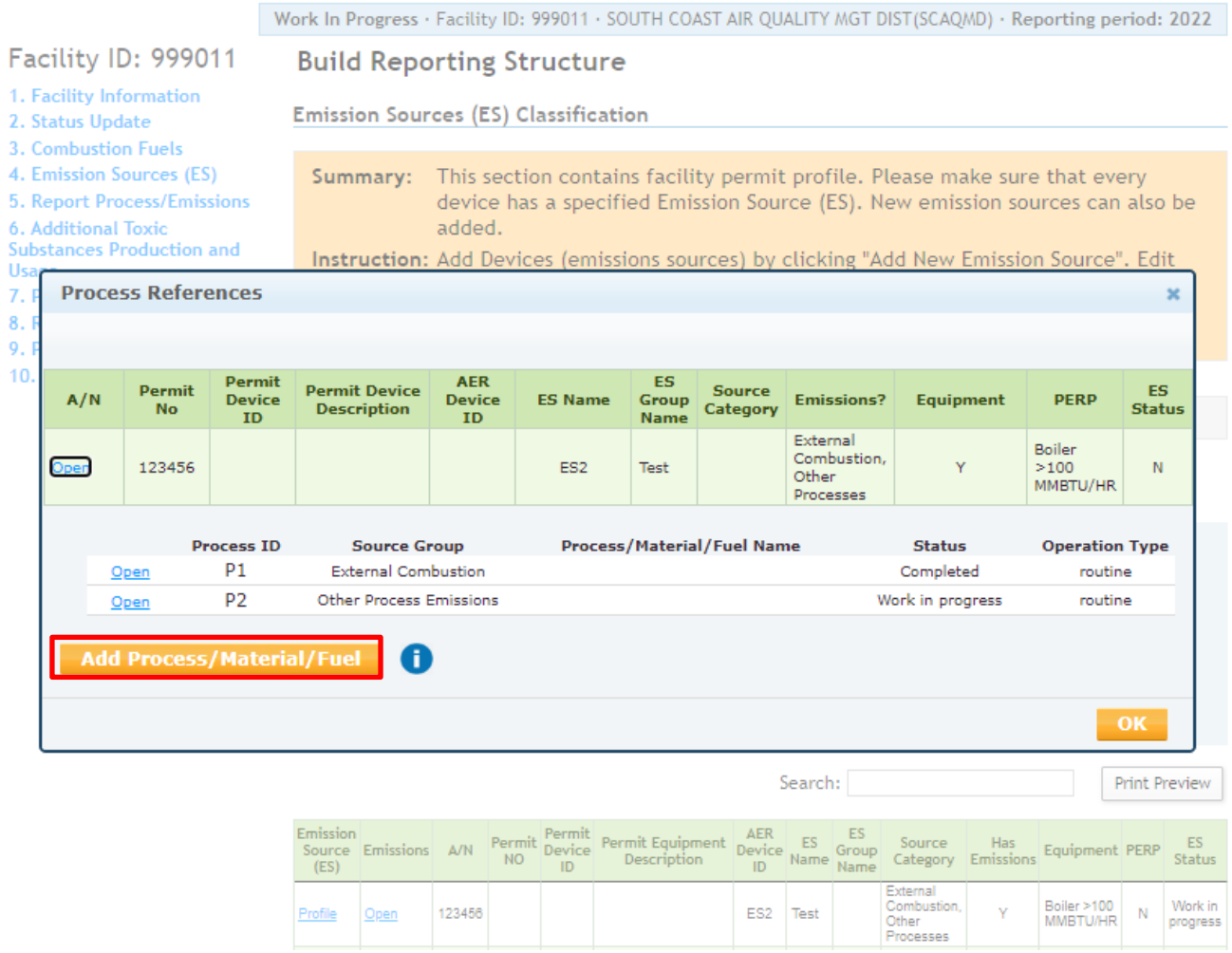
Emission Factor Pop-Up window – user adds a pollutant, enters the specific emission factor with optional comments, and cites the source of emission factor. User can indicate the overall control efficiency and whether the entered value is an after-control factor. By indicating that an emission factor is a "controlled factor" by checking off the "Controlled EF value" checkbox, the user is stating that the efficiency of the control equipment is already incorporated in the emission factor. That is why selecting this option disactivates the "Overall Controlled Efficiency" box. If you are not using a "controlled factor," do not click the "Controlled EF value" checkbox and enter the control efficiency value (in the form of a value less than 1 with decimals) in the "Overall Control Efficiency" field.



Clicking on "Save" button will bring user back to the worksheet (below) where user can work on toxic air contaminants by clicking the "Add New" button next to the applicable section.

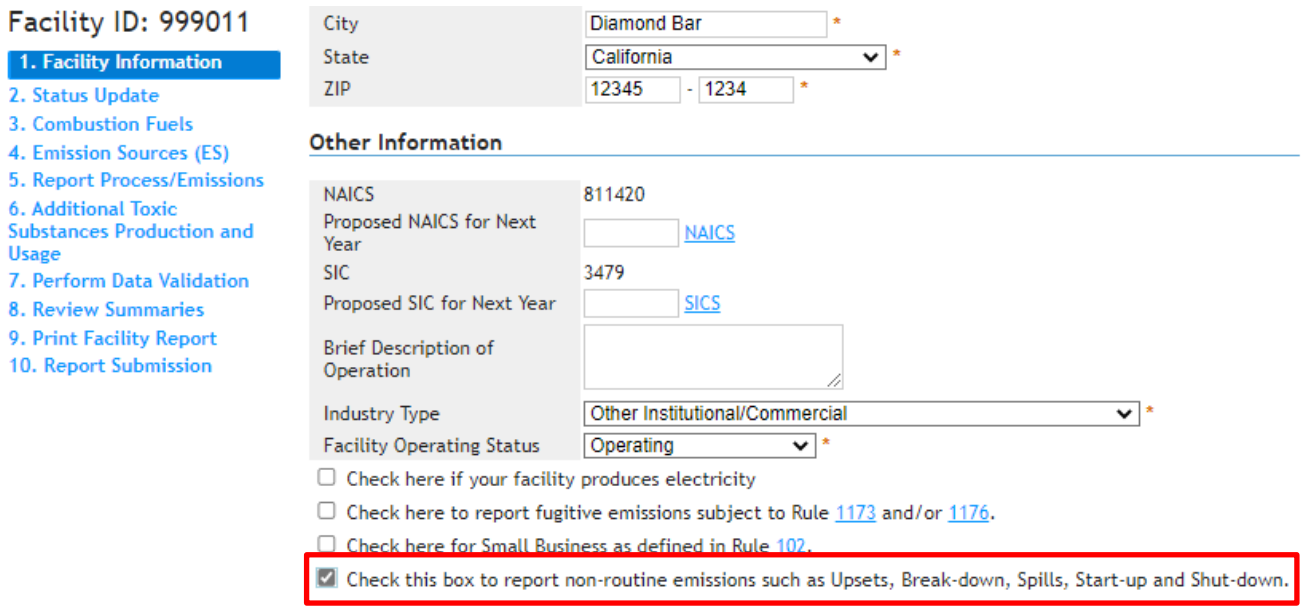


Once finished, the following screen shows two processes with one marked as completed. User can add another process here, if needed, by using the Orange "Add Process" button. Clicking on "OK" button will bring user back to Emission Source overview screen.

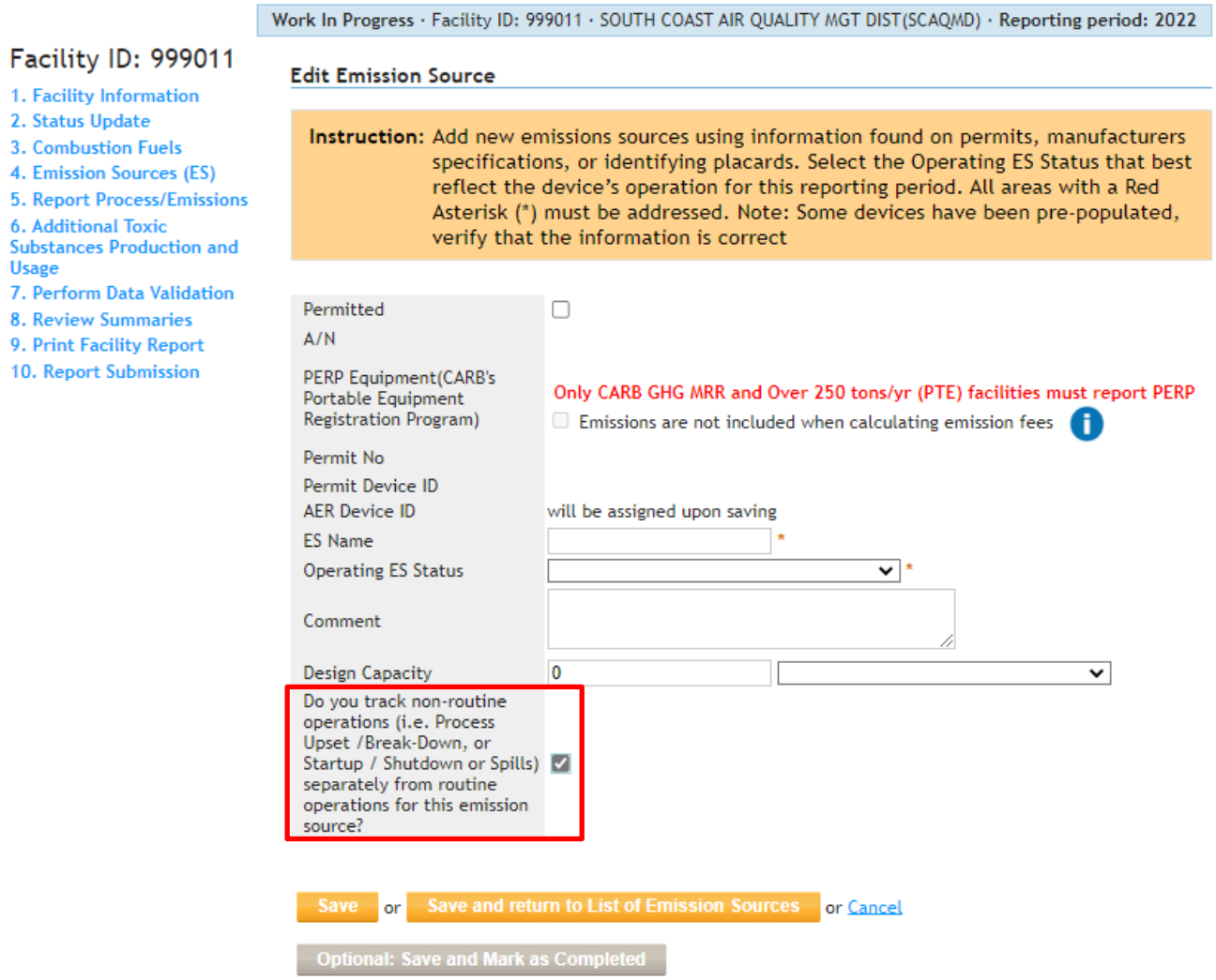


Reporting Non-Routine Operations

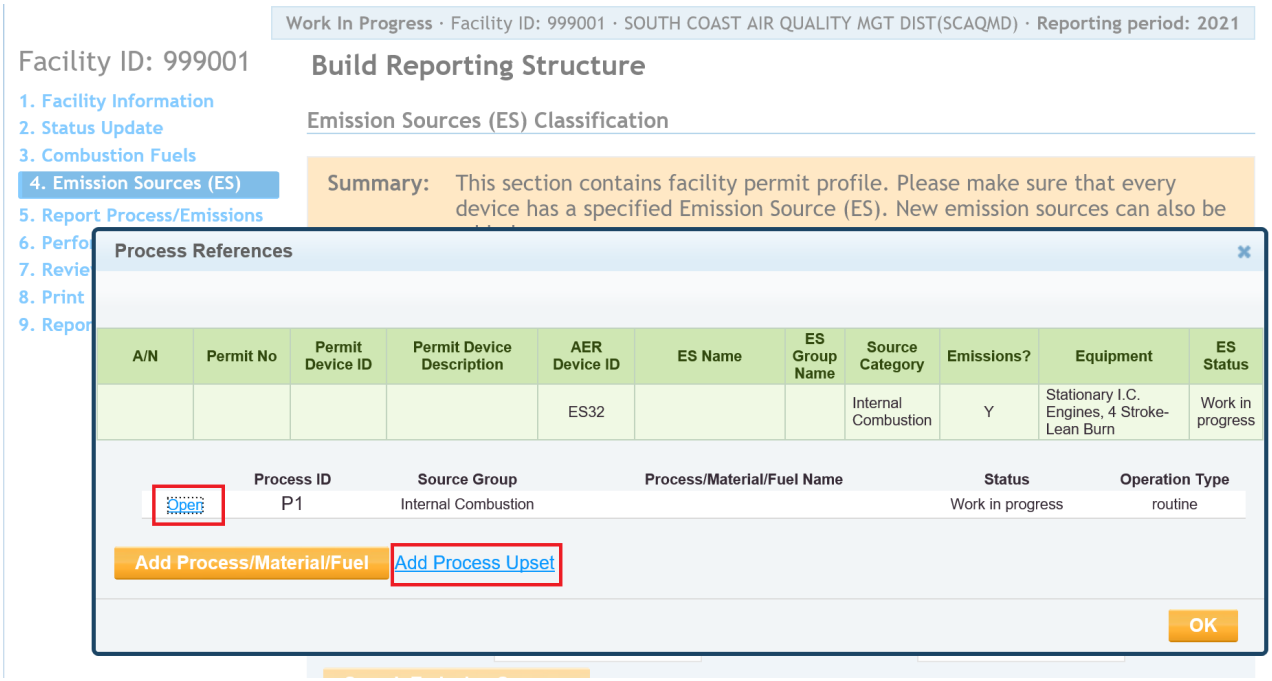
Emissions from non-routine operations such as "Upsets, Break-down, Spills, Start-up, Shut-down and Process Turn-around" can be tracked and reported by checking the appropriate box under "Other Information" in the "Facility Information" section, as shown in the image below.



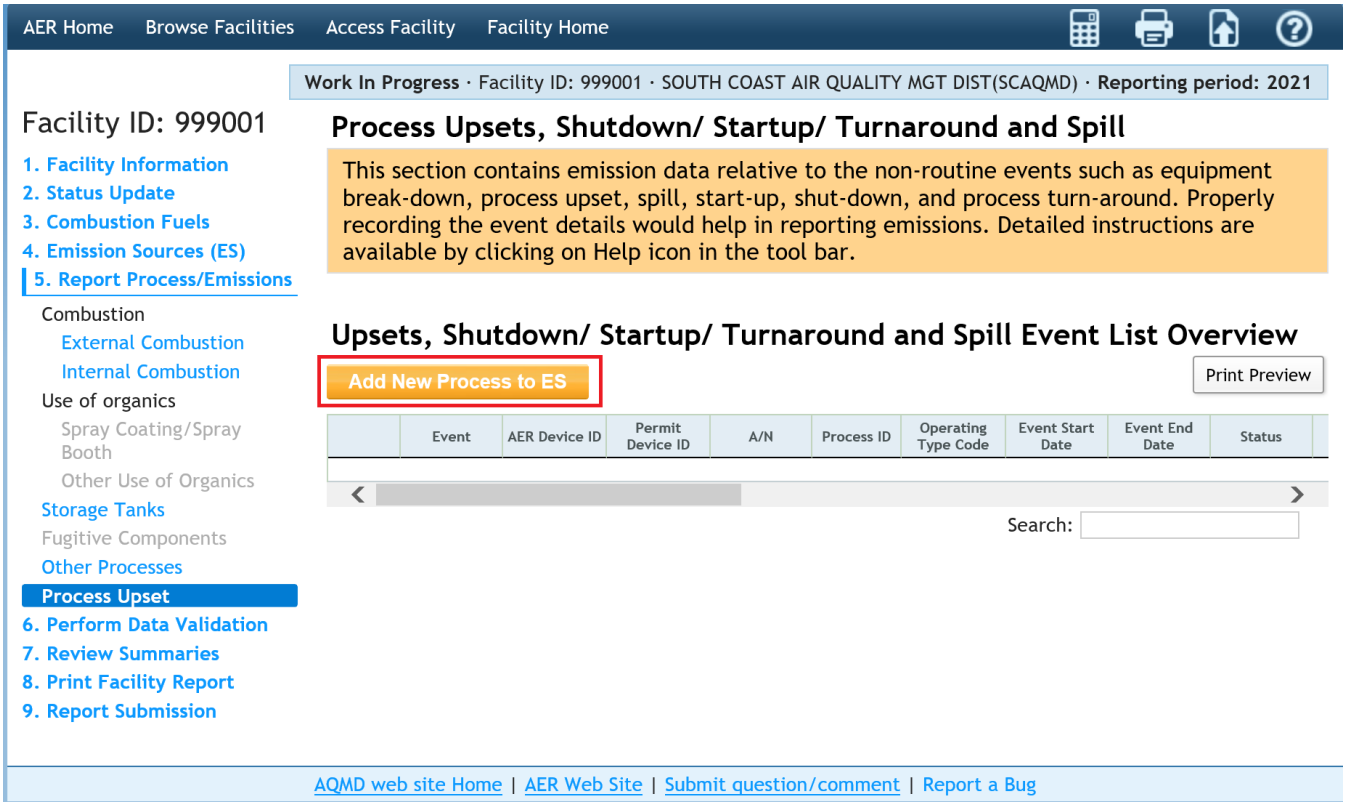
The tool will create a checkbox on "Edit Emission Source" screen for each emission source to place a check mark if facility tracked non-routine operations for that emission source, as shown in the image below.



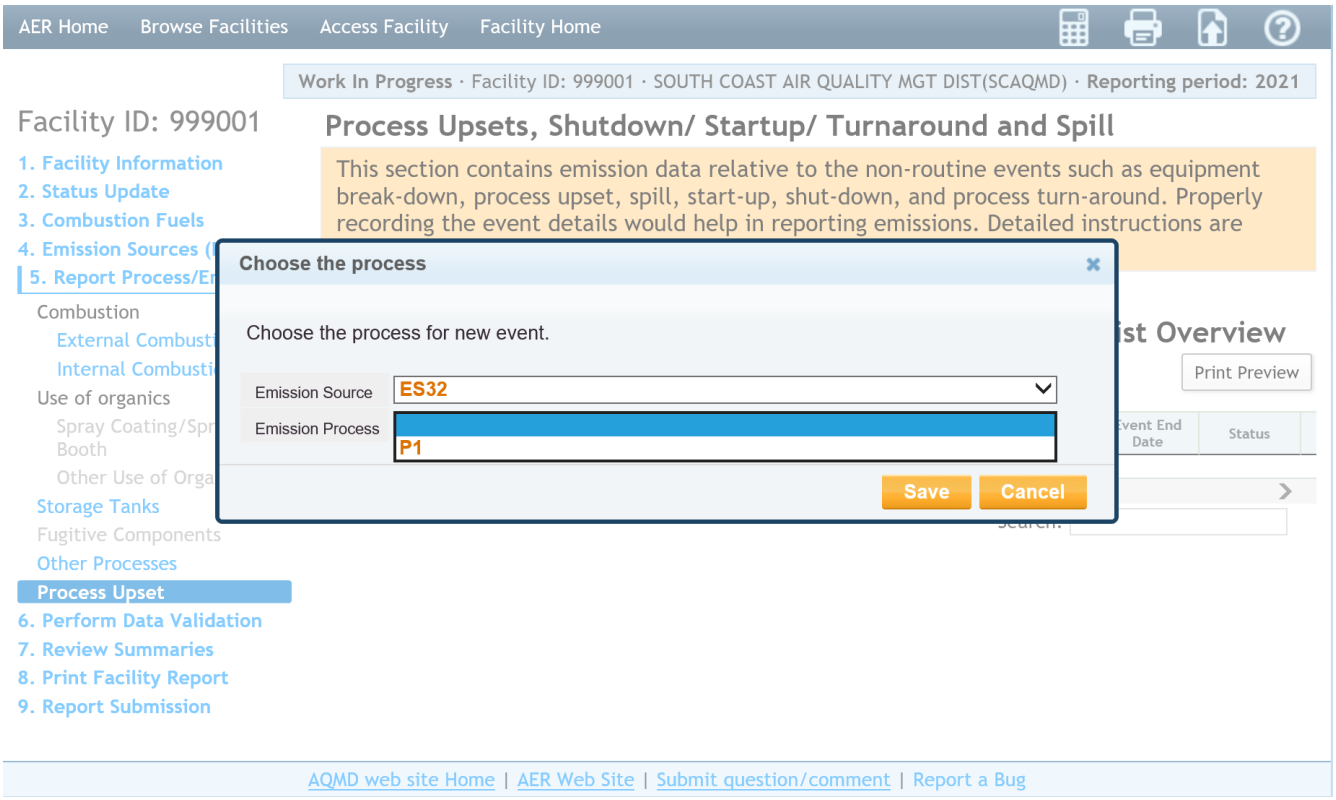
If facility placed a checkmark to indicate that facility tracked the non-routine emissions for a particular source, the "Add Process Upset" command will appear next to "Add Process" orange button on the "Process References" screen, as shown in the image below.



