

Guidelines for Fuel Dispensing Operations

(Revised December 2024)

Detailed Site-Specific AP-42 Method

When estimating emissions from underground storage tanks, it is assumed that no breathing or standing losses occur because the insulating nature of the earth limits the temperature change. Underground storage tanks are classified as fixed roof tanks, users NOT submitting an Abbreviated Report may use the current AP-42, Chapter 7.1 (June 2020) methodology to estimate working loss (total loss) for aboveground or underground storage tanks.

Default Emission Factor Method

For service stations and other facilities where gasoline and/or diesel fuel are transferred and dispensed, VOC emissions may be estimated and reported using emission factors established by the South Coast AQMD and the California Air Resources Board (CARB). Diesel fuel dispensing emission factors were estimated based on AP-42, Chapter 5.2 (June 2008). These emission factors include losses from loading, storing, dispensing, and spills or leaks from all components of the transfer and dispensing facility. All gasoline fuel dispensing assumes emissions control technology. Users should use the appropriate emission factor for diesel fuel dispensing based on whether the operations are controlled or uncontrolled.

Emission Factors for Gasoline Fuel Dispensing:

Underground Gasoline Tanks:

Criteria Pollutant	EF (lbs/Mgal)	Controlled				
VOC	0.743	Yes				

TAC Pollutant	EF (lbs/Mgal)	Controlled			
Benzene	4.00E-03	Yes			
Ethyl Benzene	3.63E-03	Yes			
n-Hexane	1.36E-02	Yes			
Naphthalene	4.20E-04	Yes			
Propylene	1.84E-05	Yes			
Xylenes	1.79E-02	Yes			
Toluene	1.91E-02	Yes			

Aboveground Tanks:

Criteria Pollutant	EF (lbs/Mgal)	Controlled			
VOC	19.519	No			
VOC	1.322	Yes			

TAC Pollutant	EF (lbs/Mgal)	Controlled			
Benzene	7.09E-03	Yes			
Ethylbenzene	6.38E-03	Yes			
Naphthalene	7.35E-04	Yes			
n-Hexane	2.42E-02	Yes			
Propylene	3.29E-05	Yes			
Toluene	3.37E-02	Yes			
Xylenes	3.14E-02	Yes			

Emissions Factors for Diesel Fuel Dispensing:

Criteria Pollutant	EF (lbs/Mgal)	Controlled			
VOC	0.028	No			
VOC	0.0028	Yes			

The AER webtool automatically populates these default emission factors when fuel dispensing is chosen as an emission source category in the Edit Device page (Note, Mgal = 1,000 gallons, MMgal = 1,000,000 gallons).

Example Reporting for Gasoline Dispensing at a Fueling Site

An industrial facility operating on-site refueling equipment dispensed 25,000 gallons of gasoline during the reporting period.

The following steps illustrate how to report VOC and Toxics emissions from underground storage tanks with attached gasoline dispensing equipment.

First, go to the Emission Sources (ES) page using the blue font menu on the left-hand side of the webpage and select the Profile link next to the device you would like to report.

Facility ID: 999014

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
- 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.

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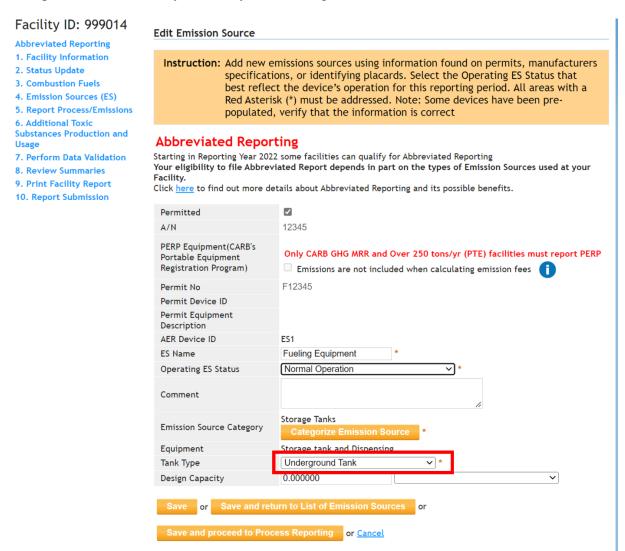
Abbreviated Reporting

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.

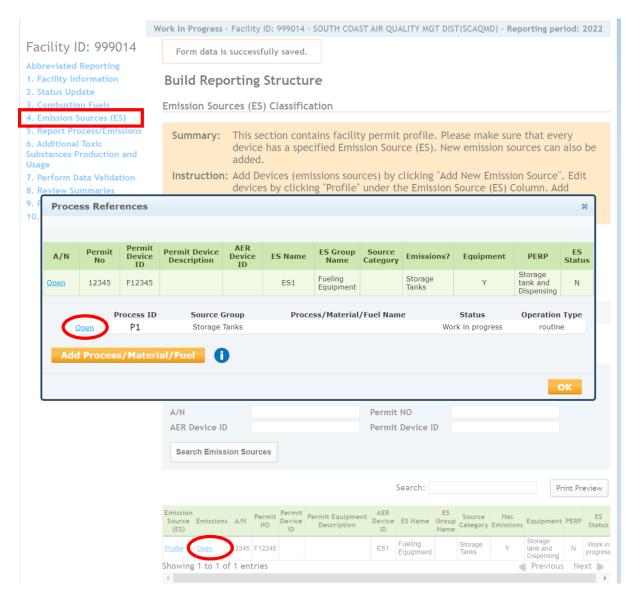
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Complete all required fields (i.e., fields marked with a red asterisk "*") on the Edit Emission Source page, being careful to select the appropriate Tank Type from the drop-down list. Once completed with data entry, click any of the orange Save buttons to continue.

