

Improved Point Source Inventory

Demonstration of the New Reporting Software for Consolidated Reporting of Criteria and Toxic Emissions

12th Annual Emission Inventory Conference
Emission Inventories - Applying New Technologies



April 30, 2003



Background

Annual Emissions Reporting

- Criteria pollutants, 23 toxics and ODCs
- Annual reporting
- Fees based on annual emissions

AB2588 Program

- Public right-to-know program
- Approximately 450 toxics
- Once in 4-year reporting
- Fees based on risks

Why a consolidated program?

- Streamlines the reporting process
- Improves toxics emission data quality
- Minimizes needed resources for both the facilities and the District
- Provides a linkage and consistency between criteria and toxic pollutants
- CARB and EPA also moving toward consolidation

What are the consolidated Annual Emissions Reports Used For?

- Criteria and Toxics Emissions Inventory
- AQMP and Rule Development
- Compliance Verification
- Title V and RECLAIM Programs
- Revenue Projection

Program Responsibilities



AQMD

- Inventory Methodology
- Rule Interpretation
- Filing Requirements
- Exemption/Refund Requests
- Engineering Review & Audits



ECOTEK

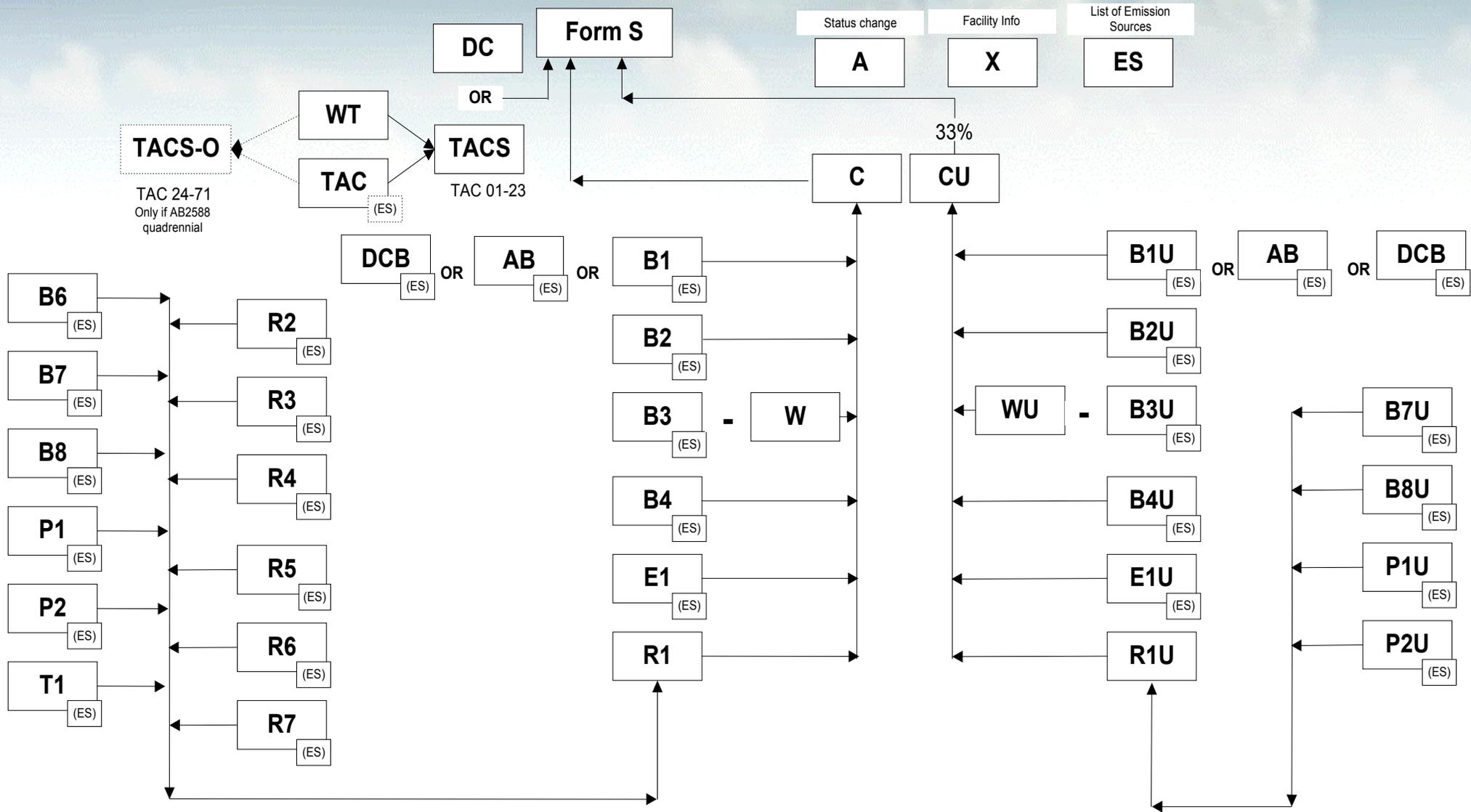
- Software Development
- Information Dissemination & Public Assistance
- Information Tracking & Recordkeeping
- Compilation of Emission & Fee Data Files
- QA/QC of Data Files