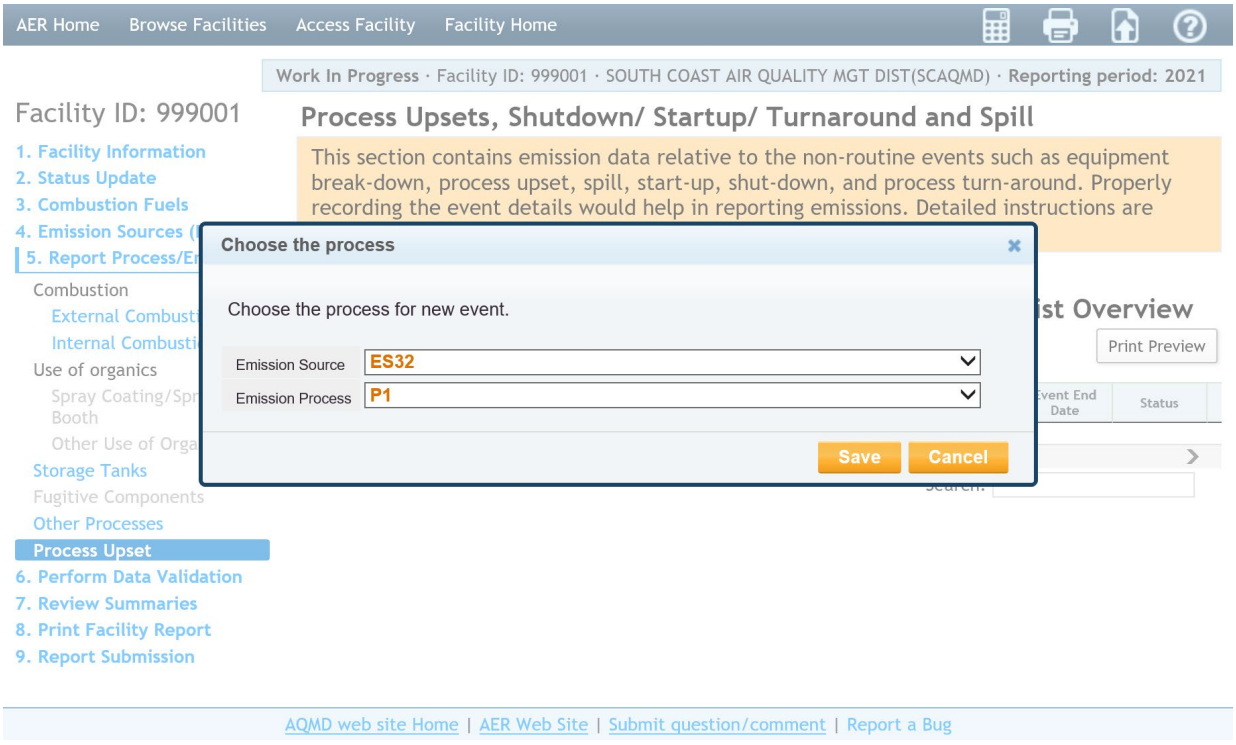
Clicking on the "Add Process Upset" command next to orange button will open the following "Process Upsets, Shutdown/ Startup/ Turnaround and Spill" screen with an orange "Add New" button. The tool will create "Upset, Shutdown/ Startup/ Turnaround and Spill Event List Overview" section, below the Toxic emissions row, where user can add as many such events as needed using the "Add New" button, as shown in the image below.



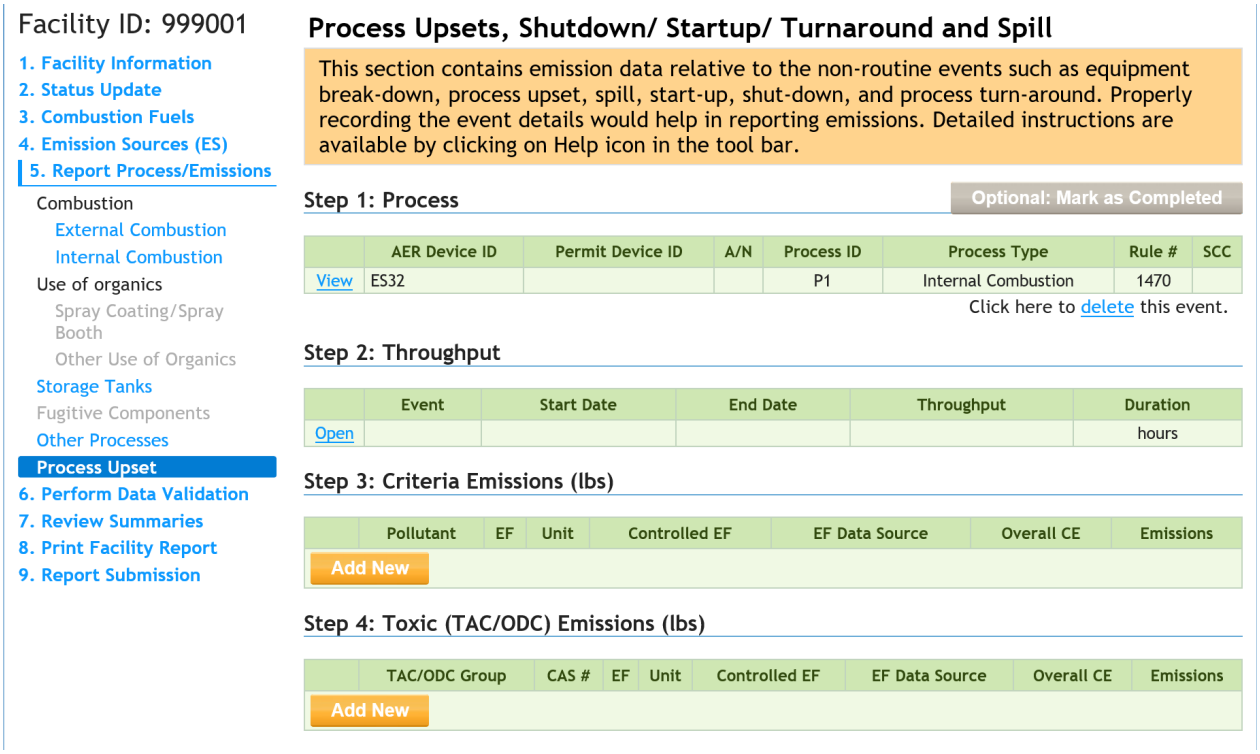
"Add New" Pop-up window – Clicking on the orange "Add New" button on the screen above will pop up the following screen where user selects emission source and process for the non-routine operations. Process upset command in left menu is highlighted and facility has selected process P2 for reporting non-routine emissions.



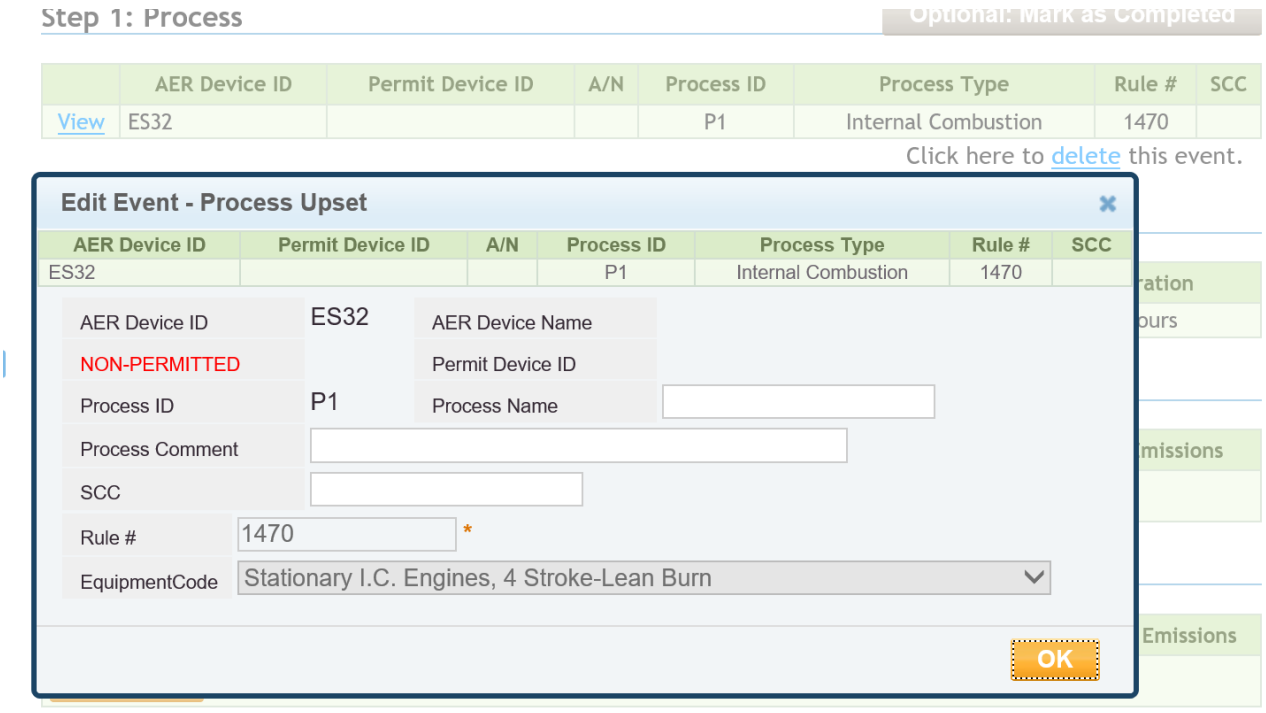
Clicking on the selected process will save the selections as shown in the worksheet below.



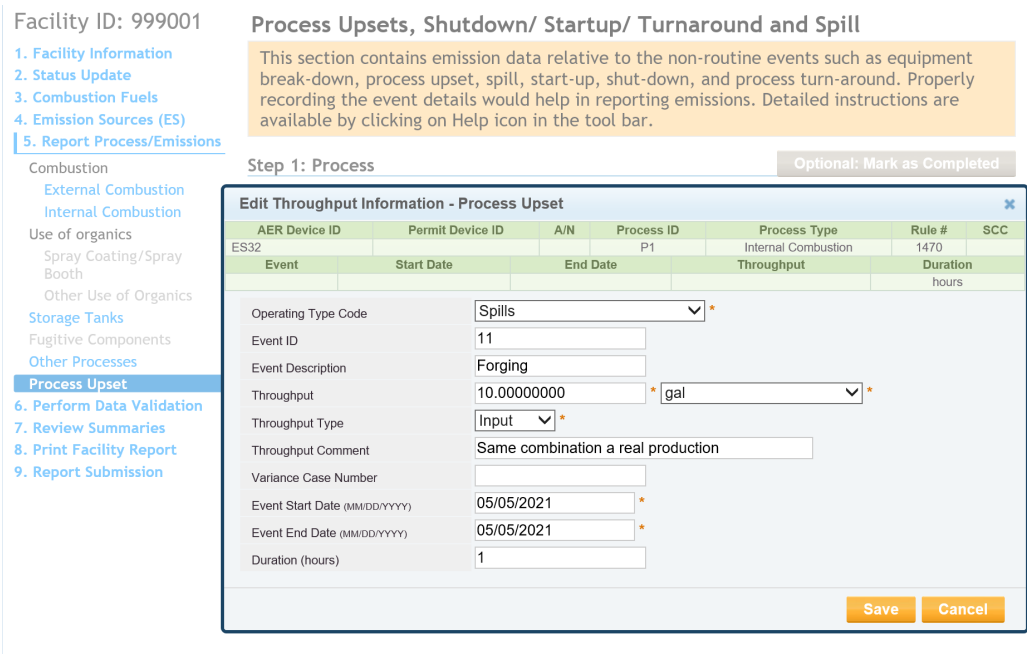
Clicking on the orange "Save" button shown above will open the following screen for the facility to enter upset emissions associated with the selected process. Clicking on the "cancel" button will revert to the previous screen to highlight another Process, if selected process was wrong.



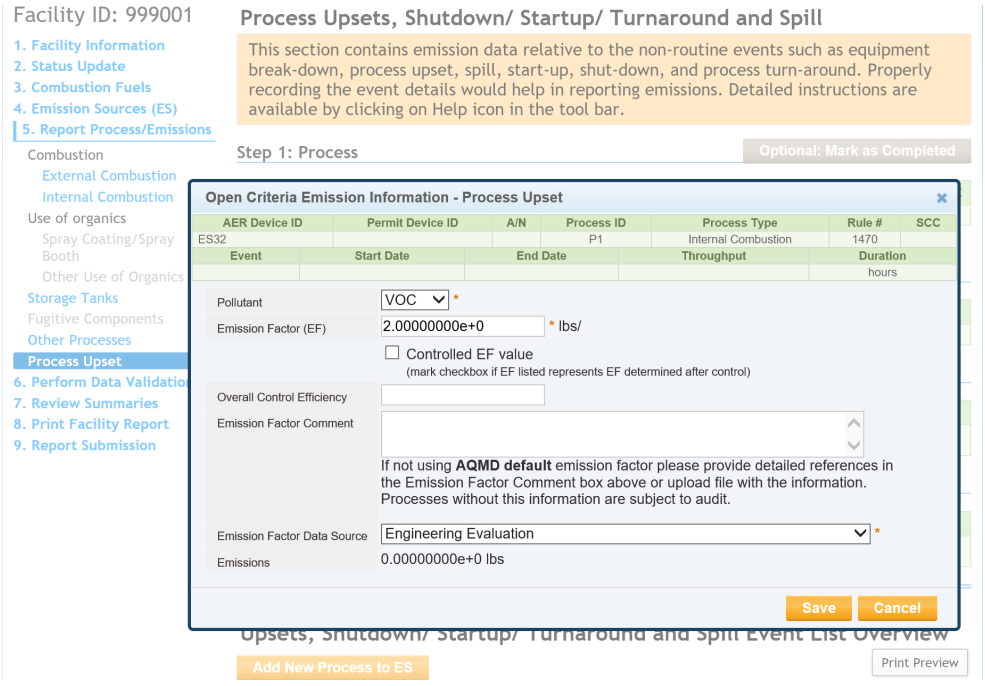
Edit Event - Process Upset Pop-up window – Clicking on the "View" link of the "Step 1: Process" section in the image above, brings user to the pop-up screen shown below, where the selected Process information is displayed for information or read-only purposes. Facility cannot amend this screen. A Click on "OK" will take user back to the above screen.



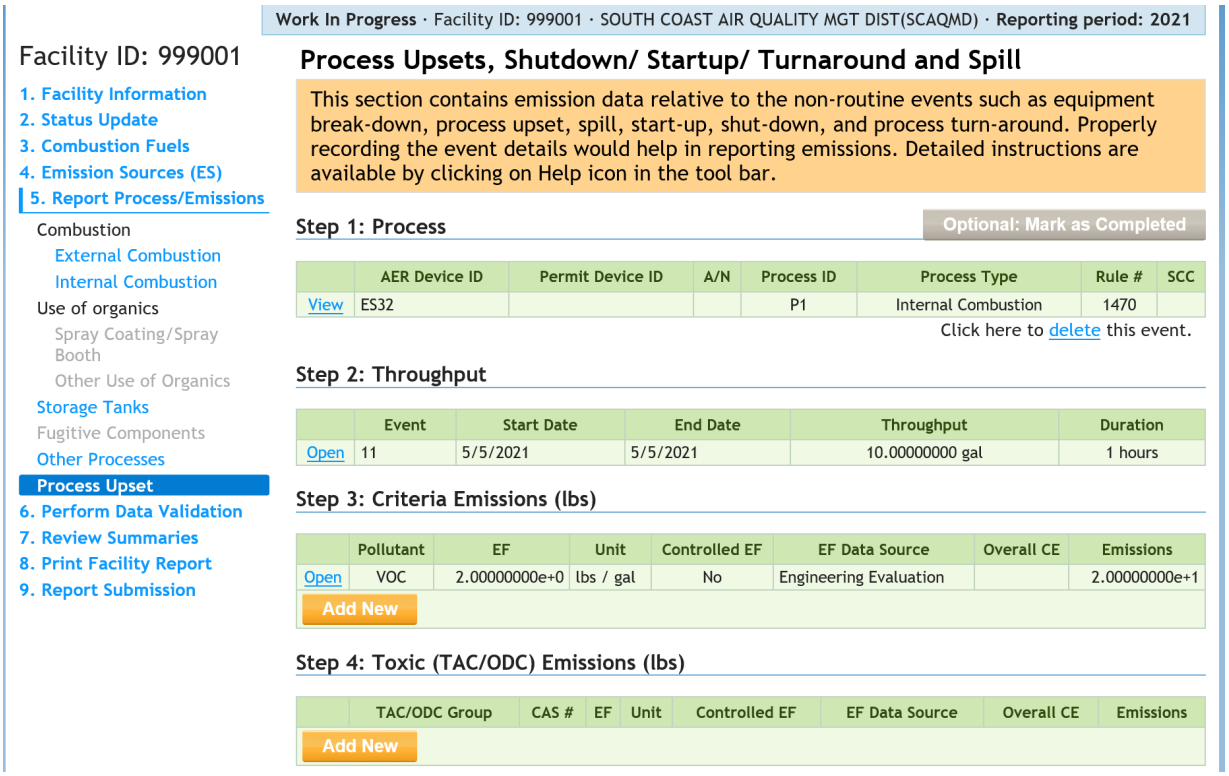
Edit Throughput Information – Process Upset Pop-Up window – Clicking on the "Open" link of the "Step 2: Throughput" section brings user to the pop-up screen below, where User provides more details for the non-routine events (one event at a time) including Operating Type Code, Event ID, Throughput, unit, event date, duration and comment. If the upset event is associated with a Variance, enter the Variance Case number.



Open Criteria Emission Information Pop-Up window - User must add a pollutant by clicking the "Add New" link of the "Step 3: Criteria Emissions" section. Next, enter the specific emission factor with comments, and cite the source of emission factor by selecting from the drop-down list, as shown below. User can indicate the overall control efficiency and whether the entered value is an after-control factor. By indicating that an emission factor is a "controlled factor" by checking off the "Controlled EF value" checkbox, the user is stating that the efficiency of the control equipment is already incorporated in the emission factor. That is why selecting this option deactivates the "Overall Controlled Efficiency" box. If you are not using a "controlled factor," do not click the "Controlled EF value" checkbox and enter the control efficiency value (in the form of a value less than 1 with decimals) in the "Overall Control Efficiency" field.

