GUIDELINES FOR REPORTING EMISSIONS FROM MULTIPLE IDENTICAL DEVICES/EQUIPMENT

The AER Reporting Tool (tool) is designed to collect emission data at device operation levels. Due to the repetition of data entry, the tool offers users with Emission Source Grouping feature (ESG wizard) as an option to group the identical devices/equipment and report their emissions in fewer key strokes. This document describes the restrictions of the grouping feature. It also provides instructions and examples of steps associated with building up a model and applying it to the group members, and how emissions are calculated and reported.

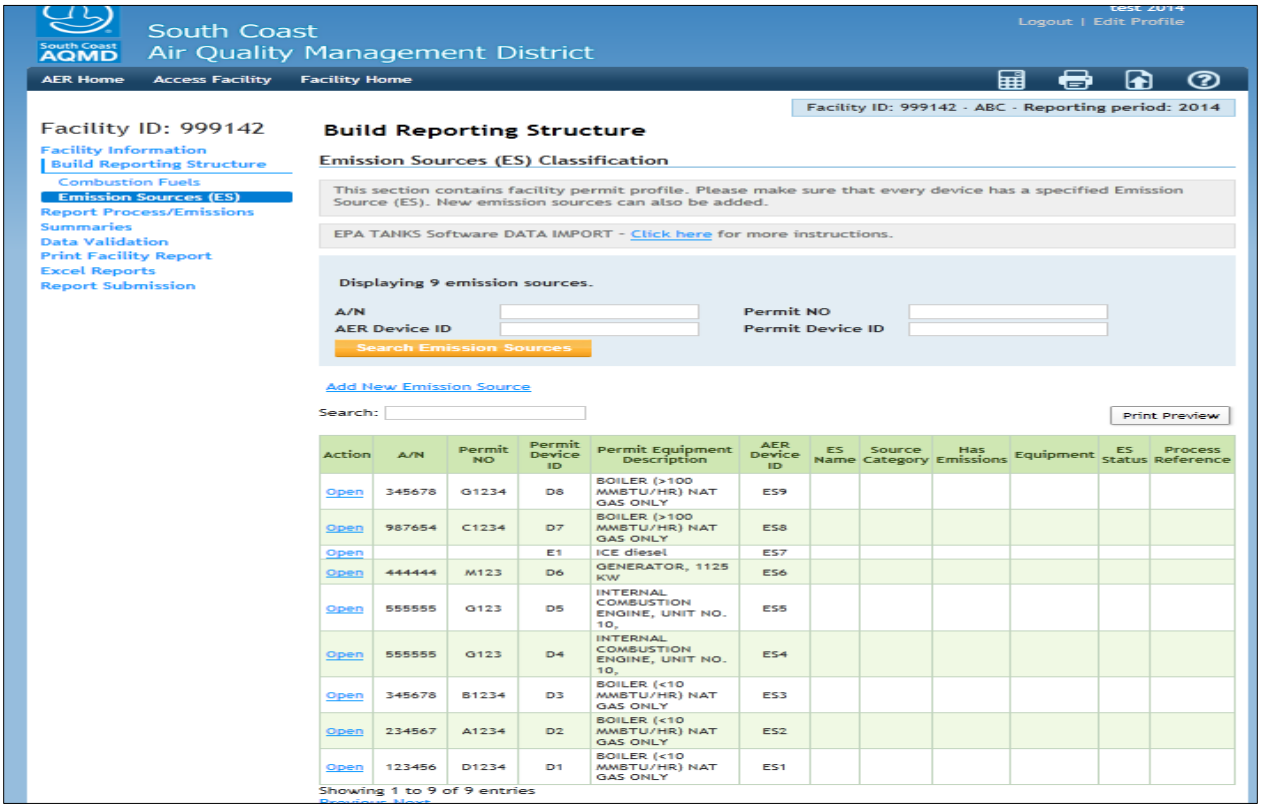
RESTRICTIONS

In order to be grouped, the device/equipment members must meet the following restrictions:

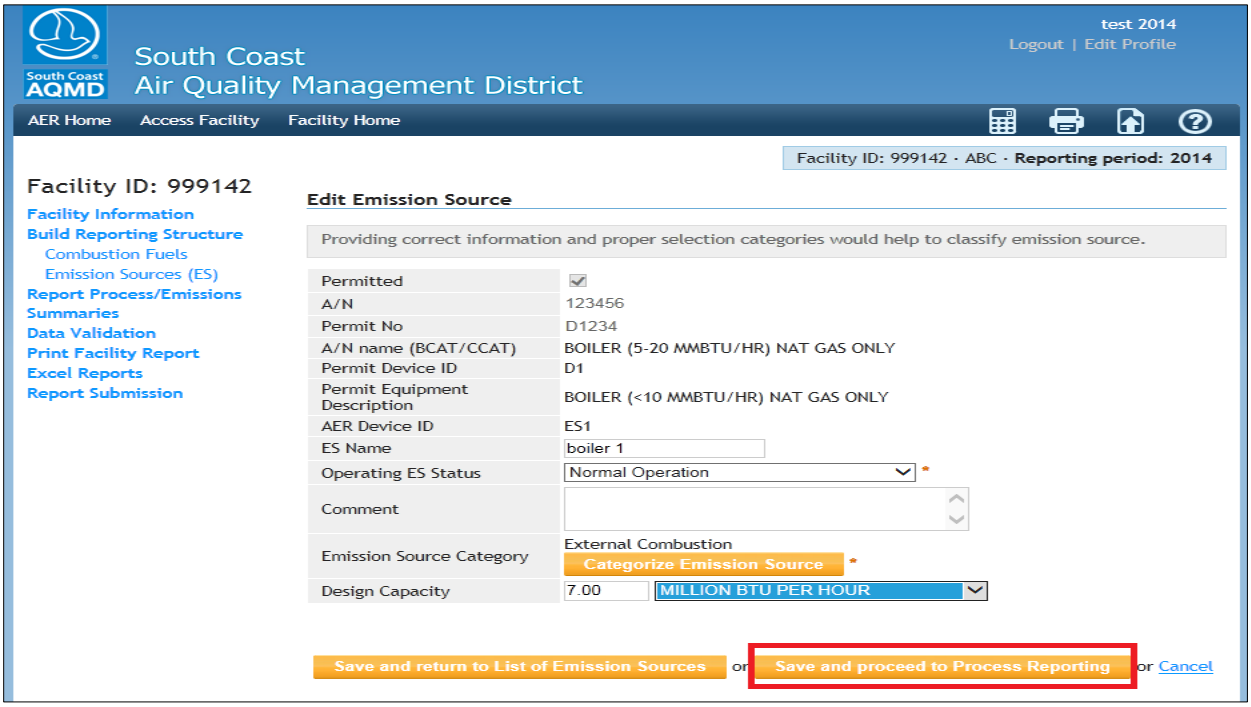
- Similar permitting and operating status
- Identical class of fuel combustion devices
- Burning the same primary fuel

STEPS TO FOLLOW

STEP # 1. Pre-determine and select an emission source (ES) from one of the devices in the list below as the building block for grouping.

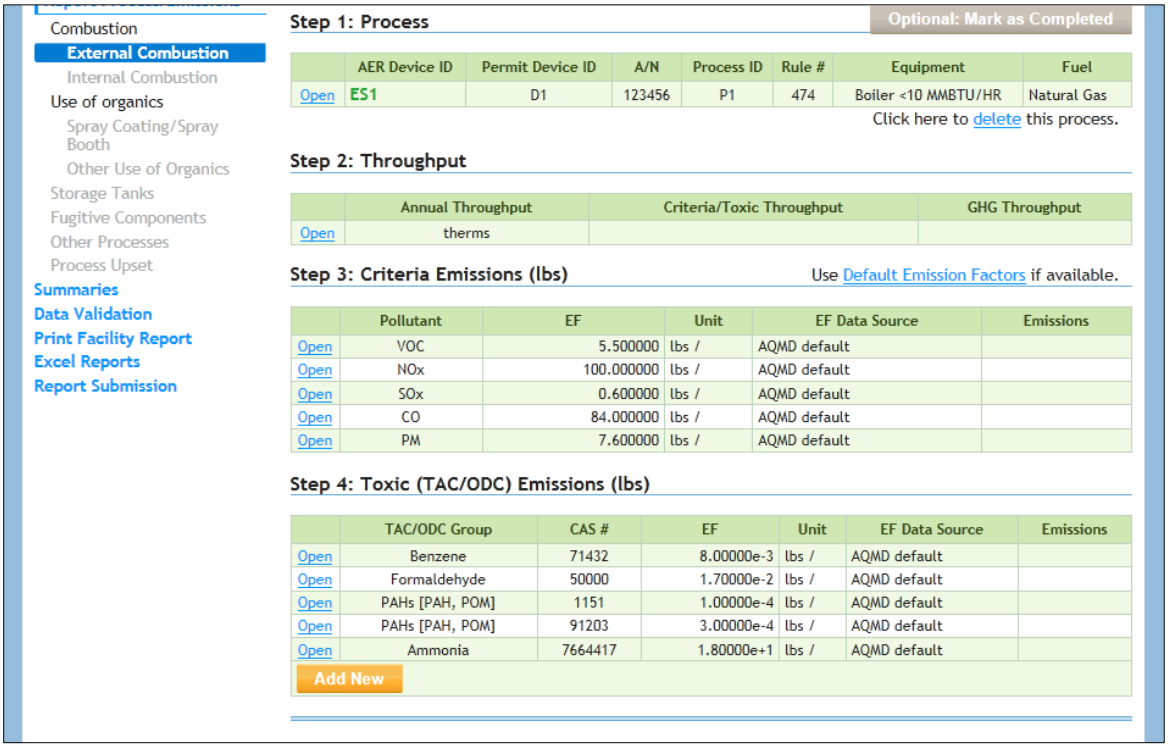


STEP # 2. Click on "Open" hyperlink to edit that emission source. In this example, ES1 (device D1 with application number (A/N) 123456) is selected as shown. Define its operating status and classify it as an external combustion source (boiler rated < 10 MMBtu/hr). Continue with "Save and Proceed to Process Reporting".