Reporting Process

The AER Program relies on a number of forms that are designed based on the specific type of equipment, process, or industry.

- Read the Instructions
- Identify Applicable Forms
- Collect Fuel, Material Usage & Throughput Records
- Identify Applicable Emission Factors
- Complete Applicable Forms Based on Facility-Specific Data

What Forms Do I Use?



Key Benefits of Software

- Interview Process Helps Select Forms
- Offers Suggestions As You Input Information
- User-Friendly (used by over 82% of facilities last year)
- Links criteria and toxic emissions



Key Benefits Of Software (cont.)

- Automatically calculates and transfers Emissions Based on Input Data
- Automatically Generates all Summary Forms
- Built-in Default Emission Factors

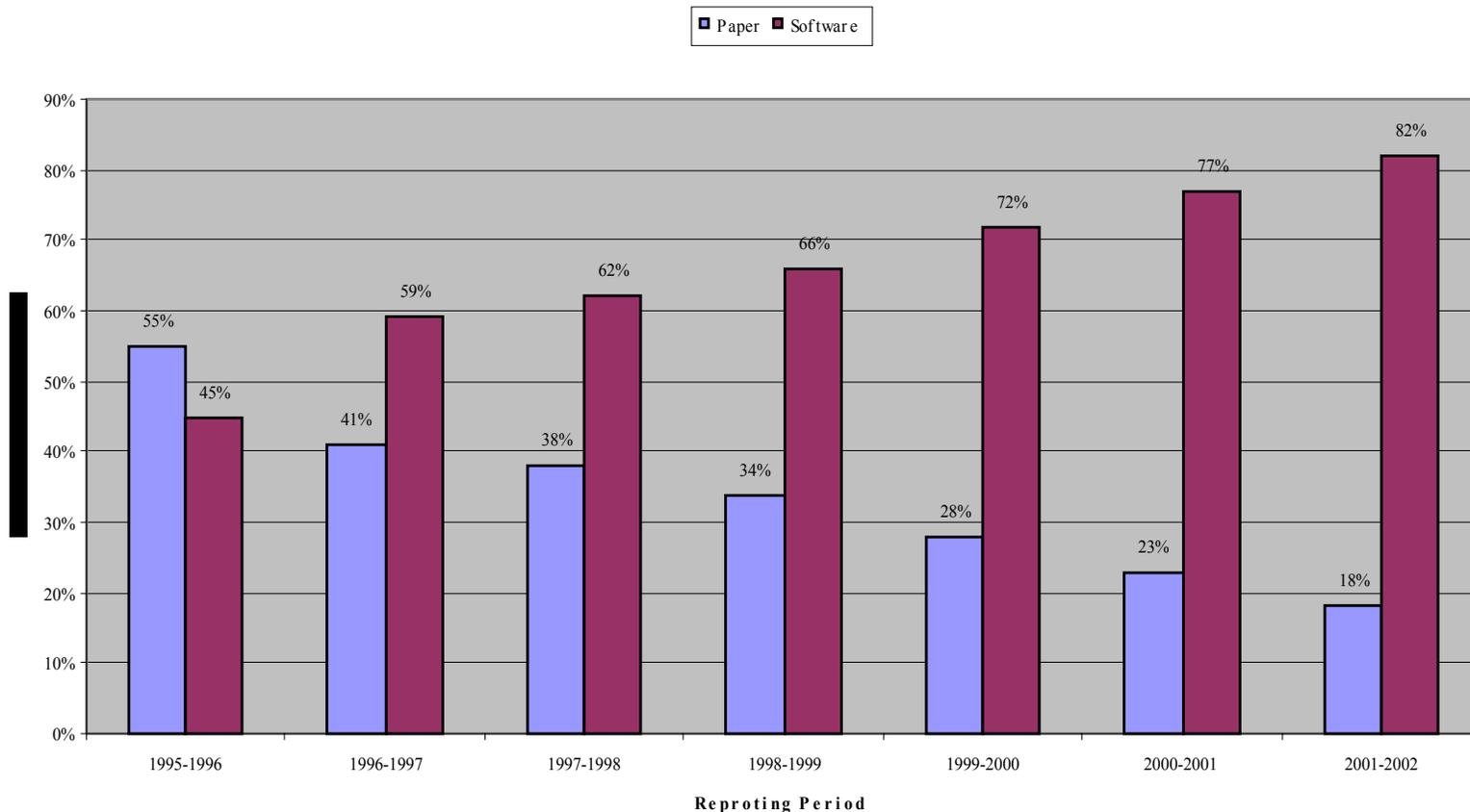
Key Benefits Of Software (cont.)