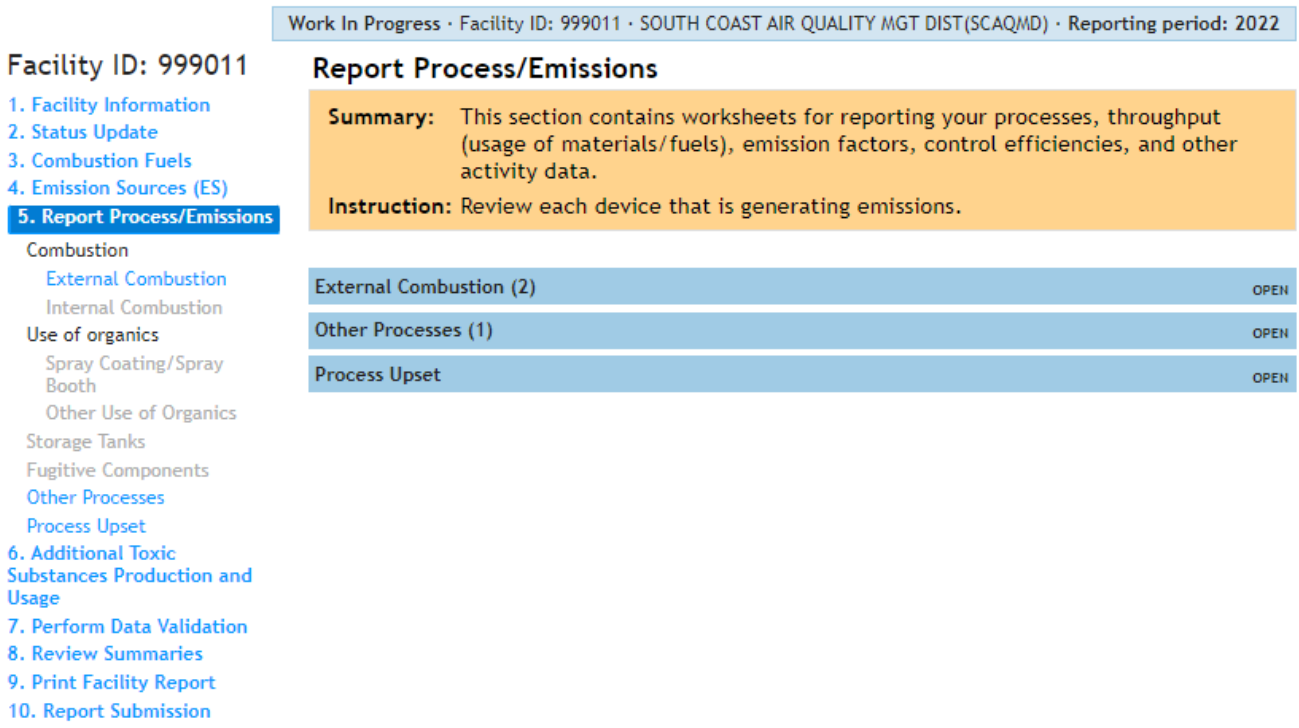


Save the selections as shown in the worksheet below. User can also report toxics emissions for the event or continue adding a new Upset/ Shutdown/ Startup/ Turnaround/ Spill event.



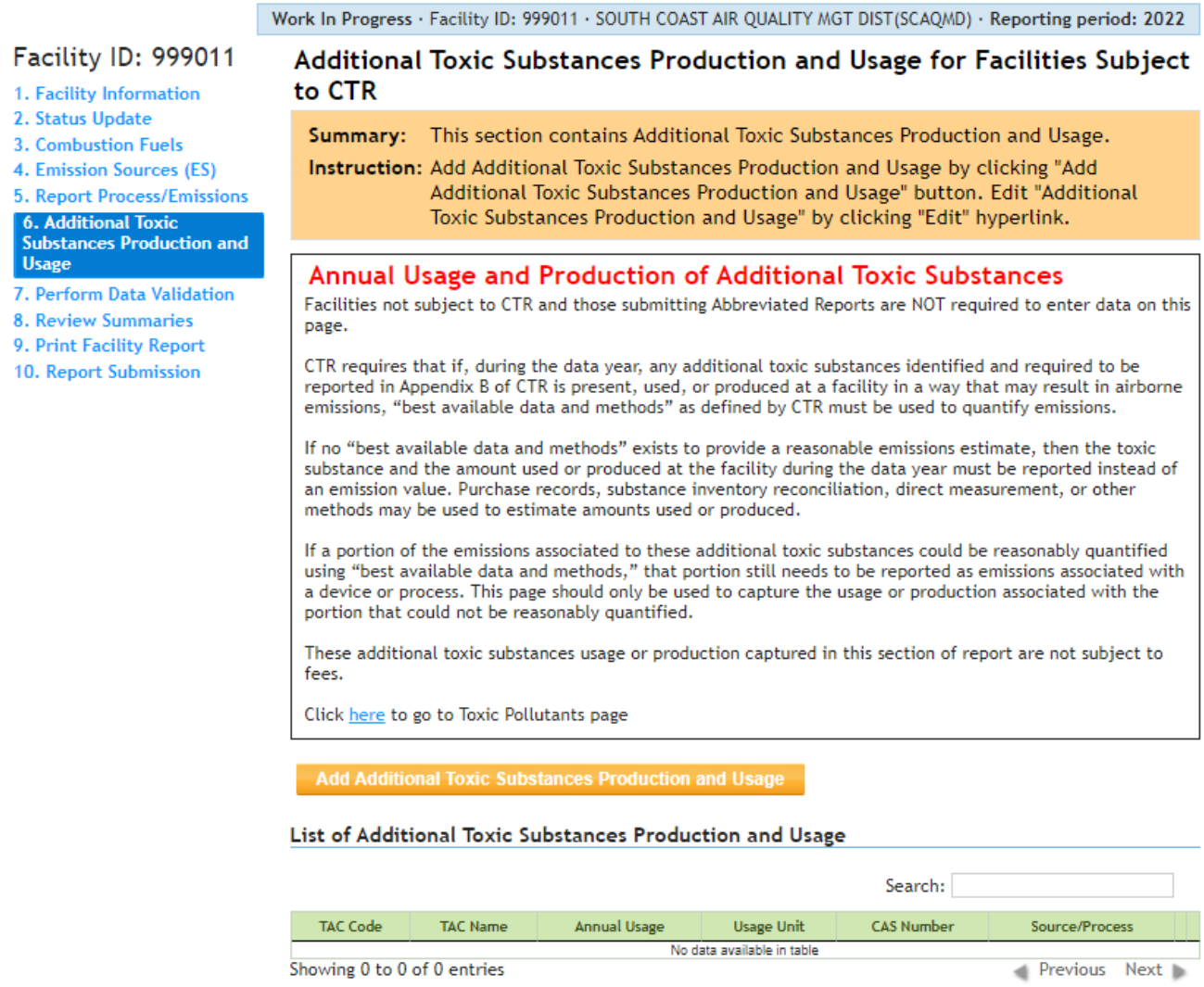
5. Report Process/Emissions

These worksheet pages arrange devices/process by the emission source category assigned on the Edit Emission Source page. These pages allow the user to compare the Device IDs, permitting IDs, Process IDs, status of each process (work in process or complete), fuel data, and emissions for each emission source category. New processes can be added using the Add New Process to ES button. Click on the blue Open and AER Device ID links allow the user to quickly assess the Process page, and Edit Emissions Source page, respectively.



6. Additional Toxic Substances Production and Usage

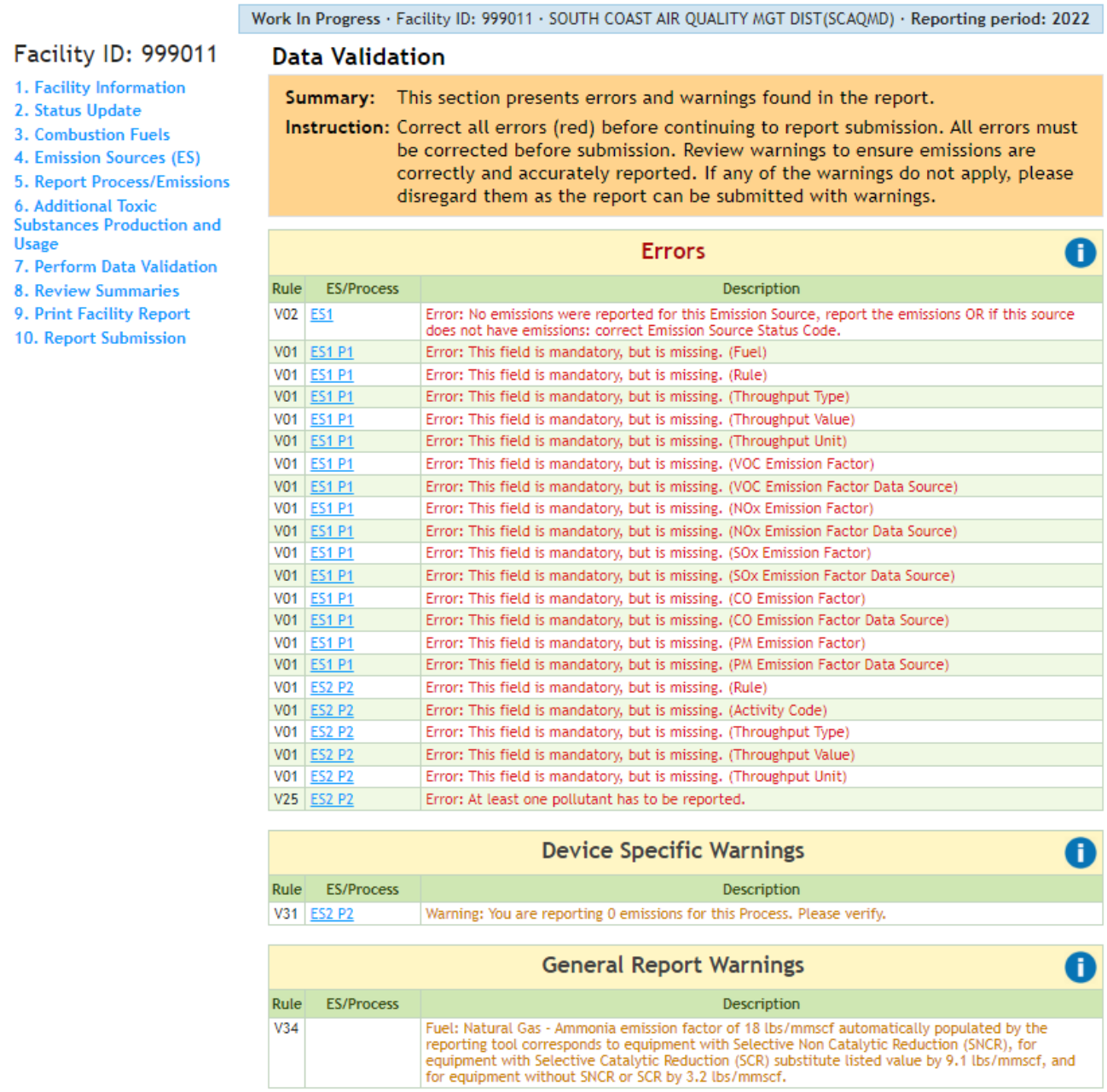
Instructions for adding additional toxic substances and usage can be found in "Additional Toxic Substances Production and Usage Guidelines" posted in the Guideline Documents section of the main AER webpage.



7. Perform Data Validation

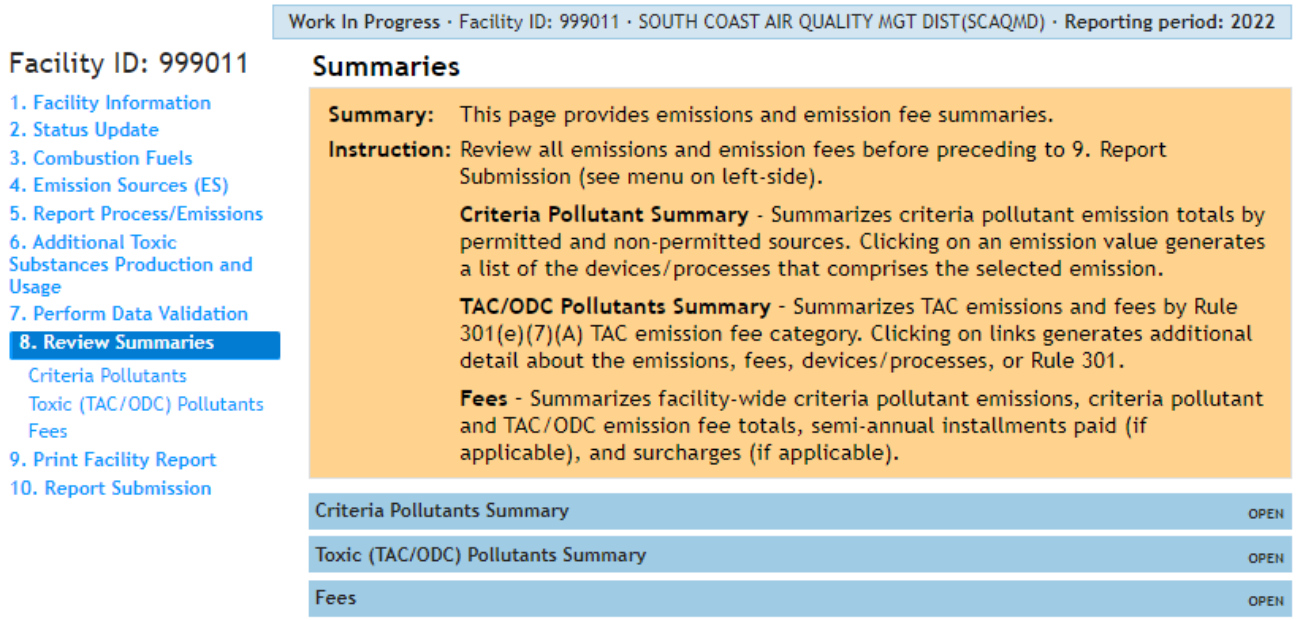
User can validate the data any time by clicking on the "Data Validation" link on the left navigation menu, as shown below. The validation notes are categorized into tables;

- Notes in the "Errors" table indicate an error that must be fixed.
- Notes in the "Device Specific Warnings" table indicate a warning for further review of data but will not prevent the user from submitting the report.
- Clicking on the hyperlinks in the second column (column labeled "ES/Process") will take the user to the data entry page containing the errors or anomalies.



8. Review Summaries

All three types of emissions (Criteria, Toxics/TAC & ODC) and applicable fees are summarized in this section as shown in the main bars located at the center of the screen and the navigation menu on the left side of the screen, as shown below. Clicking on one of the summary links will open a new summary page showing the total emissions for an individual pollutant type (i.e., Criteria Pollutants, Toxic Pollutants, or ODC) or the total fees due.

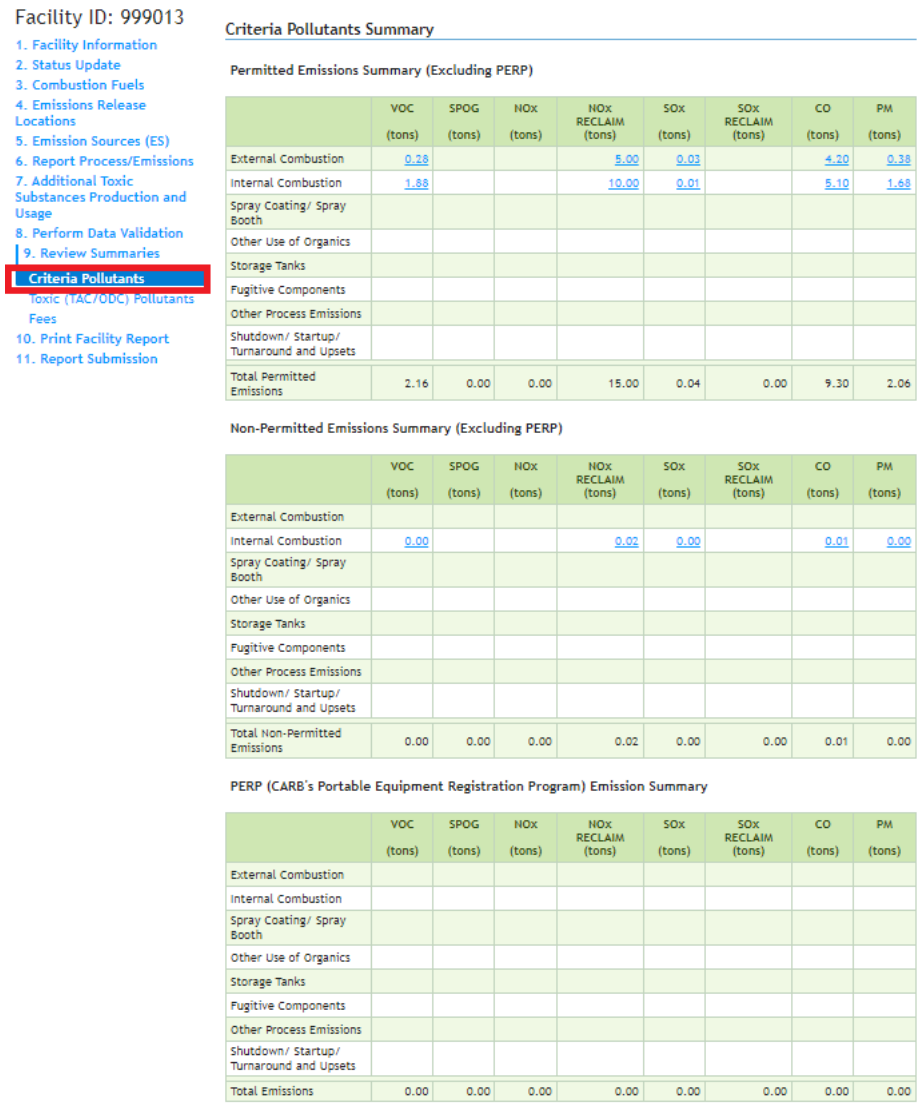


Criteria Pollutants Summary

Emissions from both permitted and non-permitted sources are summarized in the following screen by major categories. Total criteria pollutant emissions are listed by equipment category and expressed in tons.

Criteria pollutant emissions are presented in three tables here: permitted emissions, PERP or portable equipment registered under the CARB's Portable Equipment Registration Program, and non-permitted (excluding PERP) emissions. Only GHG and Criteria facilities under CTR need to report emissions from equipment certified under PERP. Guidelines for reporting emissions from CTR Core facilities which include GHG and Criteria facilities can be found on the AER website.

Please note that no emission fees are assessed for portable devices that are designated as PERP in the AER tool.



Facility ID: 999013

1. Facility Information
2. Status Update
3. Combustion Fuels
4. Emissions Release Locations
5. Emission Sources (ES)
6. Report Process/Emissions
7. Additional Toxic Substances Production and Usage
8. Perform Data Validation
9. Review Summaries
   - Criteria Pollutants
   - Toxic (TAC/ODC) Pollutants
   - Fees
10. Print Facility Report
11. Report Submission

Criteria Pollutants Summary

Permitted Emissions Summary (Excluding PERP)

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	0.28			5.00	0.03		4.20	0.38
Internal Combustion	1.88			10.00	0.01		5.10	1.68
Spray Coating/ Spray Booth								
Other Use of Organics								
Storage Tanks								
Fugitive Components								
Other Process Emissions								
Shutdown/ Startup/ Turnaround and Upsets								
Total Permitted Emissions	2.16	0.00	0.00	15.00	0.04	0.00	9.30	2.06

Non-Permitted Emissions Summary (Excluding PERP)

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion								
Internal Combustion	0.00			0.02	0.00		0.01	0.00
Spray Coating/ Spray Booth								
Other Use of Organics								
Storage Tanks								
Fugitive Components								
Other Process Emissions								
Shutdown/ Startup/ Turnaround and Upsets								
Total Non-Permitted Emissions	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00

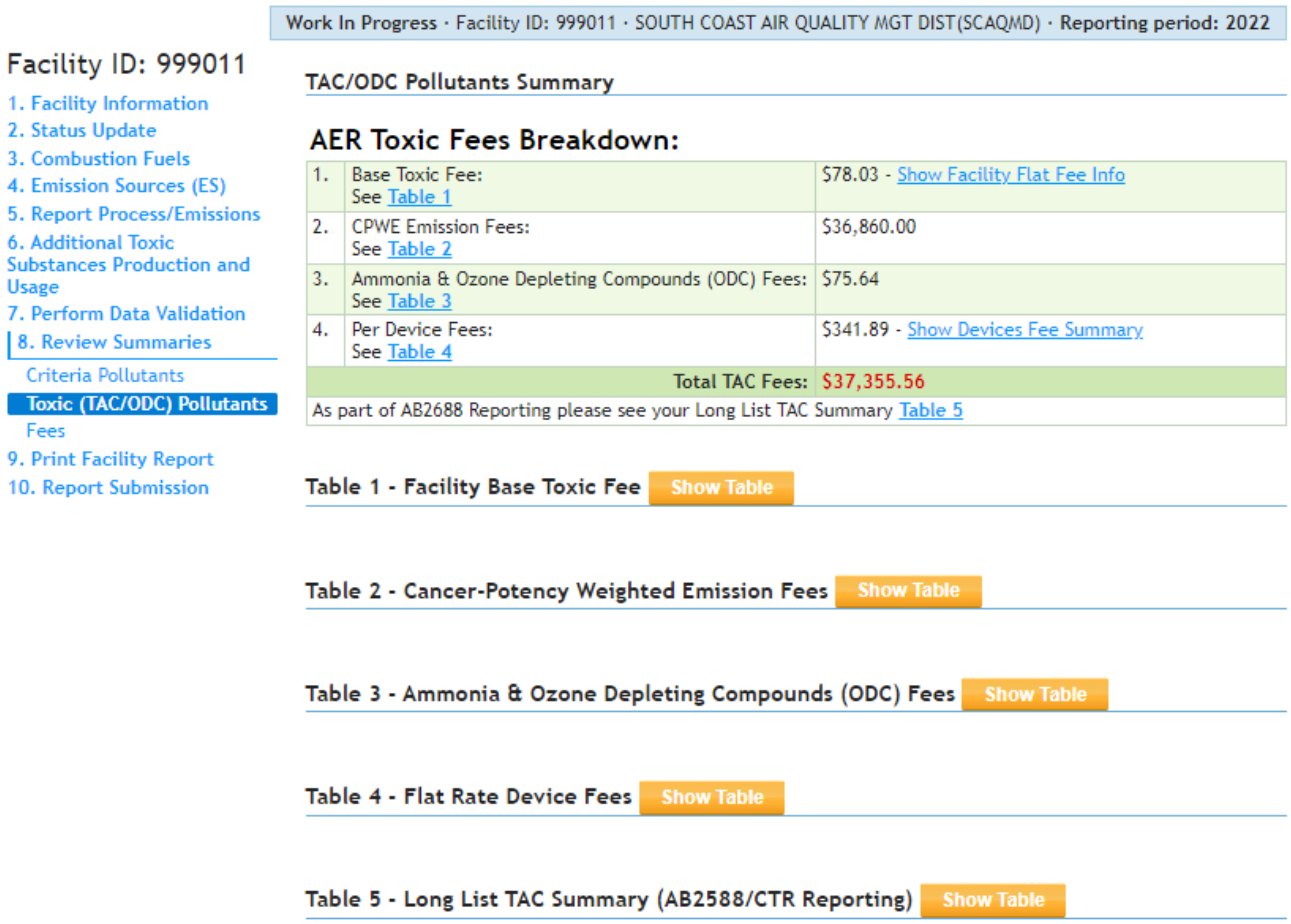
PERP (CARB's Portable Equipment Registration Program) Emission Summary

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion								
Internal Combustion								
Spray Coating/ Spray Booth								
Other Use of Organics								
Storage Tanks								
Fugitive Components								
Other Process Emissions								
Shutdown/ Startup/ Turnaround and Upsets								
Total Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note that NOx and SOx emissions are posted separately for sources/pollutants that are subject to RECLAIM requirements. All emission values are hyper-linked to detailed information relative to how data were entered, and emissions were calculated. If user clicks on an emission value in the table, the tool will display the processes that contributed to the final emissions value. By clicking on the link to a specific process, the user can verify for last time, the accuracy of the entered information.