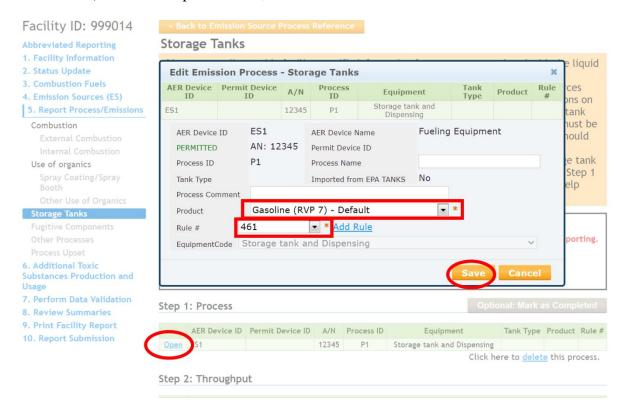


Click here to <u>delete</u> this emission source and associated data.

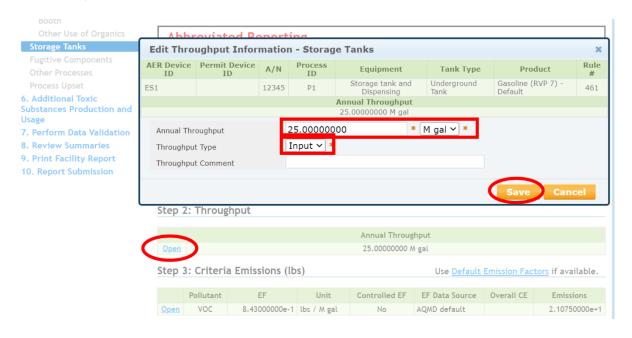
To enter data for the fuel dispensing equipment, select the Device ID from the Emission Sources page by clicking on the Open link in the emission source table. Then, click on the Open button on the Process References pop-up window.



Enter process information for the device by clicking on the Open link under "Step 1: Process" on the Report Process/Emissions page. Select the appropriate Product type and Rule # (required information) from the drop-down lists, and then click the Save button.

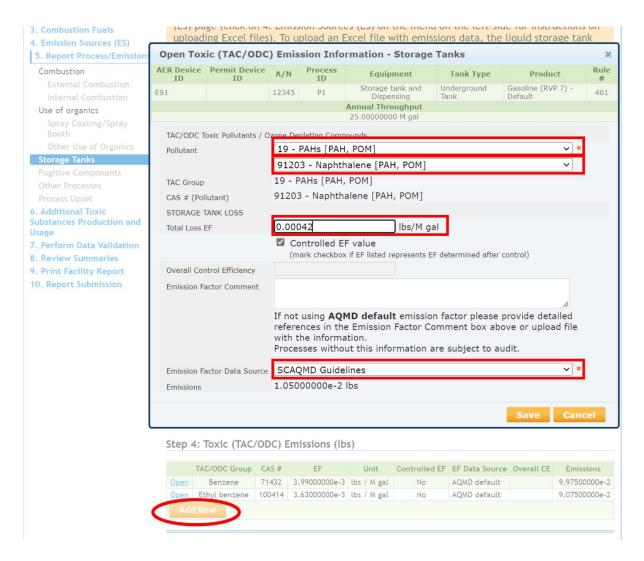


Enter fuel throughput information by clicking on the Open link under Step 2: Throughput. Enter the amount of gasoline dispensed from the equipment, select the appropriate units of measure (Note: Mgal = 1,000 gallons, MMgal = 1,000,000 gallons), and select throughput type (Input is the default). Click the Save button to save the information and close the window.



At this point, users submitting an Abbreviated Report should return to the Emission Sources (ES) page and following the steps above. Users submitting an Abbreviated Report must not change default emission factors or add additional pollutants as detailed below. Doing so will disqualify the user from submitting an Abbreviated Report.

For users that are NOT CTR Abbreviated Reporters, the best available site-specific information should be used. For example, the Safety Data Sheets (SDS) for the gasoline used at the site indicate the presence of benzene, ethylbenzene and naphthalene in varying percentages. Since the SDS states that the gasoline contains naphthalene, the user must enter a new toxic compound by clicking on the Add New button under Step 4: Toxic (TAC/ODC) Emissions. Select the appropriate TAC, enter the emission factor, and select the Emission Factor Data Source (SCAQMD Guidelines for this example).



Data entry for this device is now complete. You may edit any of the entered data by selecting the Open link next to the device on the Emission Sources (ES) page and following the steps above.