- Improves Data Accuracy
- Reduces Chances for Errors
- Simplifies the Submittal
- Audit and Warning Features Help Identify and Reduce Common Errors

$$~~1 + 1 = 3~~$$

Software Use

- The success of AER reporting software can be measured by the large and constantly growing number of facilities choosing software as a reporting option.

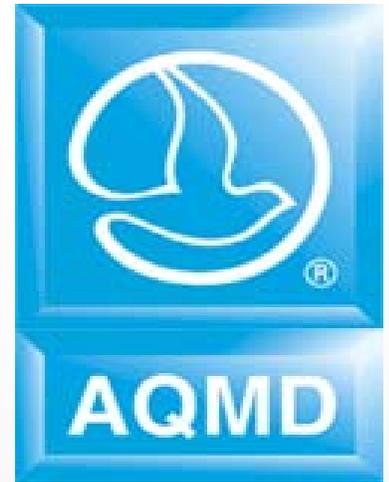


Software Demonstration





ECOTEK
Environmental Solutions



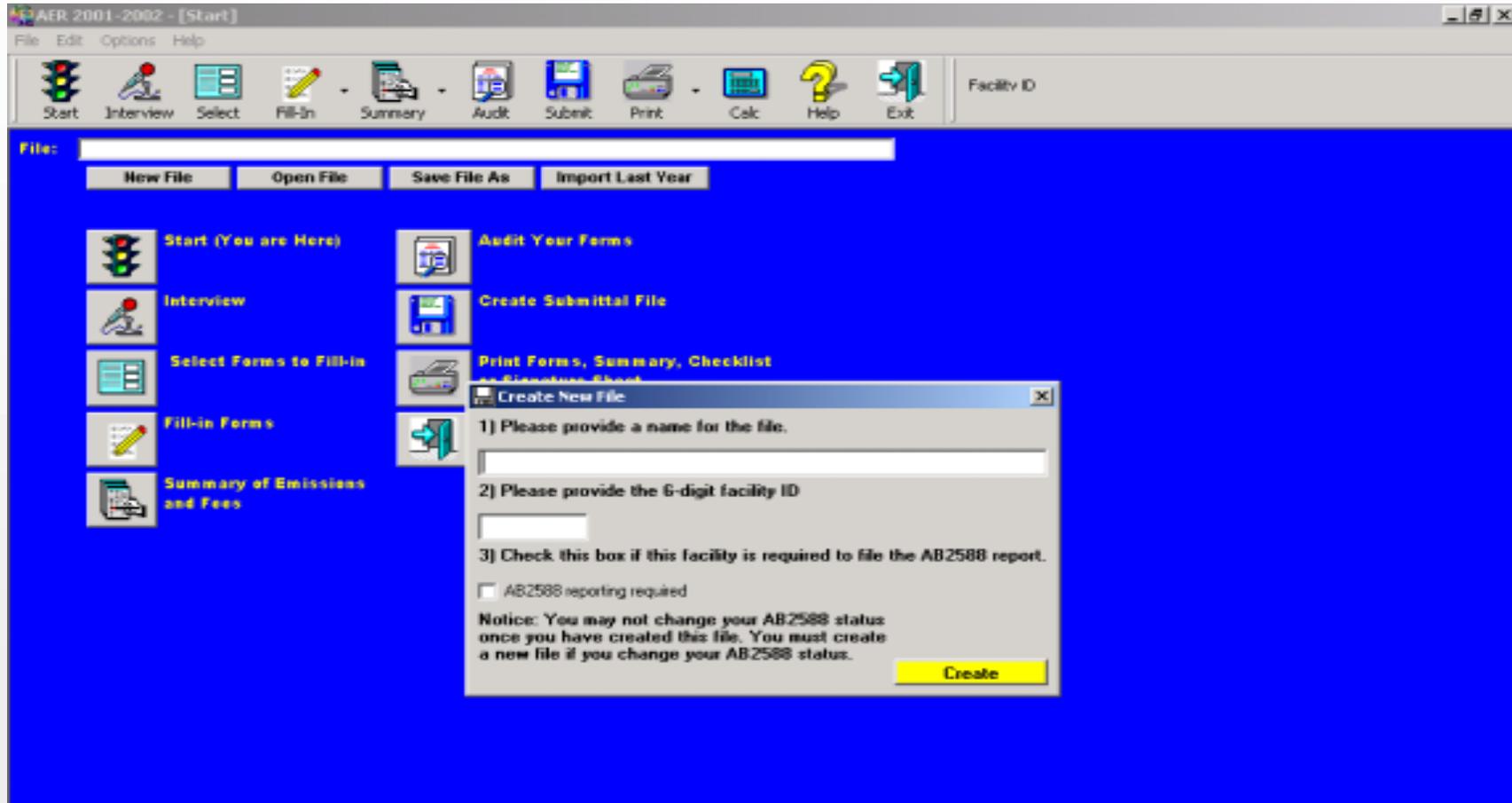
Emissions Reporting Software Brief Presentation

Emissions Reporting Software

In this brief presentation we will illustrate how to use the AER reporting software to complete the Annual Emissions Report for a facility that has to report the AB2588 quadrennial report and has the following equipment generating air emissions:

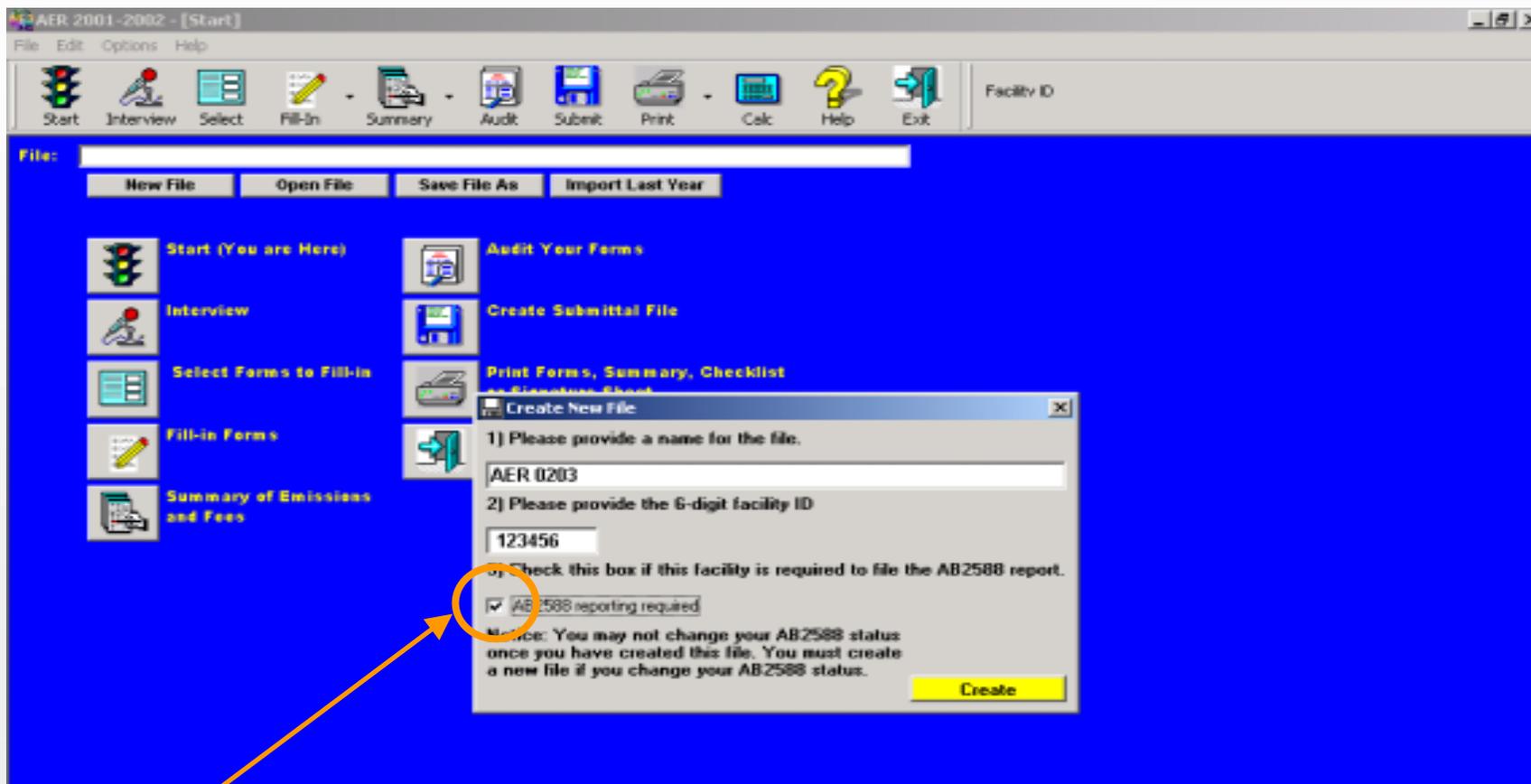
**12 MMBTU Boiler burning natural gas
Enamel applied by brush on metal
Primer applied by brush on metal
Gasoline Underground storage tank and dispensing used in vehicles
Freon losses from the cooling system**