AER Toxic Fee Summary

There are five different toxic fees. The total toxic fee breakdown is shown in the image below:



i. Facility Flat Fees

According to RULE 301 (Amended July 1, 2022), the Base Toxics Fee is $78.03 for the year 2022. This fee is subject to change every year.

Facility ID: 999011

1. Facility Information
2. Status Update
3. Combustion Fuels
4. Emission Sources (ES)
5. Report Process/Emissions
6. Additional Toxic Substances Production and Usage
7. Perform Data Validation
8. Review Summaries
   - Criteria Pollutants
   - **Toxic (TAC/ODC) Pollutants**
   - Fees
9. Print Facility Report
10. Report Submission

Table 1 - Facility Base Toxic Fee

Hide Table

Facility Base Toxic Fee of **$78.03** is applied when:

- Facility is not exempt from TAC Fees
- Any of the TAC Pollutants aggregated Annual Emissions exceed Annual Threshold

Please see the table below for the list of all TAC Pollutant that exceed Pollutants Annual Threshold:

TAC Group	TAC / ODC	CAS #	Annual Theshold	Annual Emissions (lbs)	Emissions Subject to Fee (lbs)	Exceed Threshold	Devices / Processes
5	Cadmium	7440439	0.01	0.015	0.015	Yes	1
14	Arsenic and Compounds (inorganic)	7440382	0.01	0.016	0.016	Yes	1
19	PAHs, total, without individ. components also reported [PAH, POM]	1151	0.2	0.362	0.362	Yes	1
1	Asbestos		0.0001			No	
1	Asbestos	1332214	0.0001			No	
2	Benzene	71432	2	2		No	1
3	Beryllium Compounds		0.001			No	
3	Beryllium oxide	1304569	0.001			No	
3	Beryllium	7440417	0.001			No	
3	Beryllium sulfate (tetrahydrate)	7787566	0.001			No	
3	Beryllium sulfate	13510491	0.001			No	
4	Butadiene [1,3]	106990	0.1	0.0001		No	1
5	Cadmium compounds		0.01			No	
5	Cadmium succinate	141004	0.01			No	
5	Cadmium chloride	10108642	0.01			No	
6	Carbon tetrachloride	56235	1			No	
7	Polychlorinated dibenzofurans and dioxins		0.000001			No	
7	Chlorinated dibenzofurans, without individual isomers reported	1080	0.000001			No	
7	Chlorinated dioxins, without individual isomers	1086	0.000001			No	
					Facility Base Toxic Fee:		$78.03

ii. CPWE Emission Fees

The Cancer-Potency Weighted Emission (CPWE) summary worksheet is shown in the image below. Total toxic emissions are listed by individual contaminant and expressed in pounds (lbs). The Cancer-Potency Weighted Emission Fee is $10.00 per pound.

There are 66 toxic air contaminants (TACs) in TABLE IV of Rule 301 (Amended July 1, 2022) that are subject to emissions fees as shown in the screen below. Clicking on the "here" link will display detailed information of the Rule 301 (Amended July 1, 2022).

Facility ID: 999011

1. Facility Information
2. Status Update
3. Combustion Fuels
4. Emission Sources (ES)
5. Report Process/Emissions
6. Additional Toxic Substances Production and Usage
7. Perform Data Validation
8. Review Summaries
   - Criteria Pollutants
   - Toxic (TAC/ODC) Pollutants
   - Fees
9. Print Facility Report
10. Report Submission

Table 2 - Cancer-Potency Weighted Emission Fees Hide Table

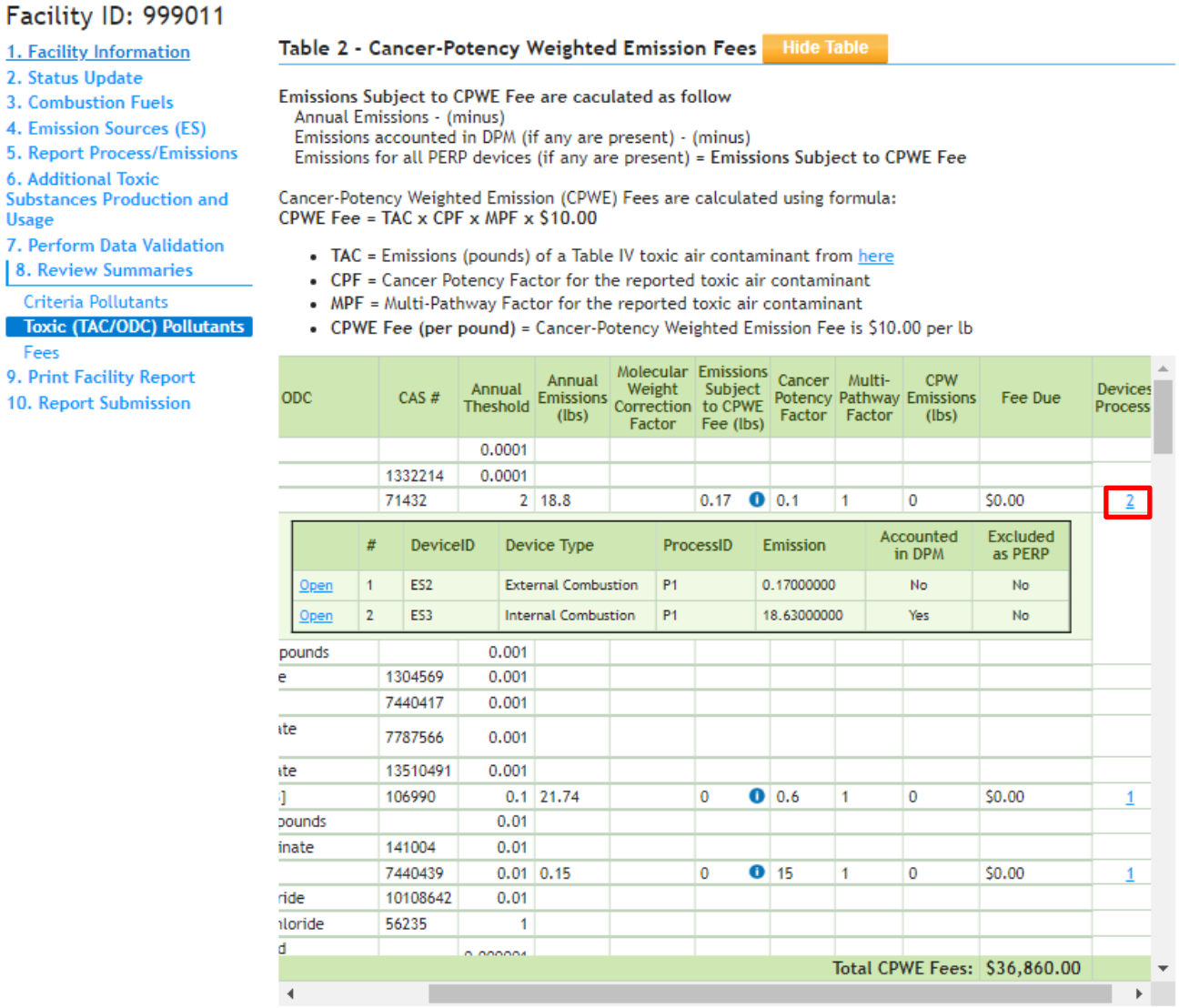
Emissions Subject to CPWE Fee are caculated as follow
Annual Emissions - (minus)
Emissions accounted in DPM (if any are present) - (minus)
Emissions for all PERP devices (if any are present) = **Emissions Subject to CPWE Fee**

Cancer-Potency Weighted Emission (CPWE) Fees are calculated using formula:
CPWE Fee = TAC x CPF x MPF x $10.00

- **TAC** = Emissions (pounds) of a Table IV toxic air contaminant from here
- **CPF** = Cancer Potency Factor for the reported toxic air contaminant
- **MPF** = Multi-Pathway Factor for the reported toxic air contaminant
- **CPWE Fee (per pound)** = Cancer-Potency Weighted Emission Fee is $10.00 per lb

TAC Group	TAC / ODC	CAS #	Annual Theshold	Annual Emissions (lbs)	Molecular Weight Correction Factor	Emissions Subject to CPWE Fee (lbs)	Cancer Potency Factor	Multi-Pathway Factor	CPW Emissions (lbs)
1	Asbestos		0.0001						
1	Asbestos	1332214	0.0001						
2	Benzene	71432	2	18.8		0.17	0.1	1	0
3	Beryllium Compounds		0.001						
3	Beryllium oxide	1304569	0.001						
3	Beryllium	7440417	0.001						
3	Beryllium sulfate (tetrahydrate)	7787566	0.001						
3	Beryllium sulfate	13510491	0.001						
4	Butadiene [1,3]	106990	0.1	21.74		0	0.6	1	0
5	Cadmium compounds		0.01						
5	Cadmium succinate	141004	0.01						
5	Cadmium	7440439	0.01	0.15		0	15	1	0
5	Cadmium chloride	10108642	0.01						
6	Carbon tetrachloride	56235	1						
7	Polychlorinated dibenzofurans and dioxins		0.000001						
7	Chlorinated dibenzofurans, without individual isomers reported	1080	0.000001						
7	Chlorinated dioxins, without individual isomers	1086	0.000001						
								Total CPWE Fees:	

The table scrolls left and right. Clicking on the blue number of devices/processes under the Devices/Processes column (furthest column to the right) for an individual TAC will display detailed information for each device/process that contributes to the total amount of TAC reported for the facility.



Diesel particulate matter (DPM) emissions are a surrogate for individual TACs emissions reported for diesel-fueled internal combustion engines. Fees are not generated for the non-DPM TAC emissions from diesel fueled internal combustion engines. The last column "Accounted in DPM" notifies the user which TAC emissions are included under the surrogate DPM emissions (see image above). In addition, not TAC fee is assessed for portable devices that are designated as PERP in the AER tool.

iii. Ammonia & Ozone Depleting Compounds (ODC) Fees

Ammonia and ODC emissions are calculated and summarized as below. Clicking on the blue number of devices/processes under the Devices/Processes column (furthest column to the right) for ammonia or an individual ODC will display detailed information for each device/process that contributes to the total amount of ammonia or an individual TAC emissions reported for the facility.

Table 3 - Ammonia & Ozone Depleting Compounds (ODC) Fees Hide Table

Please see the South Coast AQMD Rule 301 for details on how this fees are calculated.

TAC Group	TAC / ODC	CAS #	Annual Theshold	Annual Emissions (lbs)	Emissions Subject to Fee (lbs)	Emmision Fee (lb/year)	Fee Due	Devices / Processes
22	ODC Fluorocarbons		1.0000000000			$0.47		
22	Fluorocarbons (chlorinated)	1104	1.0000000000			$0.47		
22	Trichlorofluoromethane {Freon 11}	75694	1.0000000000			$0.47		
22	Dichlorofluoromethane {Freon 12}	75718	1.0000000000			$0.47		
22	Trichlorotrifluoroethane {CFC-113}	76131	1.0000000000			$0.47		
23	Methyl chloroform {1,1,1-Trichloroethane}	71556	1.0000000000			$0.06		
32	Ammonia	7664417	200.0000000000	2,090	1,891	$0.04	$75.64	2
						Total Ammonia and ODC Fees:		$75.64
The Ammonia and ODC emission fees only apply to facilities that are subject to Rule 301(e)(1)(B)								

iv. Flat rate Device Fees

The flat rate device fee calculations are calculated and summarized as below. Clicking the "ES Code" under the column "AER ID" will display the detailed information of the equipment. Clicking on the blue number of TACs under the "TACs" column (furthest column to the right) will display detailed information for each TAC that contributes to the total amount of TAC emissions reported for that device. The device fee for emissions reported for calendar year 2022 is $341.89.

Table 4 - Flat Rate Device Fees Hide Table

For each Emissions Source subject to Device Fee facility will be charged: **$341.89.**
Fee will be applied to any Emission Source:

- if device emissions exceed annual threshold for any TAC emmitant
- if device not part of PERP (Portable Equipment Registration Program)

AER ID	Equipment Code/Description	Fee Excluded as PERP	Fee Excluded based on threshold	Fees Applied	TACs
ES3	11e. Stationary I.C. Engines, 4 Stroke-Rich Burn	No	No	Yes	22
ES2	1c. Boiler >100 MMBTU/HR	No	Yes	No	10
			Number of TAC Devices:	2	
			Number of Devices Subject to Fees:	1	
			Number of Devices Triggered Fees:	$341.89	

v. The Long List TAC Summary (AB2588 and CTR Reporting)

Facilities not subject to CTR, and AB2588 facilities not subject to their quadrennial emission reporting are NOT required to report long list TACs shown in the AER tool. Such facilities are only required to report emissions from TACs presented in Table IV of Rule 301.

The long list TAC Summary emissions calculations are estimated and summarized as below. Clicking the "ES Code" under the column AER ID will display the detailed information of the equipment. Clicking on the blue number of TACs under the TACs column (furthest column to

the right) will display detailed information for each TAC that contributes to the total amount of TAC emissions reported for that device.

Table 5 - Long List TAC Summary (AB2588/CTR Reporting) Hide Table

Annual Usage and Production of Additional Toxic Substances

Facilities not subject to CTR and those submitting Abbreviated Reports are NOT required to enter data on this page.

CTR requires that if, during the data year, any additional toxic substances identified and required to be reported in Appendix B of CTR is present, used, or produced at a facility in a way that may result in airborne emissions, "best available data and methods" as defined by CTR must be used to quantify emissions.

If no "best available data and methods" exists to provide a reasonable emissions estimate, then the toxic substance and the amount used or produced at the facility during the data year must be reported instead of an emission value. Purchase records, substance inventory reconciliation, direct measurement, or other methods may be used to estimate amounts used or produced.

If a portion of the emissions associated to these additional toxic substances could be reasonably quantified using "best available data and methods," that portion still needs to be reported as emissions associated with a device or process. This page should only be used to capture the usage or production associated with the portion that could not be reasonably quantified.

These additional toxic substances usage or production captured in this section of report are not subject to fees.

Click here to go to Process based Reporting Pages

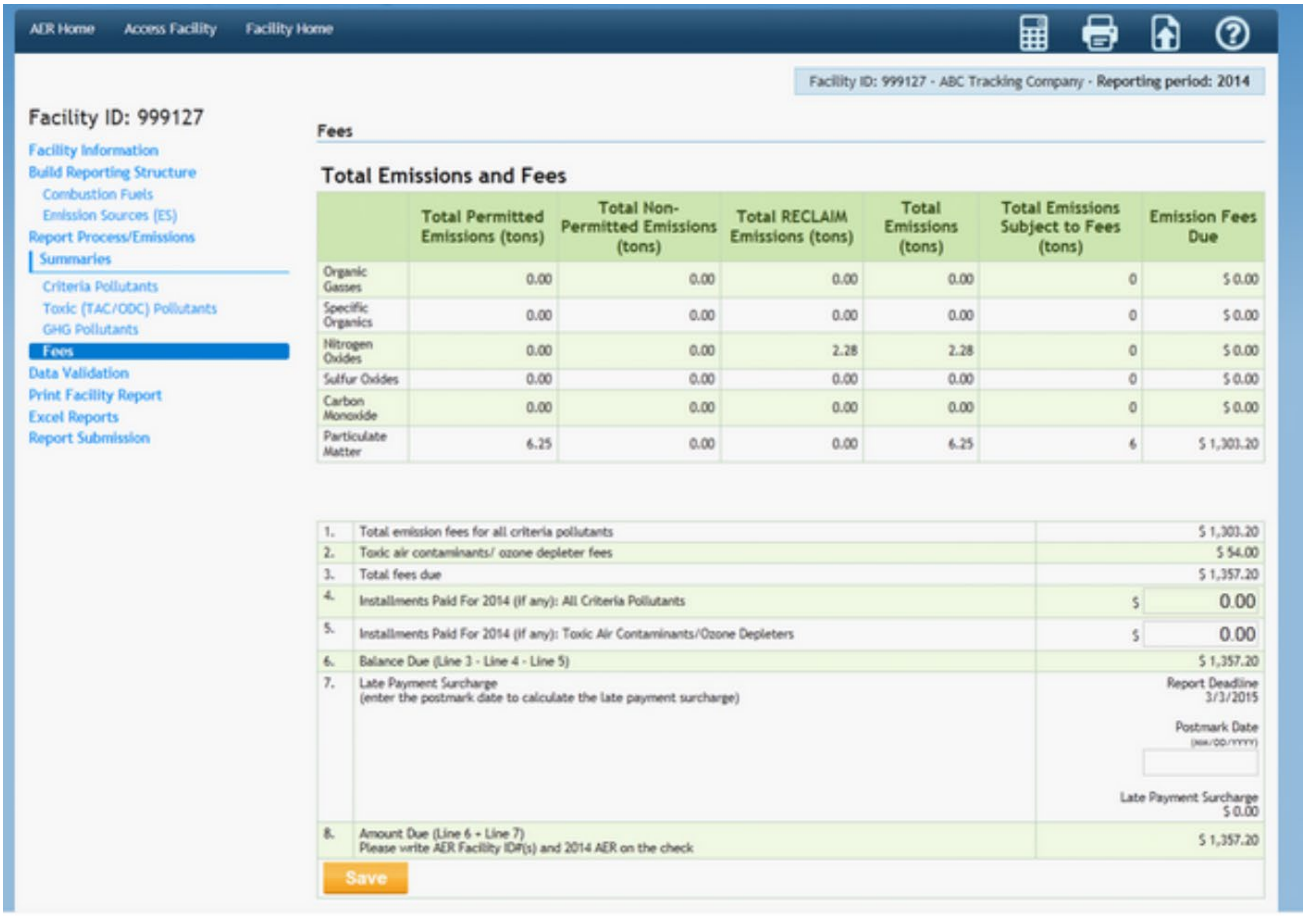
Information about this list and why users are seeing this.