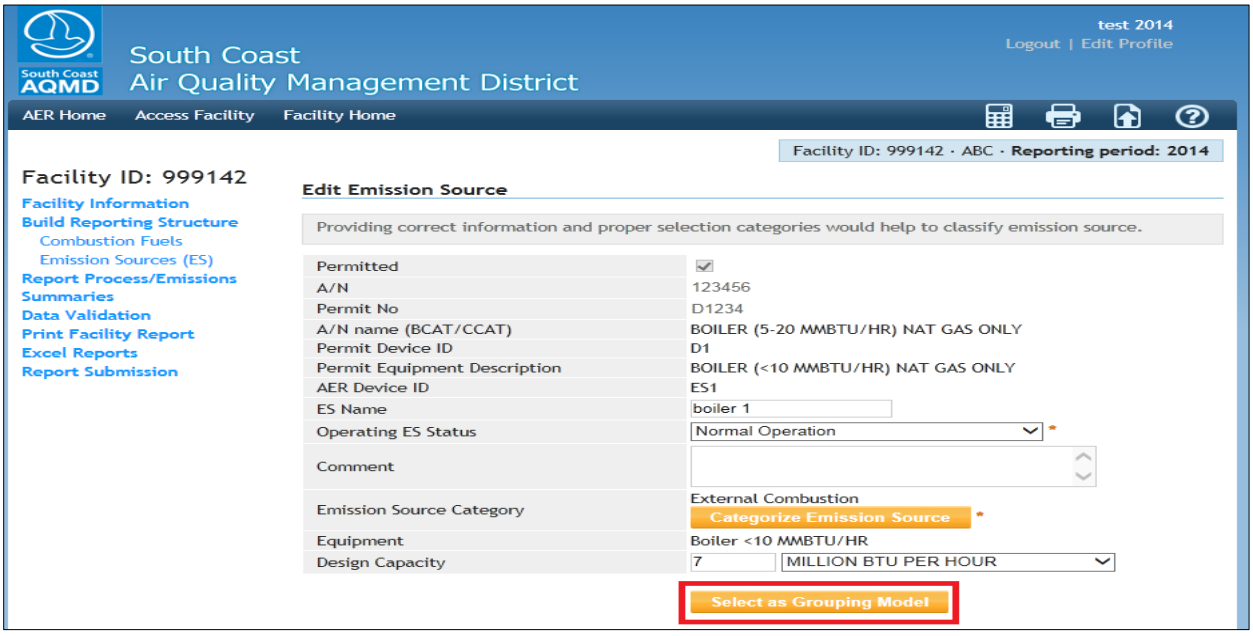


STEP # 3. The tool sets the first process (P1) based on the entered data and selection. Click on "Open" hyperlink to access emission reporting screen.

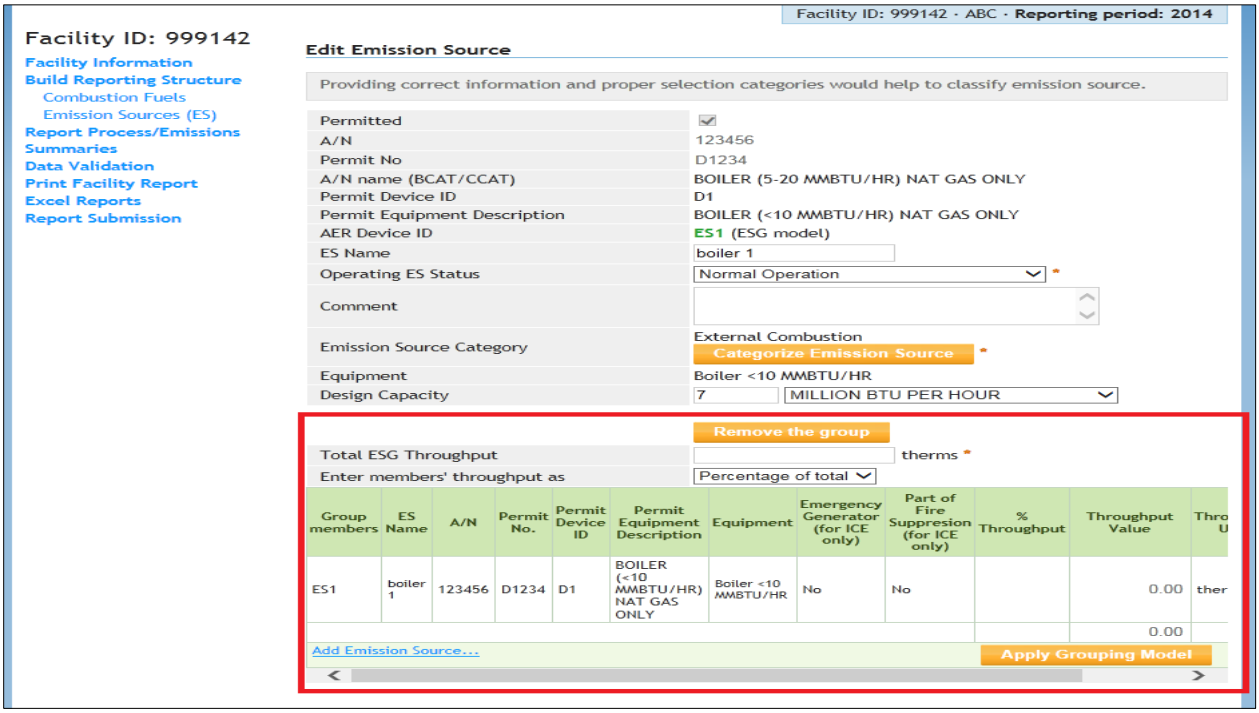
STEP # 4. Define primary fuel type under "Process". At the minimum, fuel unit must be selected at Step 2: Throughput (therms in this case). The user can skip the throughput value because ESG wizard allows user to enter throughput data at later stage. Populate with either defaults or source specific emission factors as shown.