Create New File



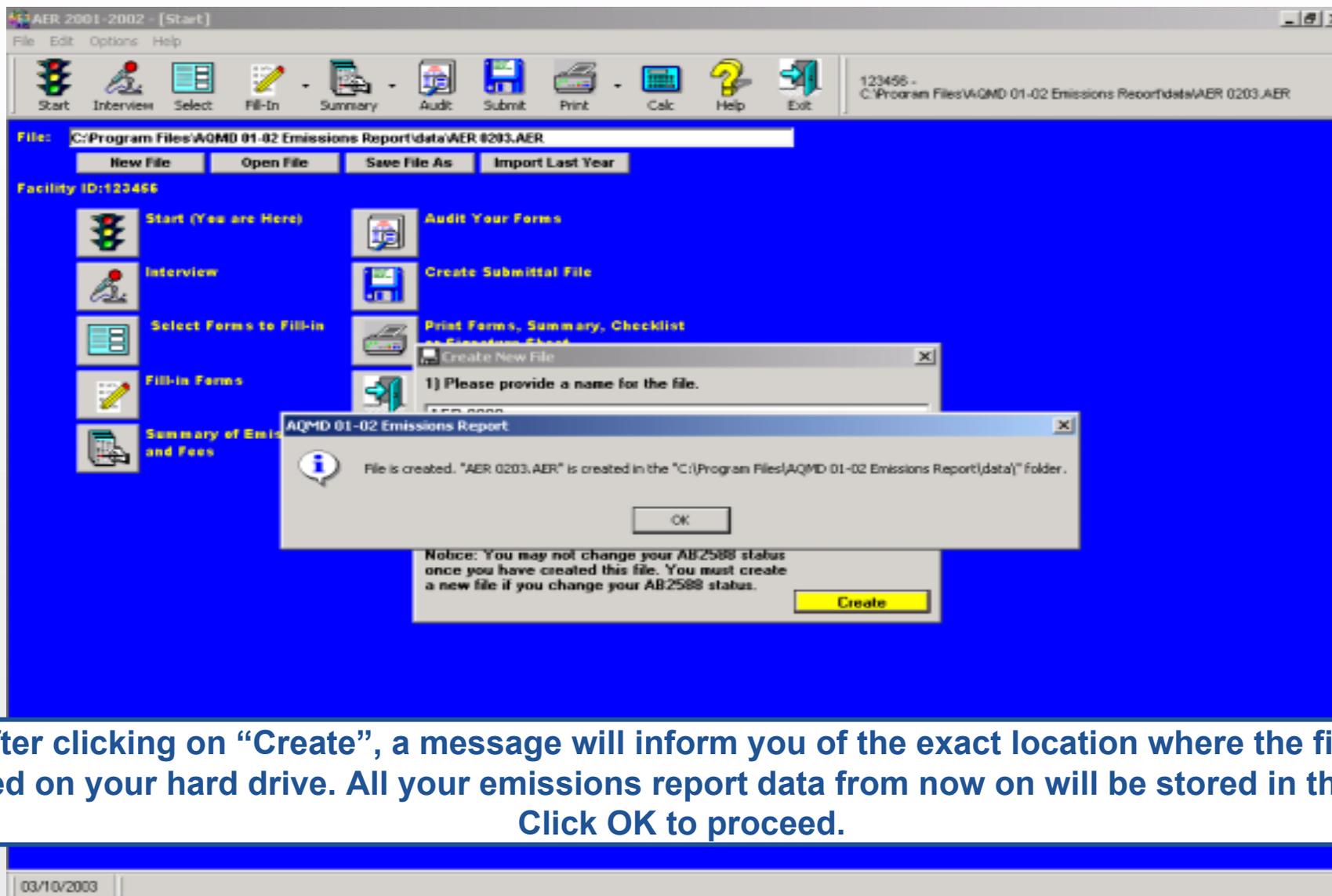
To start working on your report, the software asks you to create a file where all your emissions data will be saved. You need to enter a name for the file created and your 6 digit facility ID number.

Do you have to report AB2588 this Year?



If your Facility is subject to AB2588 Program, and if you must submit your quadrennial report this year (check what Phase you are), then you need to check the box as shown on the screen. Check cautiously since there is no option to select or deselect this box later on.