TAC Group	TAC / ODC	CAS #	Annual Emissions (lbs)	Devices / Processes
24	1,1,2,2-Tetrachloroethane	79345		
25	1,1,2-Trichloroethane {Vinyl trichloride}	79005		
26	1,2,4-Trimethylbenzene	95636		
27	1,2-Dichloropropane {Propylene dichloride}	78875		
28	1,3-Dichloropropene	542756		
29	Acetaldehyde	75070		
30	Acrolein	107028		
31	Acrylonitrile	107131		
33	Carbonyl sulfide	463581		
34	Chlorine	7782505		
35	Chloroform	67663		
36	Copper	7440508		

Total Emissions and Fees

Prior to Reporting Year 2019

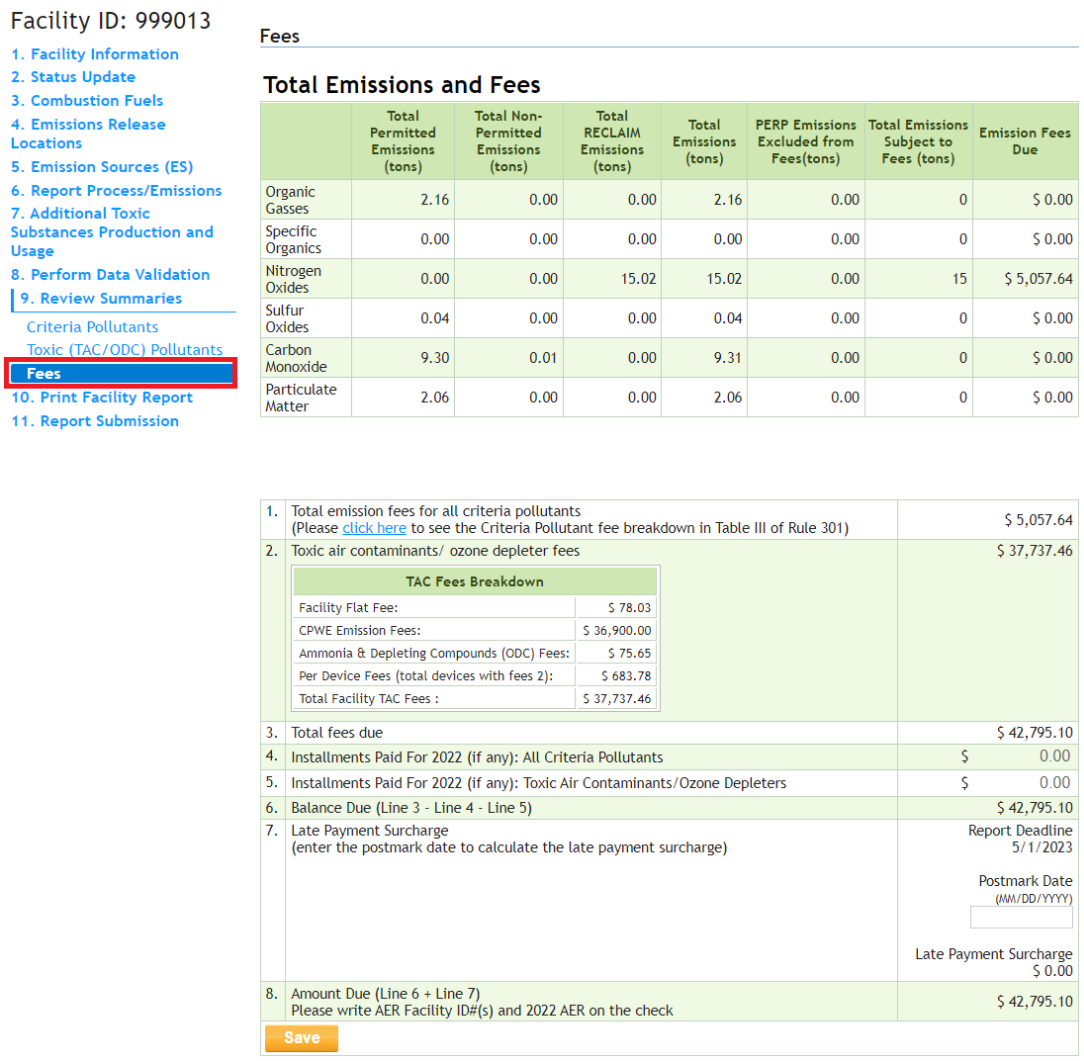
Total criteria pollutant emissions are summed up and rounded to the whole ton for fee calculation purposes. Fees for TAC/ODC are included in row #2. User is reminded to enter installments paid for both criteria and TAC/ODC (if any) if not already populated by the reporting tool. Reporting the postmark date is required for the late filers in order to calculate the late submittal surcharge (if applicable). After entering the required information, click the "Save" button to complete the data entry.



Reporting Year 2019 and After

Total criteria pollutant emissions are summed up and rounded to the whole ton for fee calculation purposes. Sum and breakdown of TAC/ODC/Ammonia fees are included in row #2. The installment paid for both criteria and TAC/ODC/Ammonia (if any) by the facility from South Coast AQMD accounting database is also shown here. Reporting the postmark date is required for the late filers in order to calculate the late submittal surcharge (if applicable). After entering the required information, click the "Save" button to complete the data entry.

Only CTR GHG and Criteria facilities need to report emissions from equipment certified under CARB's Portable Equipment Registration Program (PERP). Guidelines for reporting emissions from CTR Core facilities that include GHG and Criteria facilities can be found on the AER website. Therefore, AER and non-CTR GHG and Criteria facilities should not have emissions in the PERP emissions column.



9. Print Facility Report

The print facility report page allows users to print either the full AER PDF Report or sections of that report. To print the full AER PDF Report, the user should check the "Print Full AER PDF Report (all listed below)" check box. This will select all the individual sections. To print only sections of the AER, the user should check boxes of the desired sections. At the end of either process, the user should click on the Print Selected Pages button. A PDF version of the AER report or selected pages will appear in a pop-up box.

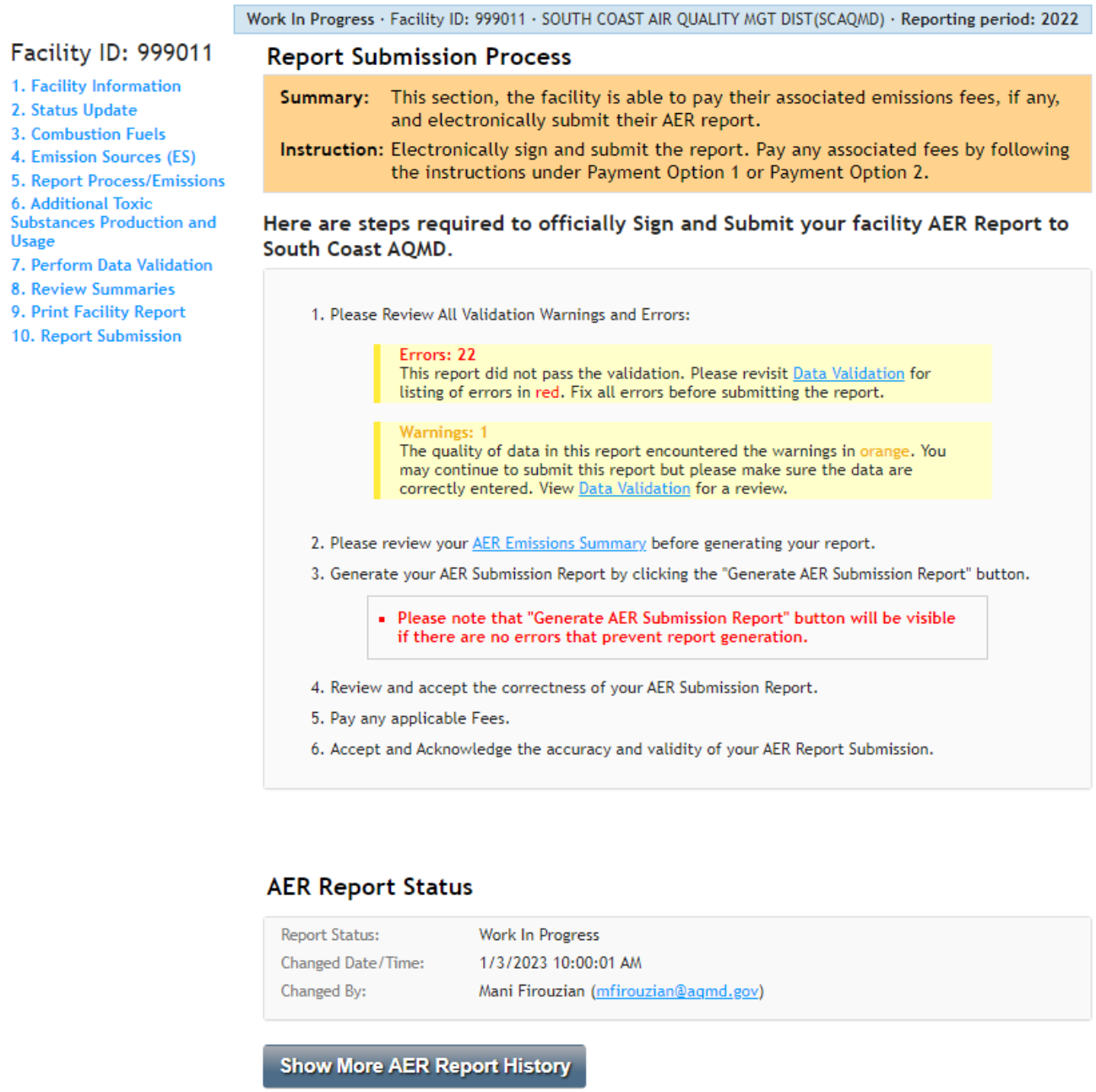
At the bottom of this page is the Print Excel Report section. The Download Report button generates a report that includes a record for all pollutants (criteria pollutants, TAC, ammonia, and ODC emissions) emitted by each process.

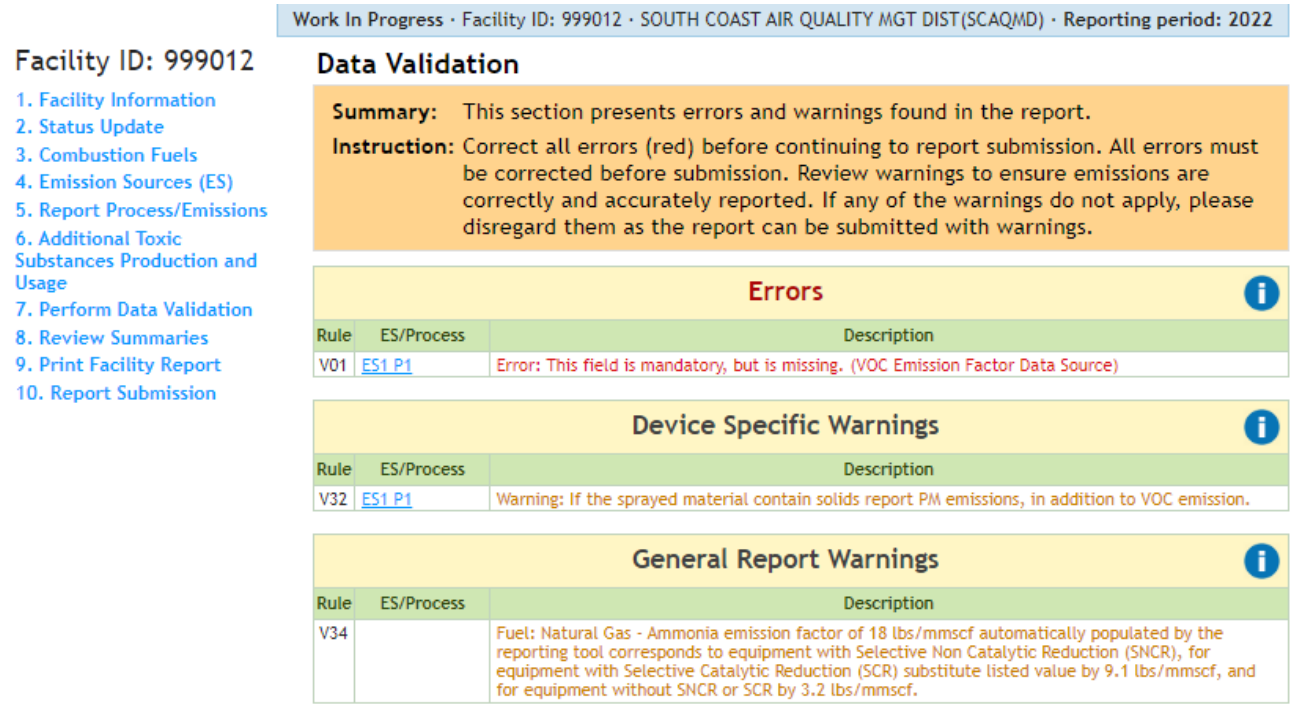
The Download TAC Report button download generates a report that includes:

- A facility information tab (FacilityInfo);
- A TAC Emissions tab, which includes a record for all TAC emissions, ammonia emissions, and ODC emissions emitted by each process;
- Summary tabs for each TAC, ammonia, and ODC emissions fee (CPWE Emission Fee, Ammonia and ODC Fees, and TAC Per Device Fees); and
- A summary tab of all TAC, ammonia, and ODC fees (TAC FEES).

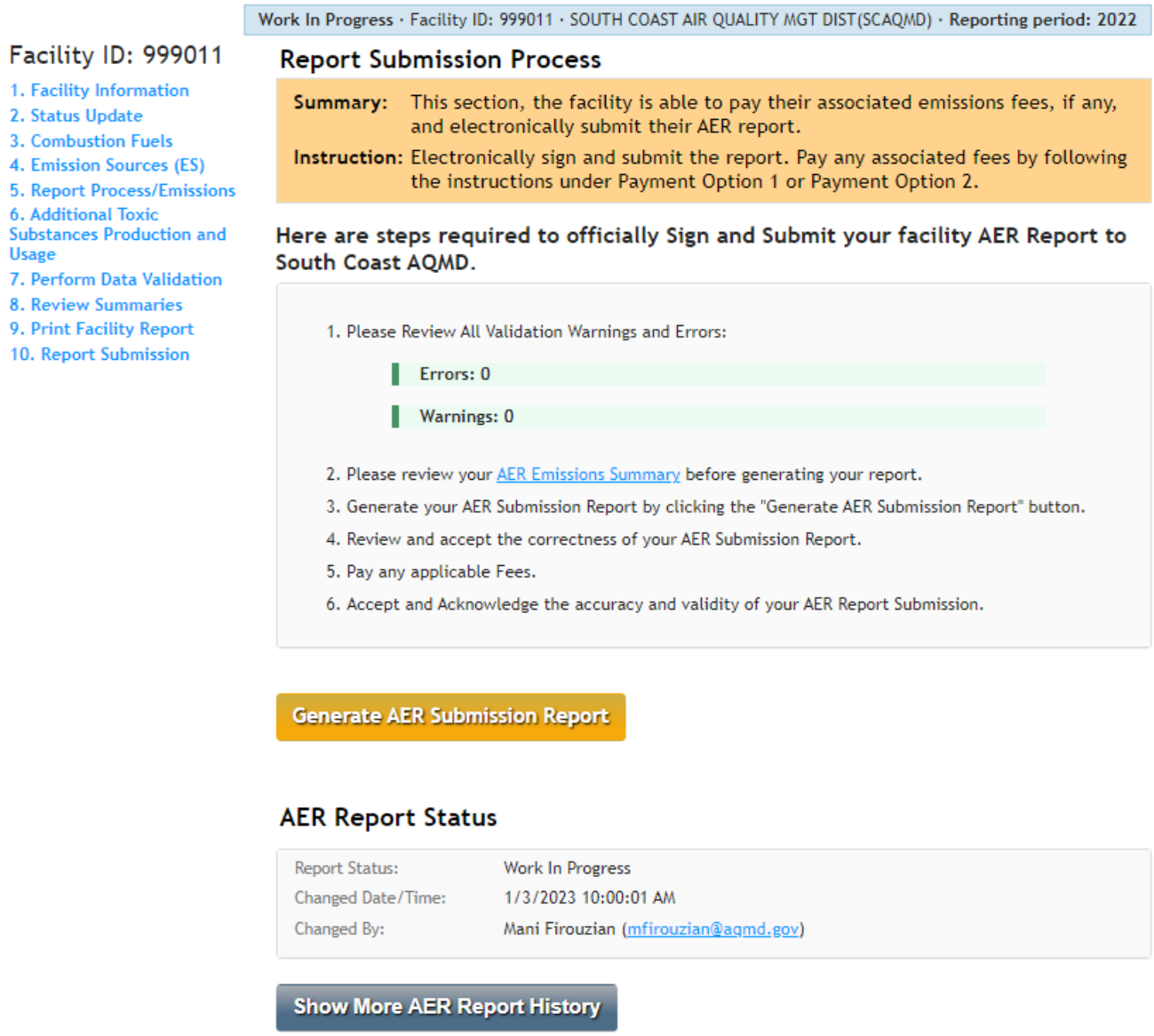
10. Report Submission

Click on the "Report Submission" link on the left Navigation menu for data submission. The screen (below) will appear flagging any errors and warnings with suggestions for user to take necessary actions in three separate items: Data Validation for Errors and Warnings, AER Emission Summary Review. Click on hyperlinks to correct any errors (Red) and warnings (Orange), when needed. Note that the non-corrected warnings in "Orange" will not stop report submission. However, verify that the reported data with that warning is correctly entered.

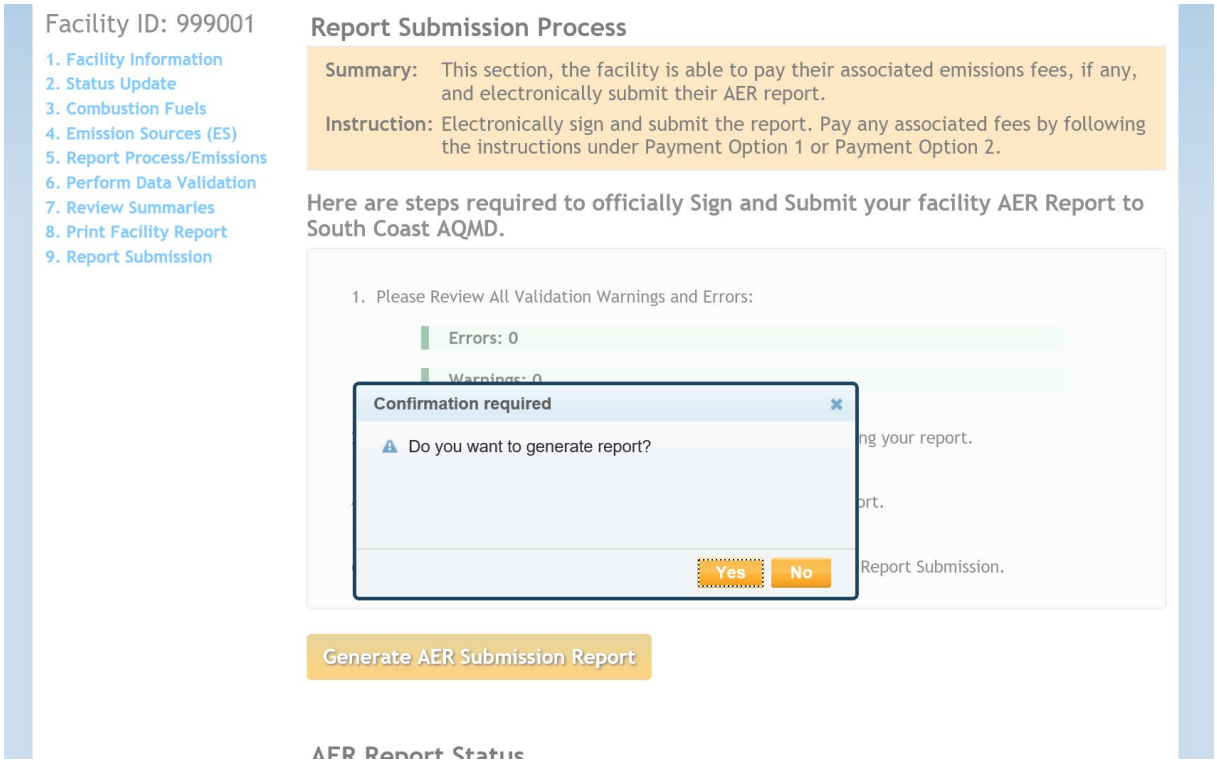




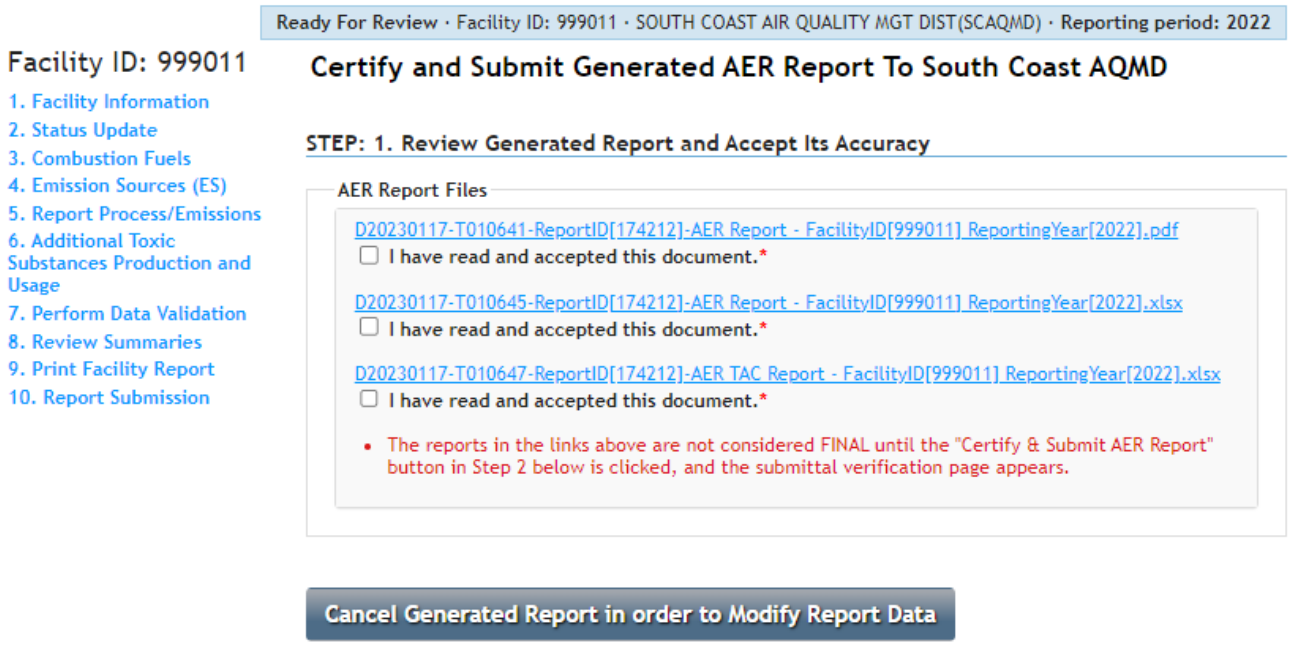
After correcting all errors in red, the "Report Submission" button is enabled as shown in screen below for user to submit the data electronically. The number of errors will be zero and the number of warnings will be displaced in orange font. Also, there will be an additional warning in orange if the report was submitted after the facility report deadline. Click the link "AER Emissions Summary" to review the AER Emissions Summary before generating the report.