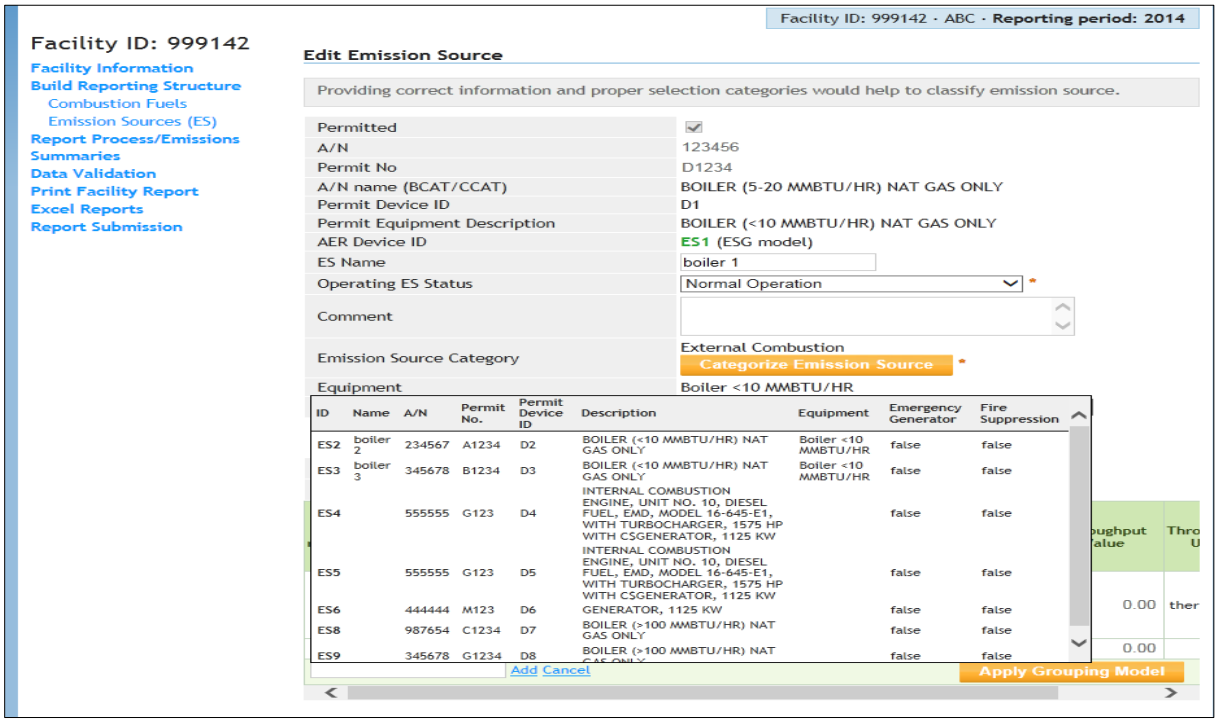
STEP # 5. After the data is saved, user is sent "Back to Emission Source Process Reference". The next time user revisits process P1 of ES1, the tool will offer the ESG wizard for "Select as Grouping Model" for building a group of identical devices as shown.