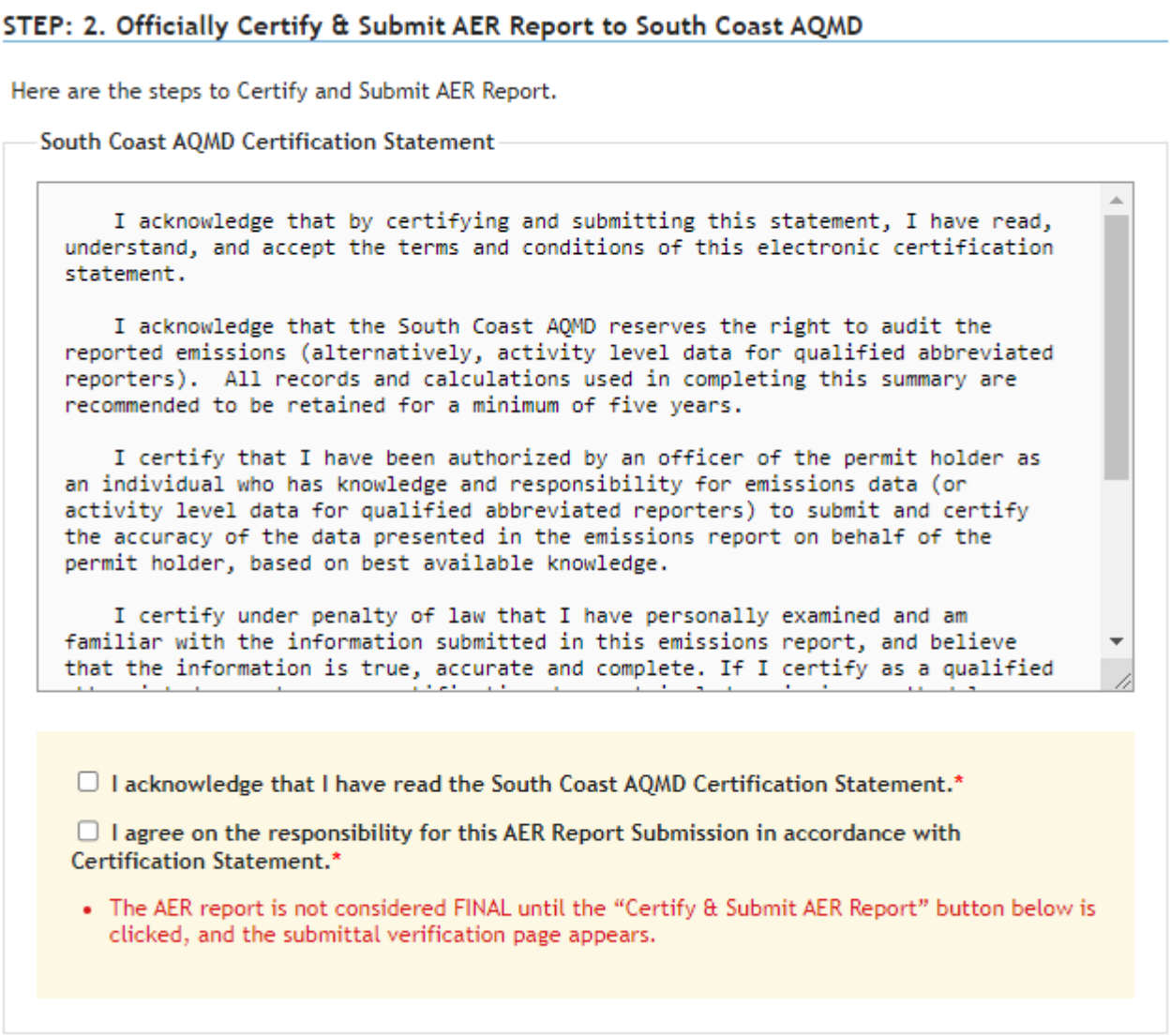
Once user clicks on the "Generate AER Submission Report" button, the tool will ask user to confirm the action as shown below.



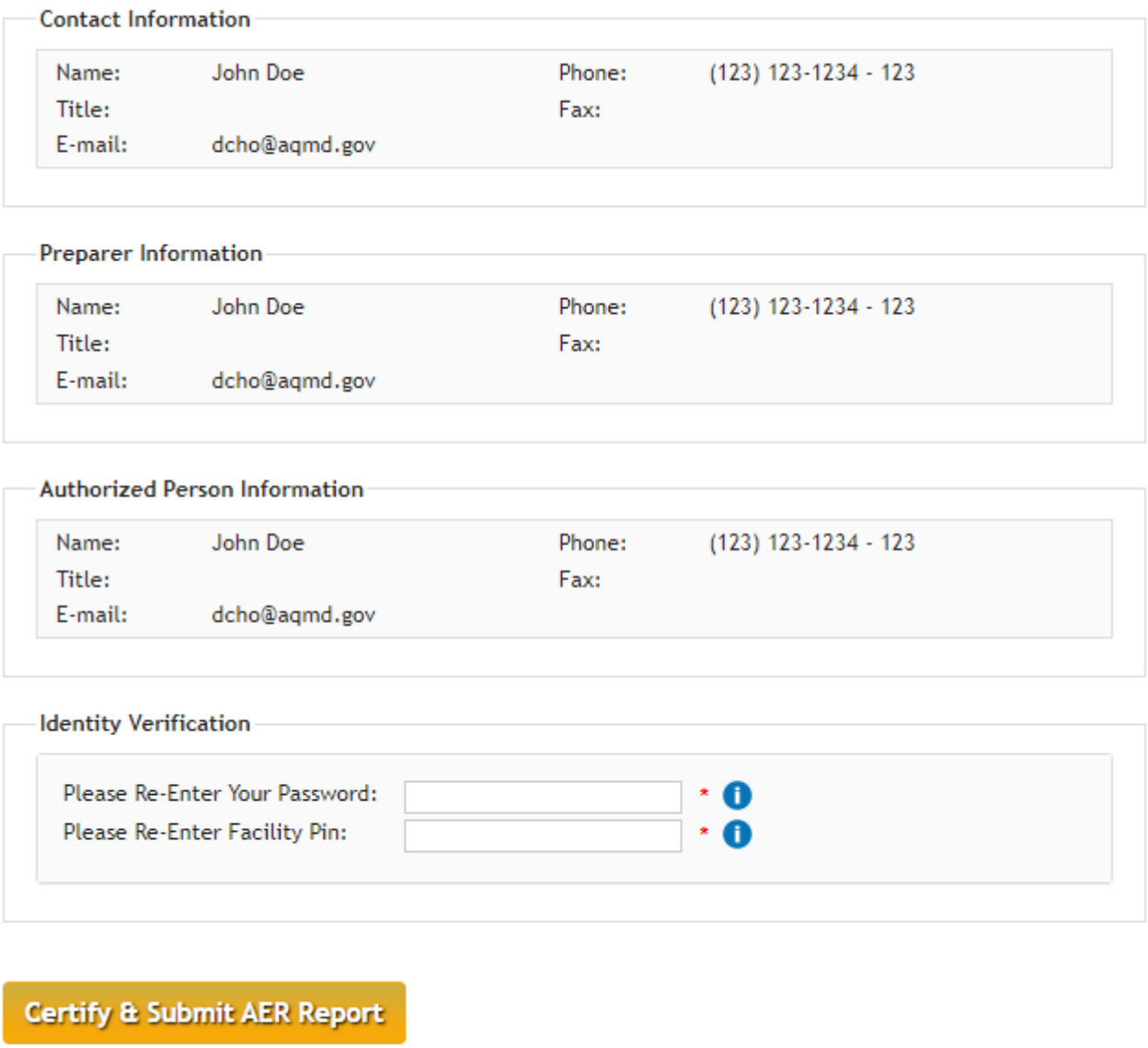
With final confirmation of "Yes", the tool will give user three generated AER Report Files to review. The user must check the box under each file, confirming that the reports have been reviewed and verified correct. If not, the user can click the link "Cancel Generated Report in order to Modify Report Data" to modify the report data.



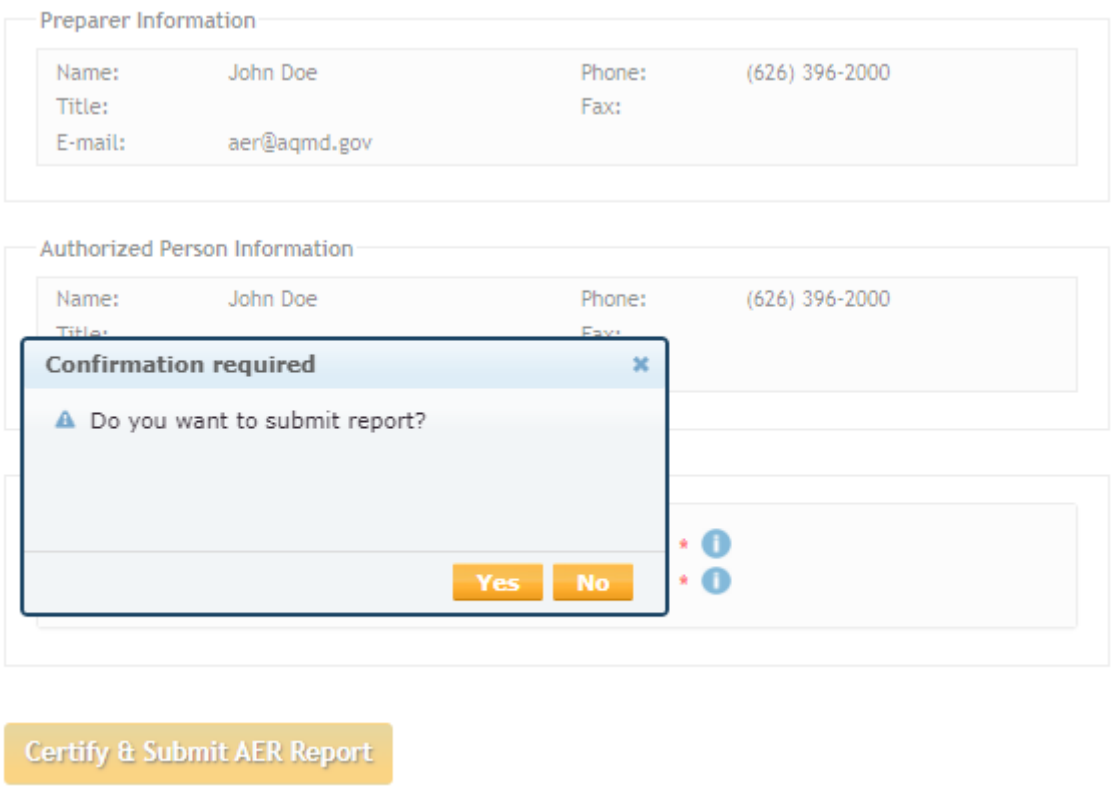
The user must read South Coast AQMD Certification Statement, then click the box next to "I acknowledge that I have read the South Coast AQMD Certification statement." The user is also required to click on the box next to "I agree on the responsibility for this AER Report Submission in accordance with Certification Statement." Once all the boxes are checked, the user will be able to click the orange button "Certify & Submit AER Report" to submit the report.



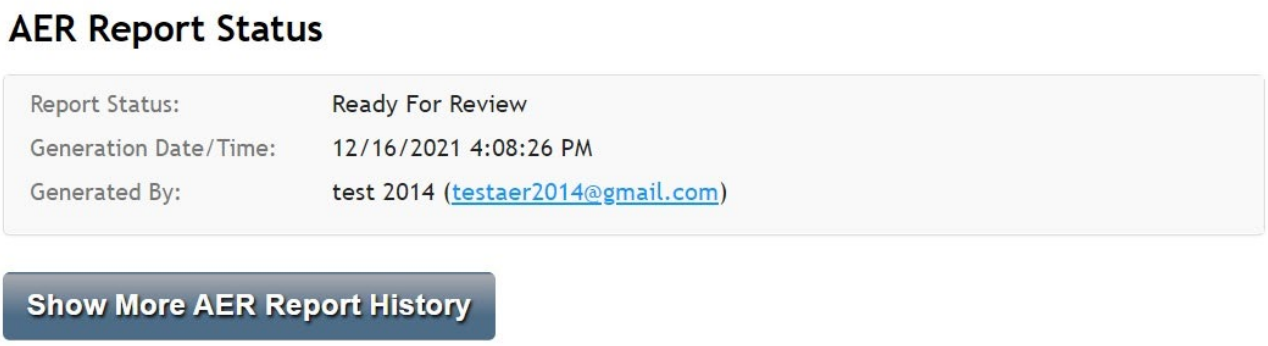
The user must enter their AER webtool password and the Facility PIN before clicking the orange button "Certify & Submit AER Report".



Once user clicks on this button, the tool will ask user one more time to confirm the action as shown.



The user can also click the link "Show More AER Report History" to show the report status as shown in the following image.



After confirming that the user wants to certify and submit the AER report, the AER webtool will display to user the AER emission fee as shown in the following images. There are two payment options; Payment Option 1 is pay via South Coast AQMD Online Payment Portal, and Payment Option 2 is pay via check. The user can choose either one to pay the fee. At the end of the process, the user will be provided an option to print or generate a pdf version of the receipt.

1. Facility Information
2. Status Update
3. Combustion Fuels
4. Emissions Release Locations
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6. Report Process/Emissions
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9. Review Summaries
10. Print Facility Report
11. Report Submission

AER emissions fee of $906.98 is due.

Please note that payment needs to be received by South Coast AQMD before the report deadline - 5/1/2023, or you will be subject to late fees.

Important:

- Please note that online payments made to South Coast AQMD may take up to 24 hours to show up in our system. If you have already made a payment please wait and check your Report Payment Status in 24 hours.
- Please note that your AER Fees Payment has to be processed or postmarked before the deadline or you will be subject to late fees.

Payment Option 1 - Pay via South Coast AQMD Online Payment Portal

Go to South Coast AQMD Payment Portal

1. Facility Information
2. Status Update
3. Combustion Fuels
4. Emissions Release Locations
5. Emission Sources (ES)
6. Report Process/Emissions
7. Additional Toxic Substances Production and Usage
8. Perform Data Validation
9. Review Summaries
10. Print Facility Report
11. Report Submission

Payment Option 2 - Pay via Check

1. Print AER Payment Voucher and instructions
2. The AER Payment Voucher and check are first received and processed by Bank of America for check deposits, return receipts for certified mails will be stamped by Bank of America rather than AQMD. Please mail the required AER Payment Voucher and check to the following address:

South Coast Air Quality Management District
P.O. Box 54493
Los Angeles, CA 90074-4493

Note: For any Express/Overnight/Courier delivery, example FedEx, please use the following address:

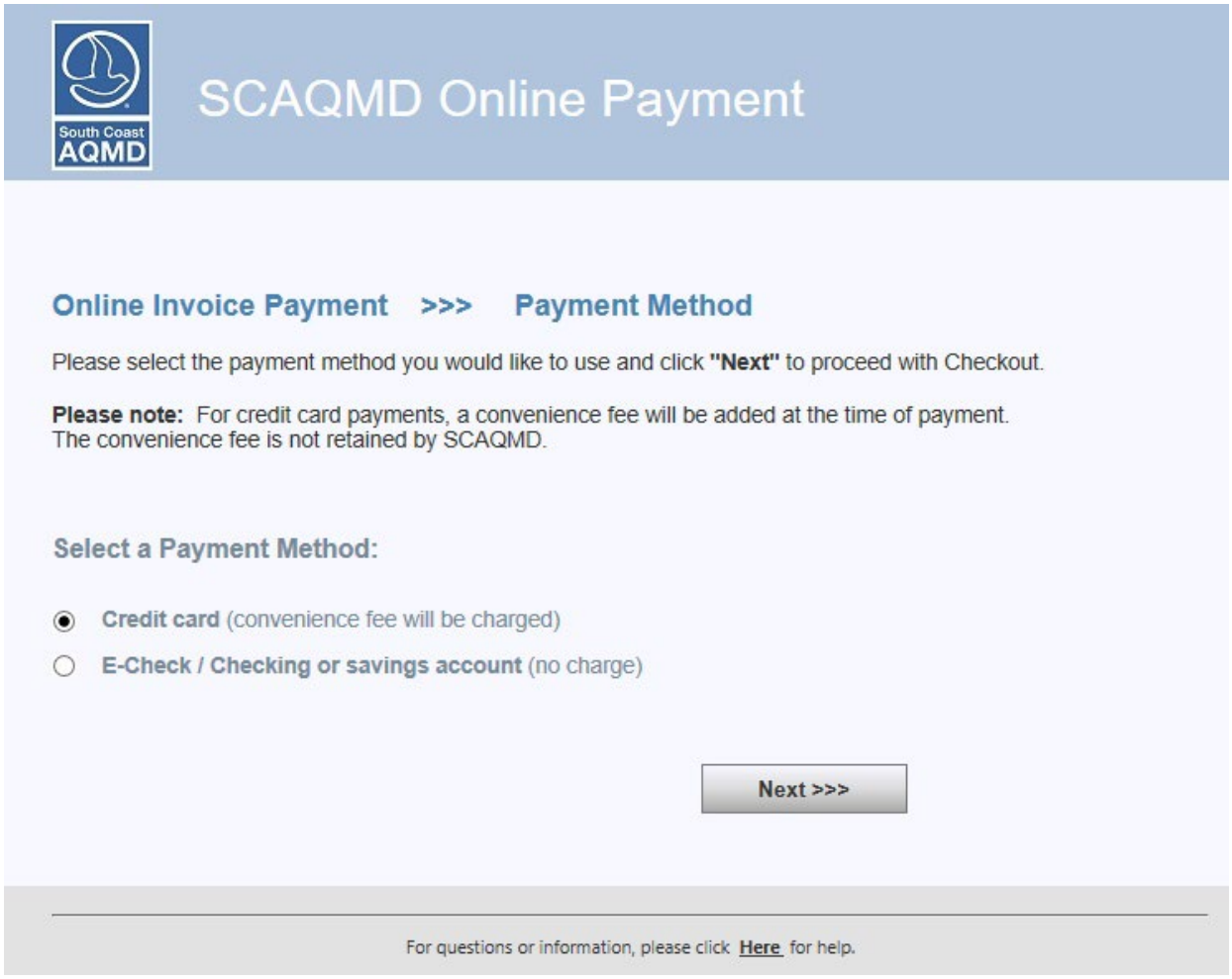
Bank of America Lockbox Services
South Coast Air Quality Management District - Lockbox 054493
2706 Media Center Drive
Los Angeles, CA 90065

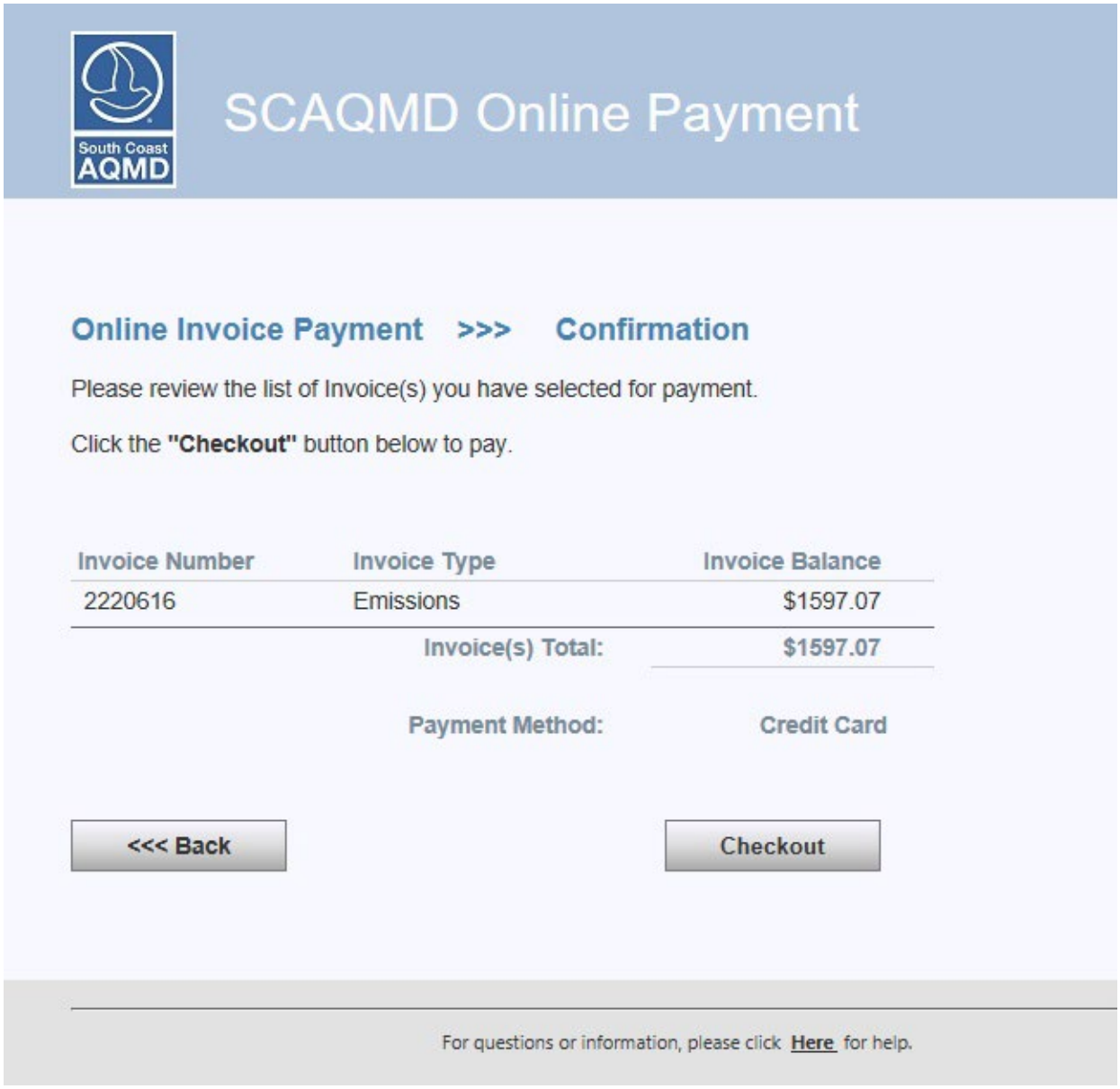
If you wish to use a messenger (or hand deliver), the package should be delivered to the cashier's booth at AQMD Headquarters at the address listed below in Diamond Bar on or before 5:00 p.m. 5/1/2023 Please note that AQMD is closed on Mondays.

South Coast Air Quality Management District
ATTN: Cash Management
Annual Emission Reporting Program
21865 Copley Drive
Diamond Bar, CA 91765-4178

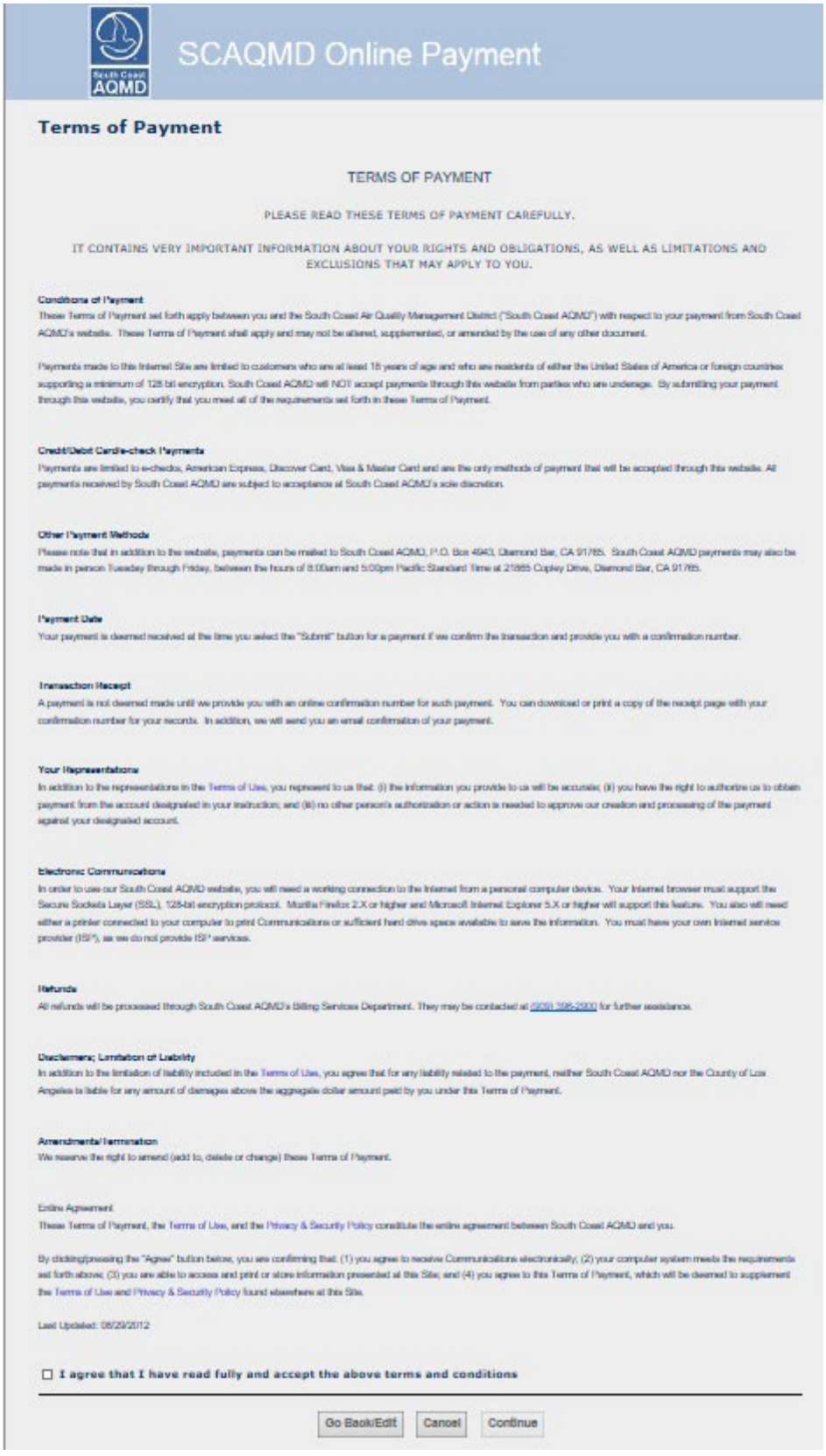
⚠ Please Note: To avoid late payment surcharges, all mails must be postmarked by the Post Office on or before 5/1/2023.

Option 1:
If Option 1 is selected, the user will be granted access to the South Coast AQMD Online Payment system. The user will be required to enter credit card information and accept the conditions for on-line payment.




SCAQMD Online Payment
South Coast AQMD
Online Invoice Payment >>> Confirmation
Please review the list of Invoice(s) you have selected for payment.
Click the "Checkout" button below to pay.
Invoice Number
Invoice Type
Invoice Balance
2220616
Emissions
$1597.07
Invoice(s) Total:
$1597.07
Payment Method:
Credit Card
<<< Back
Checkout
For questions or information, please click Here for help.

SCAQMD Online Payment
Payment Details
Complete the information below and click "Continue."
Payment Method:
Credit or Debit Card
Card Information
Card Number
Re-enter Card Number
Expiration Date
Month
Year
Card Identification Code
Billing Information
*Name
*Address
*City
*State
California
*Zip
Phone
*Email
*Required fields.
Billing Information must match Account information.
Cancel
Continue



SCAQMD Online Payment

Terms of Payment

TERMS OF PAYMENT

PLEASE READ THESE TERMS OF PAYMENT CAREFULLY.

IT CONTAINS VERY IMPORTANT INFORMATION ABOUT YOUR RIGHTS AND OBLIGATIONS, AS WELL AS LIMITATIONS AND EXCLUSIONS THAT MAY APPLY TO YOU.

Conditions of Payment
These Terms of Payment set forth apply between you and the South Coast Air Quality Management District ("South Coast AQMD") with respect to your payment from South Coast AQMD's website. These Terms of Payment shall apply and may not be altered, supplemented, or amended by the use of any other document.

Payments made to this Internet Site are limited to customers who are at least 18 years of age and who are residents of either the United States of America or foreign countries supporting a minimum of 128 bit encryption. South Coast AQMD will NOT accept payments through this website from parties who are underage. By submitting your payment through this website, you certify that you meet all of the requirements set forth in these Terms of Payment.

Credit/Debit Cards-eCheck Payments
Payments are limited to e-checks, American Express, Discover Card, Visa & Master Card and are the only methods of payment that will be accepted through this website. All payments received by South Coast AQMD are subject to acceptance at South Coast AQMD's sole discretion.

Other Payment Methods
Please note that in addition to the website, payments can be mailed to South Coast AQMD, P.O. Box 4940, Diamond Bar, CA 91765. South Coast AQMD payments may also be made in person Tuesday through Friday, between the hours of 8:00am and 5:00pm Pacific Standard Time at 21865 Copley Drive, Diamond Bar, CA 91765.

Payment Date
Your payment is deemed received at the time you select the "Submit" button for a payment if we confirm the transaction and provide you with a confirmation number.

Transaction Receipt
A payment is not deemed made until we provide you with an online confirmation number for such payment. You can download or print a copy of the receipt page with your confirmation number for your records. In addition, we will send you an email confirmation of your payment.

Your Representations
In addition to the representations in the Terms of Use, you represent to us that: (i) the information you provide to us will be accurate; (ii) you have the right to authorize us to obtain payment from the account designated in your instruction; and (iii) no other person's authorization or action is needed to approve our creation and processing of the payment against your designated account.

Electronic Communications
In order to use our South Coast AQMD website, you will need a working connection to the Internet from a personal computer device. Your Internet browser must support the Secure Sockets Layer (SSL), 128-bit encryption protocol. Mozilla Firefox 2.X or higher and Microsoft Internet Explorer 5.X or higher will support this feature. You also will need either a printer connected to your computer to print Communications or sufficient hard drive space available to save the information. You must have your own Internet service provider (ISP"), as we do not provide ISP services.

Refunds
All refunds will be processed through South Coast AQMD's Billing Services Department. They may be contacted at (909) 396-2000 for further assistance.

Disclaimers; Limitation of Liability
In addition to the limitation of liability included in the Terms of Use, you agree that for any liability related to the payment, neither South Coast AQMD nor the County of Los Angeles is liable for any amount of damages above the aggregate dollar amount paid by you under this Terms of Payment.

Amendments/Termination
We reserve the right to amend (add to, delete or change) these Terms of Payment.

Entire Agreement
These Terms of Payment, the Terms of Use, and the Privacy & Security Policy constitute the entire agreement between South Coast AQMD and you.

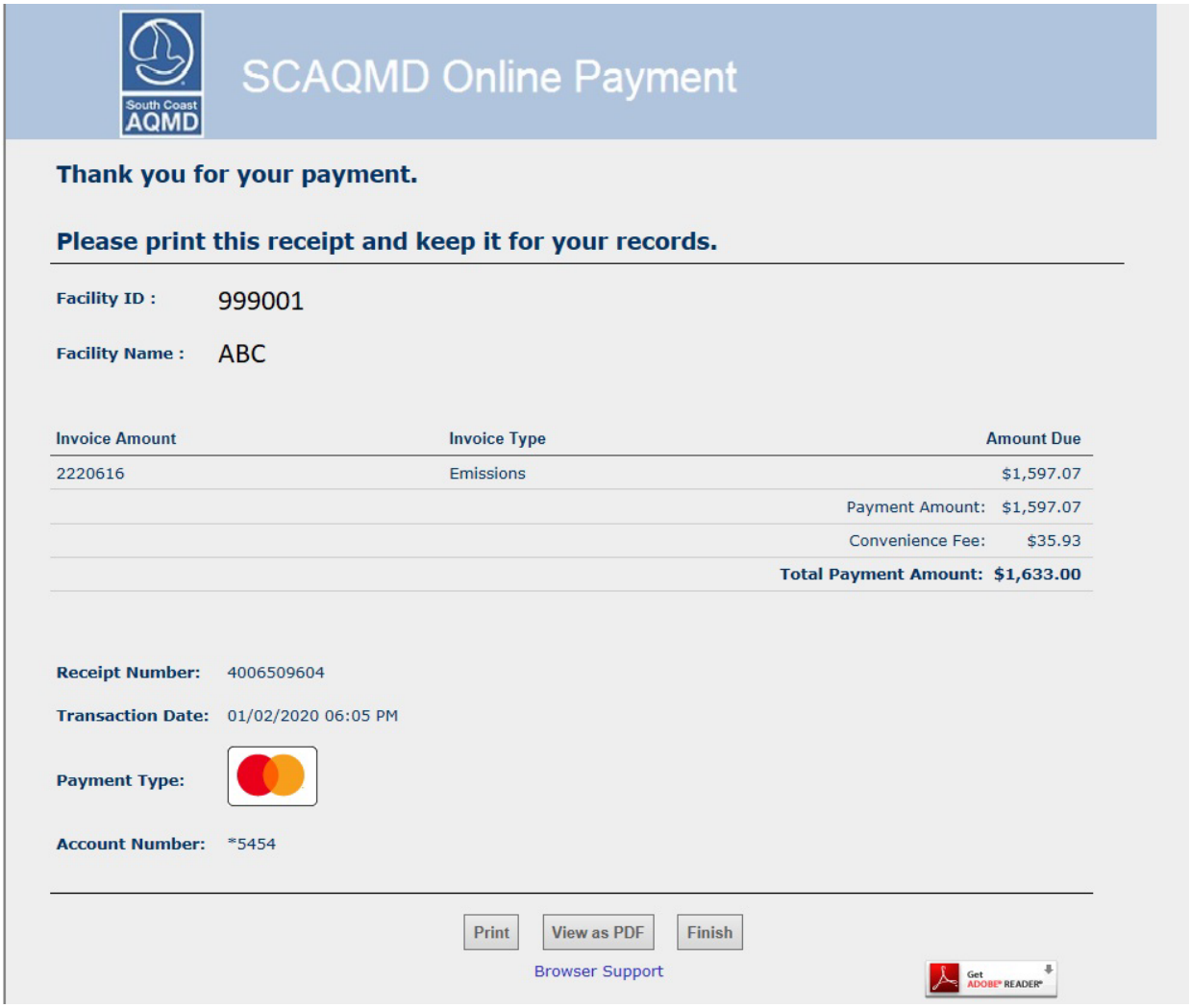
By clicking/pressing the "Agree" button below, you are confirming that: (1) you agree to receive Communications electronically; (2) your computer system meets the requirements set forth above; (3) you are able to access and print or store information presented at this Site; and (4) you agree to this Terms of Payment, which will be deemed to supplement the Terms of Use and Privacy & Security Policy found elsewhere at this Site.

Last Updated: 08/29/2012

☐ **I agree that I have read fully and accept the above terms and conditions**

Go Back/Edit | Cancel | Continue

SCAQMD Online Payment
Payment Confirmation
Click "Process Payment" to proceed.
Facility ID : 999001
Facility Name : ABC
Invoice Amount
Invoice Type
Amount Due
2220616
Emissions
$1,597.07
Payment Amount: $1,597.07
Convenience Fee: $35.93
Total Payment Amount: $1,633.00
Card Information
Card Number *5454
Expiration Date 1/21
Payment Type
Billing Information
*Name Jane Doe
Country US
*Address 123 Main
*City Anywhere
*State CA
*Zip 90000
Phone
*Email jd@ABC.com
Go Back/Edit
Cancel
Process Payment



Option 2:

If Option 2 is chosen, by clicking on the link "Print AER Payment Voucher and instructions," the AER Reporting Tool will generate a pdf version of the AER Payment Voucher. The user will need to include the AER Payment Voucher with the check to one of the three addresses provided on the "AER Submittal Confirmation" page included with the pdf version of the AER Payment Voucher. To avoid late payment surcharges, the AER Payment Voucher and check for the 2022 emissions reporting year must be postmarked by the Post Office on or before May 1, 2023.

South Coast AQMD

AER Payment Voucher

Reporting Year: **2019**

Print Date: **01/02/2020**

Facility Id: **999001**
Facility Name **ABC**
Facility Type:
Invoice#: **2220616**

Total Emissions and Fees

Submittal Date: No later than March 17 2020	Total Permitted Emissions (tons)	Total Non-Permitted Emissions (tons)	Total RECLAIM Emissions (tons)	Total Emission (tons)	Total Emissions/ Subject To Fee (tons)	Emissions Due	Fees
Organic Gasses	0.35	0.00		0.35	0.00		$0.00
Specific Organics	0.00	0.00		0.00	0.00		$0.00
Nitrogen Oxides	6.50	0.00	0.00	6.50	7.00		$1,514.20
Sulfur Oxides	0.03	0.00	0.00	0.03	0.00		$0.00
Carbon Monoxide	1.75	0.00		1.75	0.00		$0.00
Particulate Matter	0.38	0.00		0.38	0.00		$0.00

1. TOTAL EMISSION FEES FOR ALL CRITERIA POLLUTANTS	$1,514.20
2. TOXIC AIR CONTAMINANTS/ OZONE DEPLETER FEES (Total amount from Form TACS or DC)	$82.87
3. TOTAL FEES DUE	$1,597.07
4. INSTALLMENTS PAID FOR 2019 - (if any) – All Criteria Pollutants	$0.00
5. INSTALLMENTS PAID FOR 2019 - (if any) – Toxic Air Contaminants/Ozone Depleters	$0.00
6. BALANCE DUE (Line 3 - Line 4 - Line 5)	$1,597.07
7. LATE PAYMENT SURCHARGE	$0.00
8. AMOUNT DUE	**$1,597.07**

FACTORS

Common Conversion Factors

1 therm = 100,000 Btu
1 therm = 0.0000973 mmscf based on default HHV for natural gas (1,028 Btu/scf)
1 therm = 0.0000952 mmscf based on default HHV for natural gas (1,050 Btu/scf)
1 pound = 454 grams
1 gallon = 3.785 liters
1 lb/gal = 120 grams/liter
VOC (lbs/gal) = Weight Fraction (lbs/lb) x Density (lbs/ gal)
Density = Specific Gravity x 8.34 lbs/gal
1 MW (megawatt)* = 10.5 x 10^6 Btu/hr **= 8 x 10^3 steam/hr

* Net electric production of a steam electric power plant from EPA AP42 Appendix A.