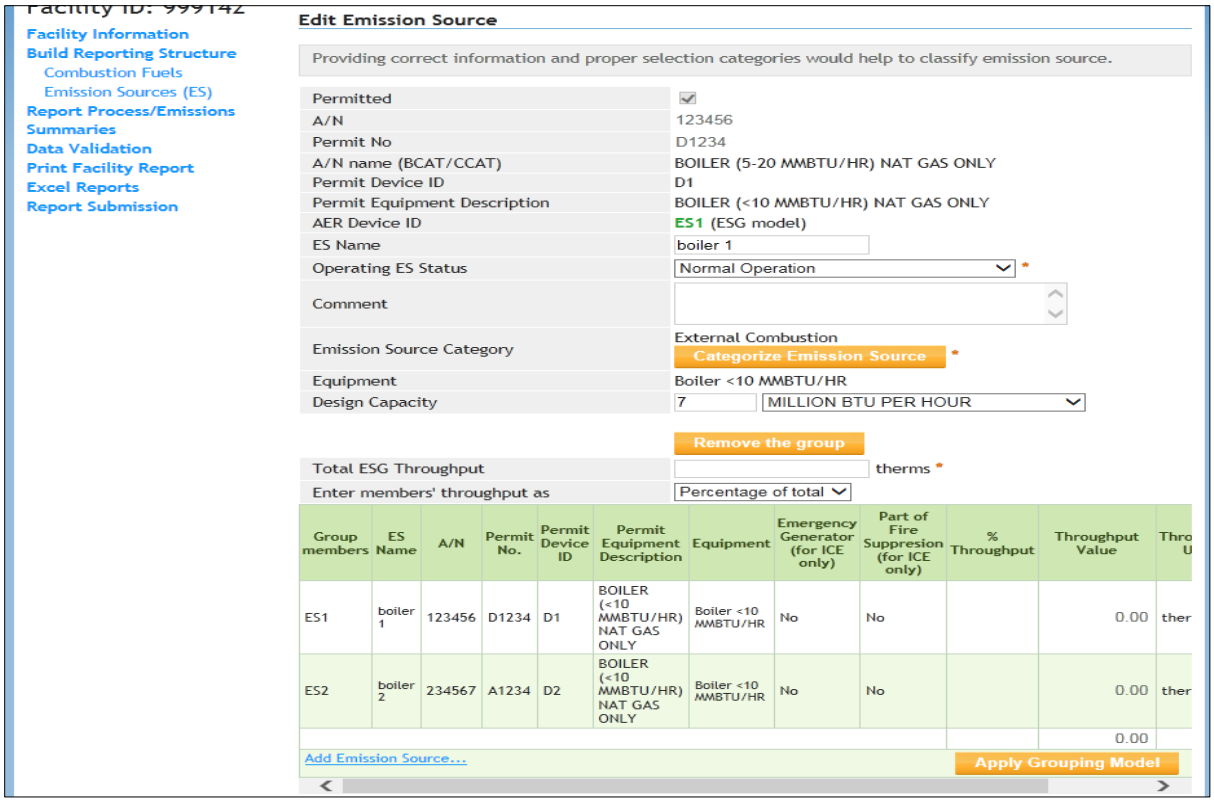


STEP # 6. Upon "Select as Grouping Model", the wizard offers user with additional area with a model device (ES1) as shown, where user can "Remove the Group" or "Add Emission Source" to the group. Note that user can enter total amount of fuel burned here.

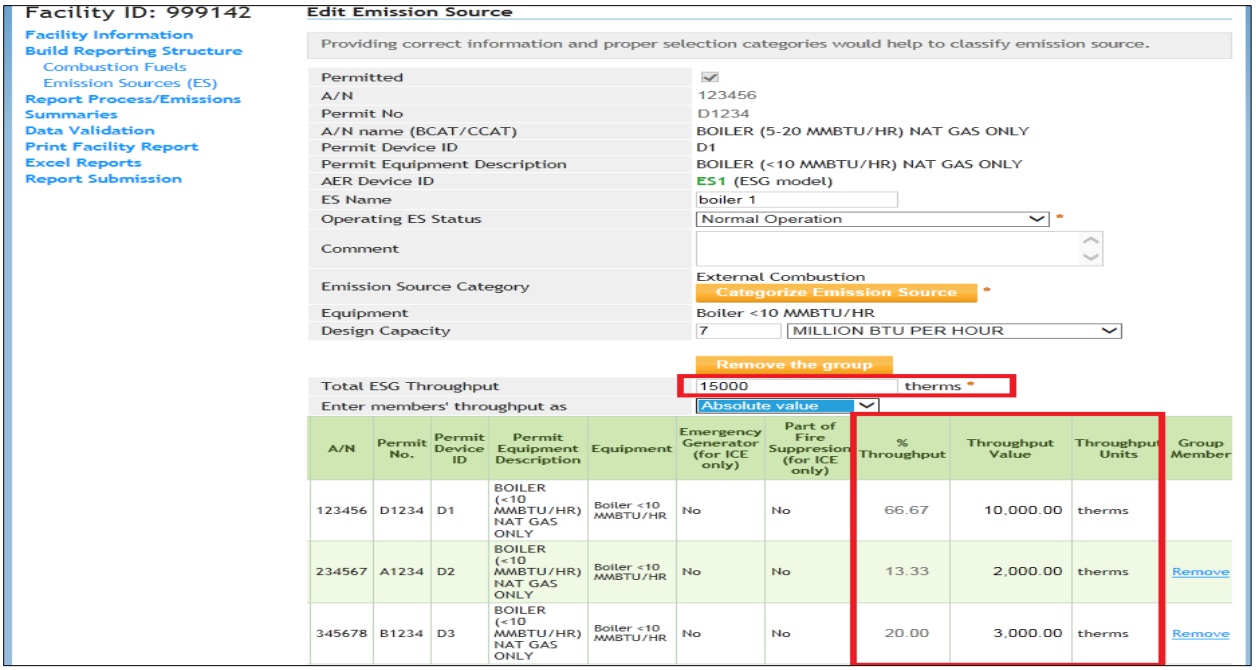


STEP # 7. Click on "Add Emission Source" hyperlink, the wizard presents the list of ES for user to "Add" to the group as shown in the next two screens.