** "Btu/hr" in this equation represents thermal energy input from combustion of fuel.

1 BHP (Boiler Horsepower) = 40.5 x 10^3 Btu/hr* = 34.5 lb steam/hr

* "Btu/hr" in this equation represents thermal energy input from combustion of fuel.

1 bhp (Brake Horsepower) = 2,542.5 Btu/hr* ÷ Internal Combustion Engine Thermal Efficiency**

* "Btu/hr" in this equation represents thermal energy input from combustion of fuel.

** When source specific data is not available: Internal Combustion Engine Thermal Efficiency = 35%.

$^oR = (^oF + 460)$
1 gallon = 7.48 cubic foot
1 Mgal = 1,000 gallon
1 MMscf = 1,000,000 scf
1 atmosphere = 14.7 psi = 760 mm Hg = 29.92 in. Hg = 1,013.2 mbars

REFERENCES

List of TACs and ODCs

Table 1 provides the complete list of toxic air contaminants and ozone depleters including TAC Code, TAC family name, CAS number/TAC ID, and the name of each specific substance classified under each TAC group. The last column "Type of TAC/ODC" identifies each of the listed components as VOC or PM.

Table 1 lists the family name and the individual species within the family for the following toxic air contaminants (TACs):

- Chlorinated dioxins and dibenzofurans (TAC Code 7)
- Fluorocarbons (chlorinated and brominated) (TAC Code 22)
- PAHs (TAC Code 19)
- POMs and PAH-derivatives (TAC Codes 61, 74, and 75)

For some of these TAC families, there are options to report under a cumulative TAC ID (1080 for chlorinated dibenzofurans, 1086 for chlorinated dioxins, and 1151 for PAHs) or under individual CAS numbers. It is important when reporting emissions for these families of compounds that emissions are not double counted thus adversely affecting the facility's emissions and/or fees. In other words, emissions reported under an individual CAS number (e.g., CAS No. 86737 for fluorene) should not also be included in the cumulative TAC ID (e.g., 1151 for PAHs). However, if there are PAHs that do not have individual CAS numbers in the AER Reporting Tool, then these should be reported under the cumulative TAC ID.

Historically, metal compounds were reported under the elemental metal. For example, only the elemental hexavalent chromium emissions were reported for strontium chromate. To estimate the elemental portion of the metal, the metal compound was multiplied by the molecular weight correction factor, which is the molecular weight of the elemental metal divided by the molecular weight of the metal compound. So, the molecular weight correction factor for strontium chromate is the molecular weight of hexavalent chromium divided by the molecular weight of strontium chromate ((51.996 lb/lb-mol)/(203.614 lb/lb-mol) = 0.2254). So, one pound of strontium chromate emissions results in 0.2254 pound of hexavalent chromium emissions.

As part of the CTR implementation CARB staff has asked that metal compound emissions required to be reported by CTR be reported as the metal compound instead of as the elemental metal. These additional metal compounds are presented in Table 3.

The molecular weight correction values are presented in Table 3 for metal compounds such as, arsenic, beryllium, hexavalent chromium, lead, and nickel. These molecular weight correction values are included in the emission fee portion of AER Reporting Tool, so users must estimate the emissions of the metal compound in the AER Reporting Tool, and the AER Reporting Tool will convert these emissions to the elemental emissions in the emission fees calculations. This methodology allows the reporting of the metal compound emissions required by CARB staff and ensures that the facility is only charged for the elemental metal emissions required by Rule 301.

If a metal compound is used at a facility that is not included as a selection in the AER Reporting Tool, for example cadmium carbonate (CAS No 513780), which is used in some fungicides and in chemical reagents. Then, the user will need to estimate the elemental metal portion of metal compound and report it under the CAS number or TAC ID (e.g., 1016 for arsenic, or 1128 for lead compounds) for the elemental metal.

The molecular weight correction for cadmium carbonate is ((112.411)/(172.41lb/lb-mol) = 0.6520). So, if one pounds or cadmium carbonate is used in a process, then the user should report 0.6520 pound of cadmium emitted from the process under the CAS No for elemental cadmium (CAS No. 7440439).

Table 1: Ammonia & Ozone Depleting Compounds (ODC)

TAC Code	Group	CAS No.	Substance	Type of TAC/ODC
32	Ammonia	7664417	Ammonia	Only TAC
22	Chlorofluorocarbons (CFCs)	1104	Fluorocarbons (chlorinated)	TAC, ODC
		75718	Dichlorodifluoromethan (Freon 12)	TAC, ODC
		75694	Trichlorofluoromethane (Freon 11)	TAC, ODC
		76131	Trichlorotrifluoroethane (Freon - 113)	TAC, ODC
23	1,1,1-trichloroethane	71556	Methyl chloroform (1,1,1-Trichloroethane)	TAC, ODC

Table 2: Form TACS Toxic Air Contaminants and Ozone Depleters

TAC Code	New Group	CAS No.	Substance	Type of TAC/ODC
1	Asbestos Mineral fibers (other than man-made)	1332214	Asbestos	TAC and PM
2	Benzene	71432	Benzene	TAC and VOC
3	Beryllium, including compounds	7440417	Beryllium	TAC and PM
		1304569	Beryllium oxide	
		7787566	Beryllium sulfate (tetrahydrate)	
		13510491	Beryllium sulfate	
4	Butadiene [1,3]	106990	1,3-Butadiene	TAC and VOC
5	Cadmium, including compounds	7440439	Cadmium	TAC and PM
		141004	Cadmium succinate	
		10108642	Cadmium chloride	
6	Carbon tetrachloride	56235	Carbon tetrachloride	TAC and VOC
7	Polychlorinated dibenzofurans and dioxins	1080	Dibenzofurans (Polychlorinated dibenzofurans) {PCDFs} [POM]	TAC and VOC
		1086	Chlorinated dioxins, without individual isomers reported	TAC and VOC
		1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin {TCDD} [POM]	TAC and VOC
		3268879	1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin [POM]	TAC and VOC
		19408743	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [POM]	TAC and VOC
		35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin [POM]	TAC and VOC
		39001020	1,2,3,4,5,6,7,8-Octachlorodibenzofuran [POM]	TAC and VOC
		39227286	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [POM]	TAC and VOC
		40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin [POM]	TAC and VOC
		51207319	2,3,7,8-Tetrachlorodibenzofuran [POM]	TAC and VOC
		55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran [POM]	TAC and VOC
		57117314	2,3,4,7,8-Pentachlorodibenzofuran [POM]	TAC and VOC
		57117416	1,2,3,7,8-Pentachlorodibenzofuran [POM]	TAC and VOC
		57117449	1,2,3,6,7,8-Hexachlorodibenzofuran [POM]	TAC and VOC

		57653857	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [POM]	TAC and VOC
		60851345	2,3,4,6,7,8-Hexachlorodibenzofuran [POM]	TAC and VOC
		67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran [POM]	TAC and VOC
		70648269	1,2,3,4,7,8-Hexachlorodibenzofuran [POM]	TAC and VOC
		72918219	1,2,3,7,8,9-Hexachlorodibenzofuran [POM]	TAC and VOC
8	1,4-Dioxane	123911	1,4-Dioxane	TAC and VOC
9	Ethylene dibromide {1,2-Dibromoethane}	106934	Ethylene dibromide {1,2-Dibromoethane}	TAC and VOC
10	Ethylene dichloride {1,2-Dichloroethane}	107062	Ethylene dichloride {1,2-Dichloroethane}	TAC and VOC
11	Ethylene oxide	75218	Ethylene oxide	TAC and VOC
12	Formaldehyde	50000	Formaldehyde	TAC and VOC
13	Chromium, hexavalent, including compounds	18540299	Chromium, hexavalent (and compounds)	TAC and PM
		1189851	tert-Butyl chromate(VI)	
		1333820	Chromium trioxide	
		7758976	Lead chromate	
		7789062	Strontium chromate	
		10294403	Barium chromate	
		10588019	Sodium dichromate	
		13765190	Calcium chromate	
14	Arsenic, including compounds (inorganic)	7440382	Arsenic	TAC and PM
		1016	Arsenic and Compounds (inorganic)	
		1303000	Gallium arsenide	
		1303282	Arsenic pentoxide	
		1327533	Arsenic trioxide	
		7778394	Arsenic acid	
		7778441	Calcium arsenate	
		7784421	Arsine	
15	Lead, including compounds (inorganic)	7439921	Lead compounds (inorganic)	TAC and PM
		1128	Lead compounds (inorganic)	
		301042	Lead acetate	
		1335326	Lead subacetate	
		7446277	Lead phosphate	
16	Methylene chloride {Dichloromethane}	75092	Methylene chloride {Dichloromethane}	Only TAC
17	Nickel, including compounds	7440020	Nickel	TAC and PM
		1146	Nickel refinery dust from the pyrometallurgical process	

		373024	Nickel acetate	
		1271289	Nickelocene	
		1313991	Nickel oxide	
		3333673	Nickel carbonate	
		7718549	Nickel chloride	
		7786814	Nickel sulfate	
		12035722	Nickel subsulfide	
		12054487	Nickel hydroxide	
		13138459	Nickel nitrate {Nickel (II) nitrate}	
		13463393	Nickel carbonyl	
18	Perchloroethylene {Tetrachloroethene}	127184	Perchloroethylene {Tetrachloroethene}	Only TAC
19	PAHs [PAH, POM]	1151	PAHs, total, w/o individ. components reported [PAH, POM]	TAC and VOC
		50328	Benzo[a]pyrene [PAH, POM]	TAC and VOC
		53703	Dibenz[a,h]anthracene [PAH, POM]	TAC and VOC
		56553	Benz[a]anthracene [PAH, POM]	TAC and VOC
		83329	Acenaphthene [PAH, POM]	TAC and VOC
		85018	Phenanthrene [PAH, POM]	TAC and VOC
		86737	Fluorene [PAH, POM]	TAC and VOC
		91203	Naphthalene [PAH, POM]	TAC and VOC
		120127	Anthracene [PAH, POM]	TAC and VOC
		129000	Pyrene [PAH, POM]	TAC and VOC
		189559	Dibenzo[a,i]pyrene [PAH, POM]	TAC and VOC
		189640	Dibenzo[a,h]pyrene [PAH, POM]	TAC and VOC
		191242	Benzo[g,h,i]perylene [PAH, POM]	TAC and VOC
		191300	Dibenzo[a,l]pyrene [PAH, POM]	TAC and VOC
		192654	Dibenzo[a,e]pyrene [PAH, POM]	TAC and VOC
		192972	Benzo[e]pyrene [PAH, POM]	TAC and VOC
		193395	Indeno[1,2,3-cd]pyrene [PAH, POM]	TAC and VOC
		198550	Perylene [PAH, POM]	TAC and VOC
		205823	Benzo[j]fluoranthene [PAH, POM]	TAC and VOC
		205992	Benzo[b]fluoranthene [PAH, POM]	TAC and VOC
		206440	Fluoranthene [PAH, POM]	TAC and VOC
		207089	Benzo[k]fluoranthene [PAH, POM]	TAC and VOC
		208968	Acenaphthylene [PAH, POM]	TAC and VOC
		218019	Chrysene [PAH, POM]	TAC and VOC
20	Trichloroethylene	79016	Trichloroethylene	TAC and VOC
21	Vinyl chloride	75014	Vinyl chloride	TAC and VOC
61	POMS and PAH-derivatives	56495	3-Methylcholanthrene {PAH} [POM]	TAC and VOC
		194592	2,3,7,8-Tetrachlorodibenzo-p-dioxin {TCDD} [POM]	TAC and VOC

		224420	Dibenz[a,j]acridiene [POM]	TAC and VOC
		226368	Dibenz[a,h]acridiene [POM]	TAC and VOC
		602879	5-Nitroacenaphthene [POM]	TAC and VOC
		607578	2-Nitrofluorene [PAH-Derivative, POM]	TAC and VOC
		3697243	5-Methylchrysene [PAH-Derivative, POM]	TAC and VOC
		5522430	1-Nitropyrene [PAH-Derivative, POM]	TAC and VOC
		7496028	6-Nitrochrysene [PAH-Derivative, POM]	TAC and VOC
		42397648	1,6-Dinitropyrene [PAH-Derivative, POM]	TAC and VOC
		42397659	1,8-Dinitropyrene [PAH-Derivative, POM]	TAC and VOC
		57835924	4-Nitropyrene [POM]	TAC and VOC
72	Diesel exhaust particulates	9901	Diesel Exhaust Particulates	TAC and PM
74	Methyl PAHs, POM	56495	3-Methylcholanthrene [PAH-Derivative, POM]	TAC and VOC
		57976	7,12-Dimethylbenz[a]anthracene [PAH-Derivative, POM]	TAC and VOC
		91576	2-Methyl naphthalene [PAH, POM]	TAC and VOC
		3697243	5-Methylchrysene [PAH-Derivative, POM]	TAC and VOC
75	Nitro-PAHs	602879	5-Nitroacenaphthene [POM]	TAC and VOC
		607578	2-Nitrofluorene [PAH-Derivative, POM]	TAC and VOC
		5522430	1-Nitropyrene [PAH-Derivative, POM]	TAC and VOC
		7496028	6-Nitrochrysene [PAH-Derivative, POM]	TAC and VOC
		42397648	1,6-Dinitropyrene [PAH-Derivative, POM]	TAC and VOC
		42397659	1,8-Dinitropyrene [PAH-Derivative, POM]	TAC and VOC
		57835924	4-Nitropyrene [POM]	TAC and VOC
108	Lead compounds (other than inorganic)	1129	Lead compounds (other than inorganic)	TAC and PM
		75741	Tetramethyllead	
		78002	Tetraethyllead	

Table 3: Molecular Weight Correction Factors

TAC Code	CAS No	Description	FamilyName	Molecular Weight Correction Factors
3	1304569	Beryllium oxide	Beryllium, including compounds	0.36
3	7787566	Beryllium sulfate (tetrahydrate)	Beryllium, including compounds	0.0508
3	13510491	Beryllium sulfate	Beryllium, including compounds	0.0857
5	141004	Cadmium succinate	Cadmium, including compounds	0.4921
5	10108642	Cadmium chloride	Cadmium, including compounds	0.6132
13	1189851	tert-Butyl chromate(VI)	Chromium, hexavalent, including compounds	0.2258
13	1333820	Chromium trioxide	Chromium, hexavalent, including compounds	0.52
13	7758976	Lead chromate	Chromium, hexavalent, including compounds	0.1609
13	7789062	Strontium chromate	Chromium, hexavalent, including compounds	0.2554

13	10294403	Barium chromate	Chromium, hexavalent, including compounds	0.2053
13	10588019	Sodium dichromate	Chromium, hexavalent, including compounds	0.397
13	13765190	Calcium chromate	Chromium, hexavalent, including compounds	0.3332
14	1303000	Gallium arsenide	Arsenic, including compounds (inorganic)	0.518
14	1303282	Arsenic pentoxide	Arsenic, including compounds (inorganic)	0.6519
14	1327533	Arsenic trioxide	Arsenic, including compounds (inorganic)	0.7574
14	7778394	Arsenic acid	Arsenic, including compounds (inorganic)	0.5278
14	7778441	Calcium arsenate	Arsenic, including compounds (inorganic)	0.3766
15	301042	Lead acetate	Lead, including compounds (inorganic)	0.637
15	1335326	Lead subacetate	Lead, including compounds (inorganic)	0.7696
15	7446277	Lead phosphate	Lead, including compounds (inorganic)	0.7659
17	373024	Nickel acetate	Nickel, including compounds	0.3321
17	1271289	Nickelocene	Nickel, including compounds	0.49365
17	1313991	Nickel oxide	Nickel, including compounds	0.7859
17	3333673	Nickel carbonate	Nickel, including compounds	0.4945
17	7718549	Nickel chloride	Nickel, including compounds	0.4529
17	7786814	Nickel sulfate	Nickel, including compounds	0.3794
17	12035722	Nickel subsulfide	Nickel, including compounds	0.2443
17	12054487	Nickel hydroxide	Nickel, including compounds	0.6332
17	13138459	Nickel nitrate {Nickel (II) nitrate}	Nickel, including compounds	0.3213
17	13463393	Nickel carbonyl	Nickel, including compounds	0.3438
108	75741	Tetramethyllead	Lead, including compounds (other than inorganic)	0.775
108	78002	Tetraethyllead	Lead, including compounds (other than inorganic)	0.6407

Table 4. Special Instructions for Reporting Select Toxic Air Contaminants

TAC Code	Substance	Reporting Recommendations
14	Arsenic and compounds	The entire emissions of arsenic compounds included in the AER Reporting Tool must be reported. For, example if one pound of arsenic trioxide is emitted, then one pound should be reported under CAS No 1327533. However, if an arsenic compound is not included in the AER Reporting Tool, then only elemental emissions of the arsenic compound should be reported under the TAC ID 1016. To report the elemental emissions of the arsenic compound, the emissions of the arsenic compound should be multiplied by the molecular weight correction factor, which is the molecular weight of elemental arsenic divided by the molecular weight of the arsenic compound.
1	Asbestos	Be sure to consider the asbestos weight fraction in mineral fibers such as erionite, talc, etc. when calculating the asbestos emissions.
3	Beryllium Compounds	The entire emissions of beryllium compounds included in the AER Reporting Tool must be reported. For, example if one pound of beryllium oxide is emitted, then one pound should be reported under CAS No 1304569. However, if the beryllium compound is not included in the AER Reporting Tool, then only elemental emissions of the beryllium compound should be reported under CAS No 7440417. To report the elemental emissions of the beryllium compound, the emissions of the beryllium compound should be multiplied by the molecular weight correction factor, which is the molecular weight of elemental beryllium divided by the molecular weight of the beryllium compound.
5	Cadmium Compounds	The entire emissions of cadmium compounds included in the AER Reporting Tool must be reported. For, example if one pound of cadmium chloride is emitted, then one pound should be reported under CAS No 10108642. However, if the cadmium compound is not included in the AER Reporting Tool, then only elemental emissions of the cadmium compound should be reported under CAS No 7440439. To report the elemental emissions of the cadmium compound, the emissions of the cadmium compound should be multiplied by the molecular weight correction factor, which is the molecular weight of elemental cadmium divided by the molecular weight of the cadmium compound.
13	Hexavalent chromium and compounds	The entire emissions of hexavalent chromium compounds included in the AER Reporting Tool must be reported. For, example if one pound of strontium chromate is emitted, then one pound should be reported under CAS No 7789062. However, if the hexavalent chromium compound is not included in the AER Reporting Tool, then only elemental emissions of the hexavalent chromium compound should be reported under CAS No 18540299. To report the elemental emissions of the hexavalent chromium compound, the emissions of the hexavalent chromium compound should be multiplied by the molecular weight correction factor, which is the molecular weight of elemental hexavalent chromium divided by the molecular weight of the hexavalent chromium compound.
7	Chlorinated dioxins and dibenzofurans	Report emissions as either a family total or by individual species. Do not double count the same emissions in the family total and as an individual species.
22	Fluorocarbons (chlorinated and brominated)	Report emissions as either a family total or by individual species. Do not double count the same emissions in the family total and as an individual species.
15 108	Lead and compounds	The entire emissions of lead compounds included in the AER Reporting Tool must be reported. For, example if one pound of lead

TAC Code	Substance	Reporting Recommendations
		acetate is emitted, then one pound should be reported under CAS No 301042. However, if the lead compound is not included in the AER Reporting Tool, then only elemental emissions of the lead compound should be reported under TAC ID 1128. To report the elemental emissions of the lead compound, the emissions of the lead compound should be multiplied by the molecular weight correction factor, which is the molecular weight of elemental lead divided by the molecular weight of the lead compound.
17	Nickel	The entire emissions of nickel compounds included in the AER Reporting Tool must be reported. For, example if one pound of nickel oxide is emitted, then one pound should be reported under CAS No 1313991. However, if the nickel compound is not included in the AER Reporting Tool, then only elemental emissions of the nickel compound should be reported under CAS No 7440020. To report the elemental emissions of the nickel compound, the emissions of the nickel compound should be multiplied by the molecular weight correction factor, which is the molecular weight of elemental nickel divided by the molecular weight of the nickel compound.
19	PAHs	Report emissions as either a family total or by individual species. Do not double count the same emissions in the family total and as an individual species.
61 74 75	POMs and PAH-derivatives	Report emissions as either a family total or by individual species. Do not double count the same emissions in the family total and as an individual species.