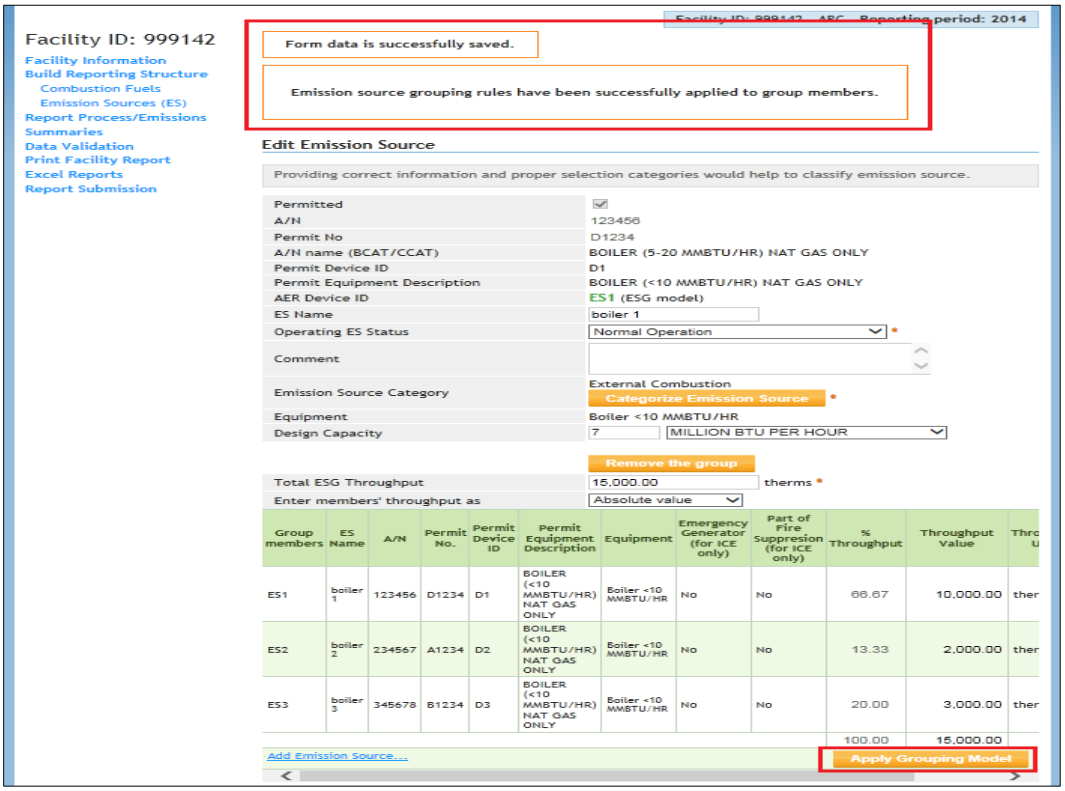




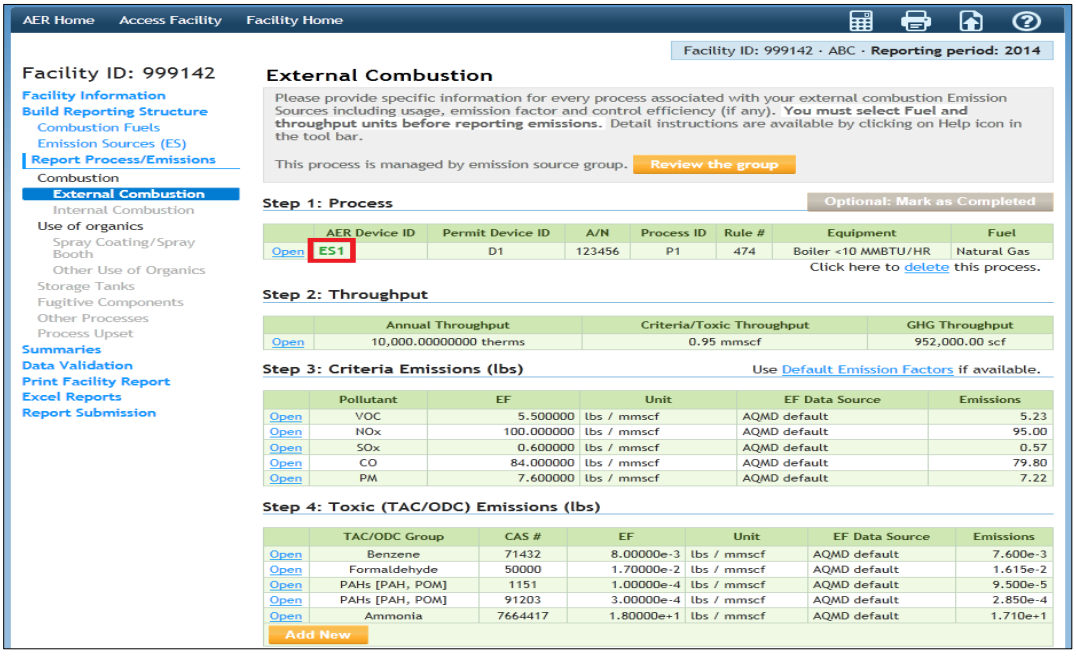
STEP # 8. In this example, user added two more devices to the group (ES2 and ES3). At this stage, user can enter total fuel for all 3 devices and specify either percentage (% Throughput) or actual throughput (Absolute Value in this example) for each member of the group as shown in the red boxes.

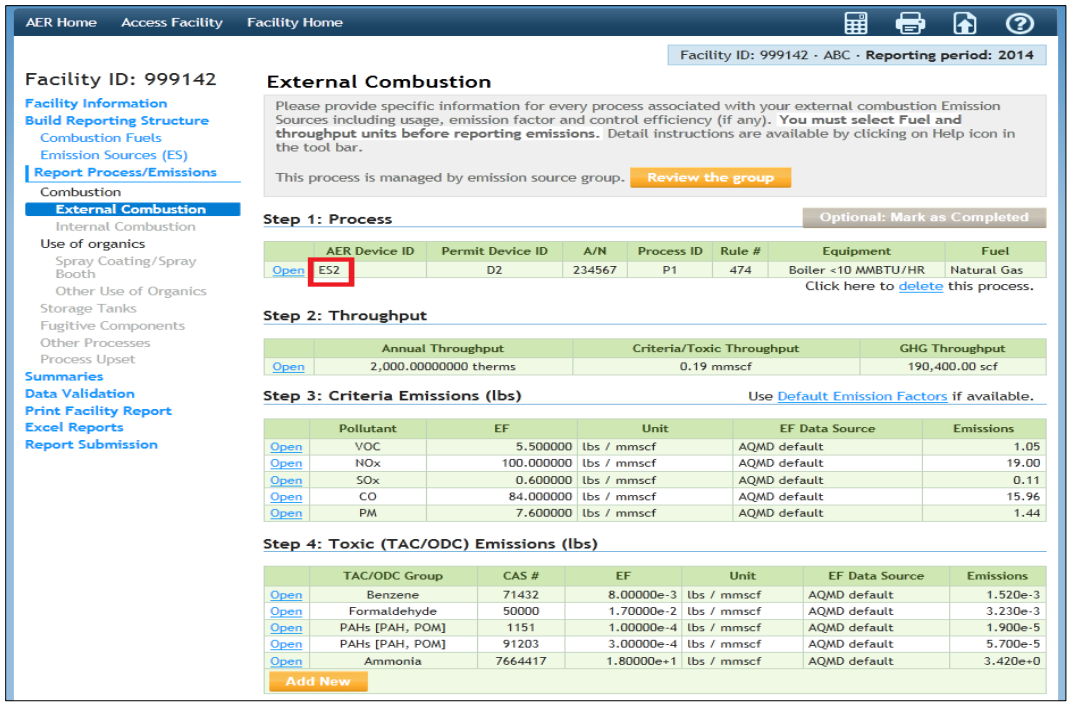


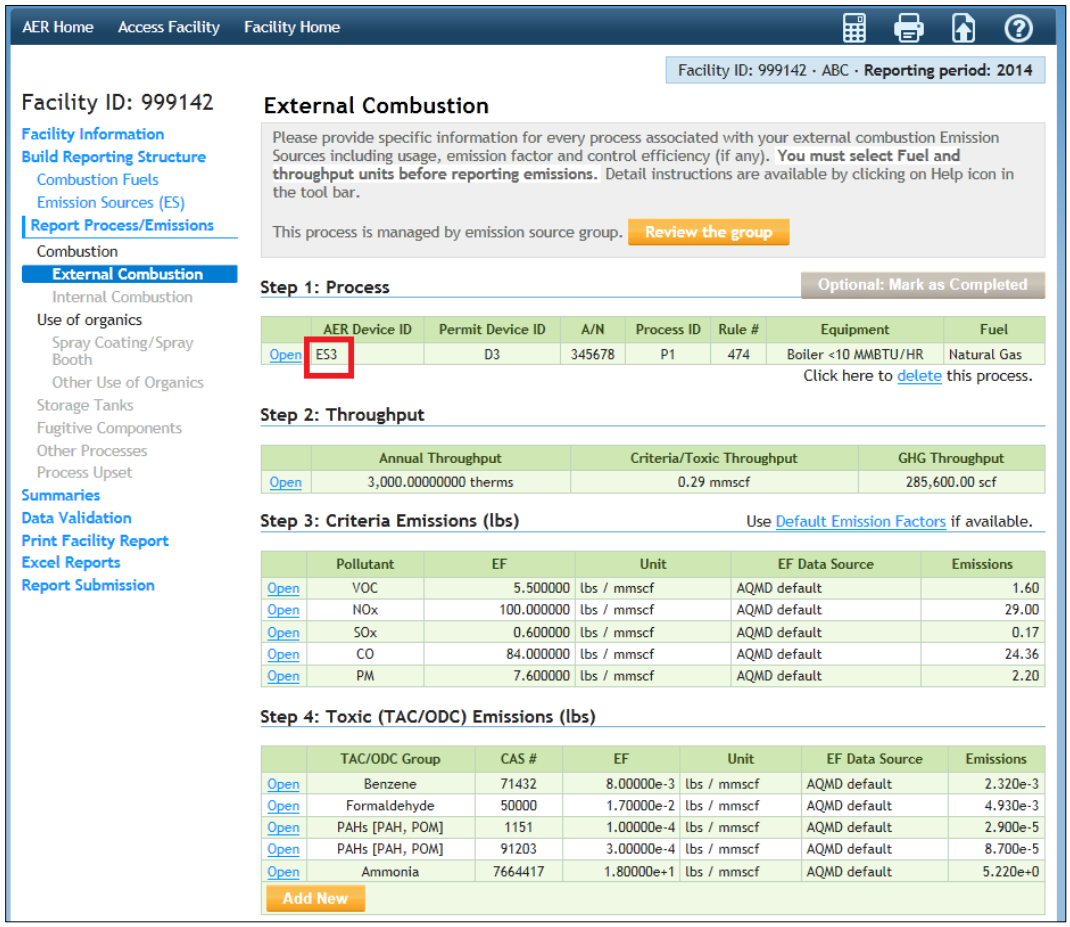
STEP # 9. As user select "Apply Grouping Model", the wizard acknowledges it with a message as shown.



The next 3 screens show that data from the model (ES1) are applied to the group members (ES2 and ES3). The tool also offers user an avenue to go back for adding/deleting group members or working in other areas.




AER Home
Access Facility
Facility Home
Facility ID: 999142 · ABC · Reporting period: 2014
Facility ID: 999142
Facility Information
Build Reporting Structure
Combustion Fuels
Emission Sources (ES)
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
Summaries
Data Validation
Print Facility Report
Excel Reports
Report Submission
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). You must select Fuel and throughput units before reporting emissions. Detail instructions are available by clicking on Help icon in the tool bar.
This process is managed by emission source group.
Review the group
Step 1: Process
Optional: Mark as Completed
AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Equipment | Fuel
Open | ES2 | D2 | 234567 | P1 | 474 | Boiler <10 MMBTU/HR | Natural Gas
Click here to delete this process.
Step 2: Throughput
Annual Throughput | Criteria/Toxic Throughput | GHG Throughput
Open | 2,000.00000000 therms | 0.19 mmscf | 190,400.00 scf
Step 3: Criteria Emissions (lbs)
Use Default Emission Factors if available.
Pollutant | EF | Unit | EF Data Source | Emissions
Open | VOC | 5.500000 | lbs / mmscf | AQMD default | 1.05
Open | NOx | 100.000000 | lbs / mmscf | AQMD default | 19.00
Open | SOx | 0.600000 | lbs / mmscf | AQMD default | 0.11
Open | CO | 84.000000 | lbs / mmscf | AQMD default | 15.96
Open | PM | 7.600000 | lbs / mmscf | AQMD default | 1.44
Step 4: Toxic (TAC/ODC) Emissions (lbs)
TAC/ODC Group | CAS # | EF | Unit | EF Data Source | Emissions
Open | Benzene | 71432 | 8.00000e-3 | lbs / mmscf | AQMD default | 1.520e-3
Open | Formaldehyde | 50000 | 1.70000e-2 | lbs / mmscf | AQMD default | 3.230e-3
Open | PAHs [PAH, POM] | 1151 | 1.00000e-4 | lbs / mmscf | AQMD default | 1.900e-5
Open | PAHs [PAH, POM] | 91203 | 3.00000e-4 | lbs / mmscf | AQMD default | 5.700e-5
Open | Ammonia | 7664417 | 1.80000e+1 | lbs / mmscf | AQMD default | 3.420e+0
Add New


AER Home
Access Facility
Facility Home
Facility ID: 999142 · ABC · Reporting period: 2014
Facility ID: 999142
Facility Information
Build Reporting Structure
Combustion Fuels
Emission Sources (ES)
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
Summaries
Data Validation
Print Facility Report
Excel Reports
Report Submission
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). You must select Fuel and throughput units before reporting emissions. Detail instructions are available by clicking on Help icon in the tool bar.
This process is managed by emission source group.
Review the group
Step 1: Process
Optional: Mark as Completed
AER Device ID | Permit Device ID | A/N | Process ID | Rule # | Equipment | Fuel
Open | ES3 | D3 | 345678 | P1 | 474 | Boiler <10 MMBTU/HR | Natural Gas
Click here to delete this process.
Step 2: Throughput
Annual Throughput | Criteria/Toxic Throughput | GHG Throughput
Open | 3,000.00000000 therms | 0.29 mmscf | 285,600.00 scf
Step 3: Criteria Emissions (lbs)
Use Default Emission Factors if available.
Pollutant | EF | Unit | EF Data Source | Emissions
Open | VOC | 5.500000 | lbs / mmscf | AQMD default | 1.60
Open | NOx | 100.000000 | lbs / mmscf | AQMD default | 29.00
Open | SOx | 0.600000 | lbs / mmscf | AQMD default | 0.17
Open | CO | 84.000000 | lbs / mmscf | AQMD default | 24.36
Open | PM | 7.600000 | lbs / mmscf | AQMD default | 2.20
Step 4: Toxic (TAC/ODC) Emissions (lbs)
TAC/ODC Group | CAS # | EF | Unit | EF Data Source | Emissions
Open | Benzene | 71432 | 8.00000e-3 | lbs / mmscf | AQMD default | 2.320e-3
Open | Formaldehyde | 50000 | 1.70000e-2 | lbs / mmscf | AQMD default | 4.930e-3
Open | PAHs [PAH, POM] | 1151 | 1.00000e-4 | lbs / mmscf | AQMD default | 2.900e-5
Open | PAHs [PAH, POM] | 91203 | 3.00000e-4 | lbs / mmscf | AQMD default | 8.700e-5
Open | Ammonia | 7664417 | 1.80000e+1 | lbs / mmscf | AQMD default | 5.220e+0
Add New

Additional Notes

- An ES can not be a member of two groups.
- ES members can be added or removed from groups at any time before report is submitted.
- The wizard is applicable to the primary (first selected) fuel and its throughput. The secondary fuel or other processes and upsets/spills emissions data can be separately added for individual ES.
- Adjust throughput (percentage or absolute value) accordingly as members are added or removed from a group.
- Changes made to primary process in model device and re-applied to group will override all member's primary process data. Re-applying "Grouping Model" will not affect other added processes and upsets/spills emission data.