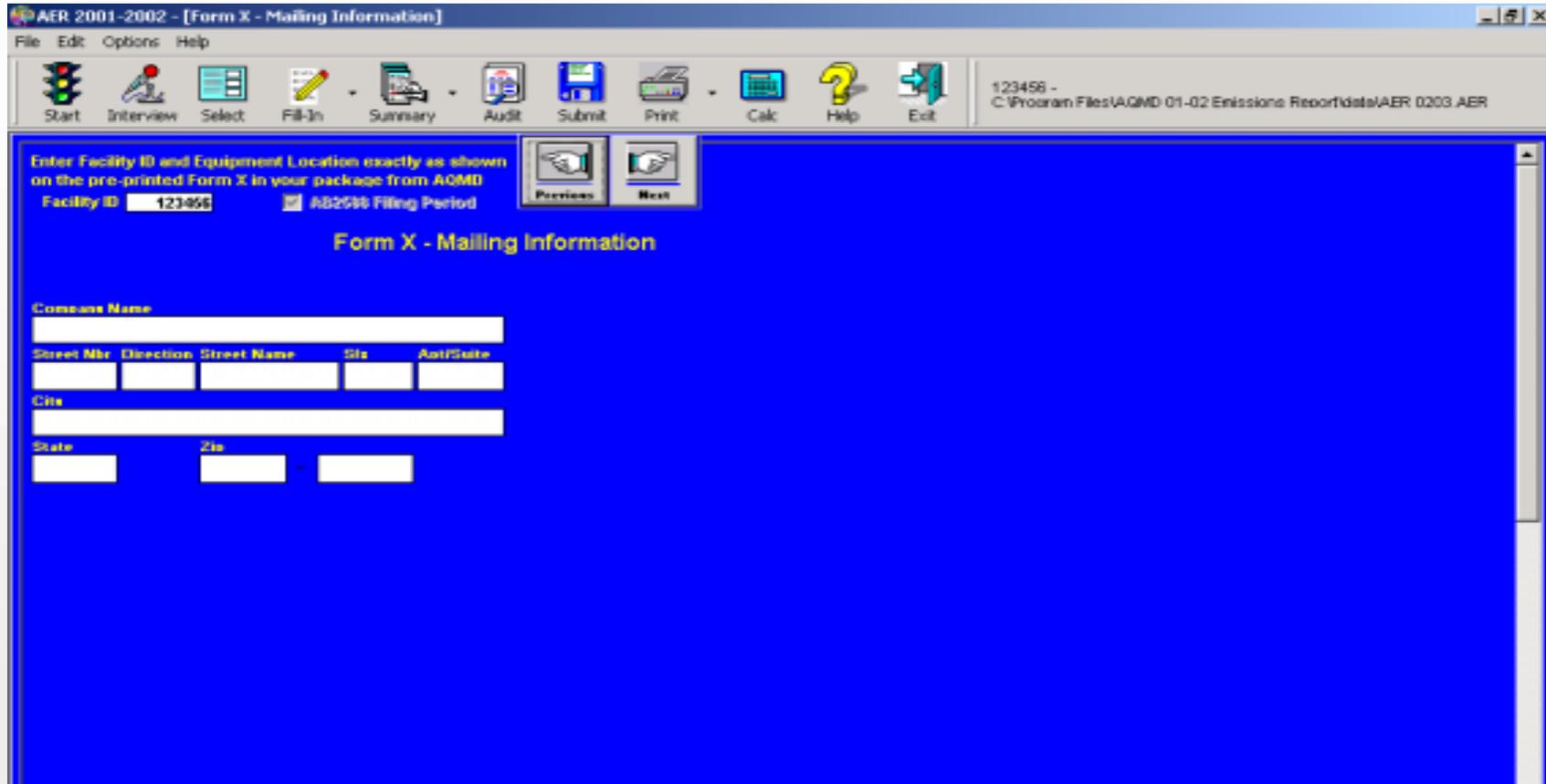
Your file is created



The screenshot shows the 'AER 2001-2002 - [Start]' application window. The menu bar includes File, Edit, Options, and Help. The toolbar contains icons for Start, Interview, Select, Fill-In, Summary, Audit, Submit, Print, Calc, Help, and Exit. The status bar shows the file path: C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER. The main window has a blue background and displays the Facility ID: 123456. A central menu lists various actions: Start (You are Here), Interview, Select Firms to Fill-in, Fill-in Firms, Summary of Emissions and Fees, Audit Your Firms, Create Submittal File, Print Firms, Summary, Checklist, and Create New File. A 'Create New File' dialog box is open, prompting the user to provide a name for the file. A message box titled 'AQMD 01-02 Emissions Report' is displayed, stating: 'File is created. "AER 0203.AER" is created in the "C:\Program Files\AQMD 01-02 Emissions Report\data\" folder.' Below the message box is a 'Create' button. A notice at the bottom of the message box reads: 'Notice: You may not change your AB2588 status once you have created this file. You must create a new file if you change your AB2588 status.'

After clicking on "Create", a message will inform you of the exact location where the file is saved on your hard drive. All your emissions report data from now on will be stored in this file. Click OK to proceed.

Interview Section - Form X



AER 2001-2002 - [Form X - Mailing Information]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

Enter Facility ID and Equipment Location exactly as shown on the pre-printed Form X in your package from AQMD

Facility ID AB2598 Filing Period

Form X - Mailing Information

Company Name

Street No. Direction Street Name City State

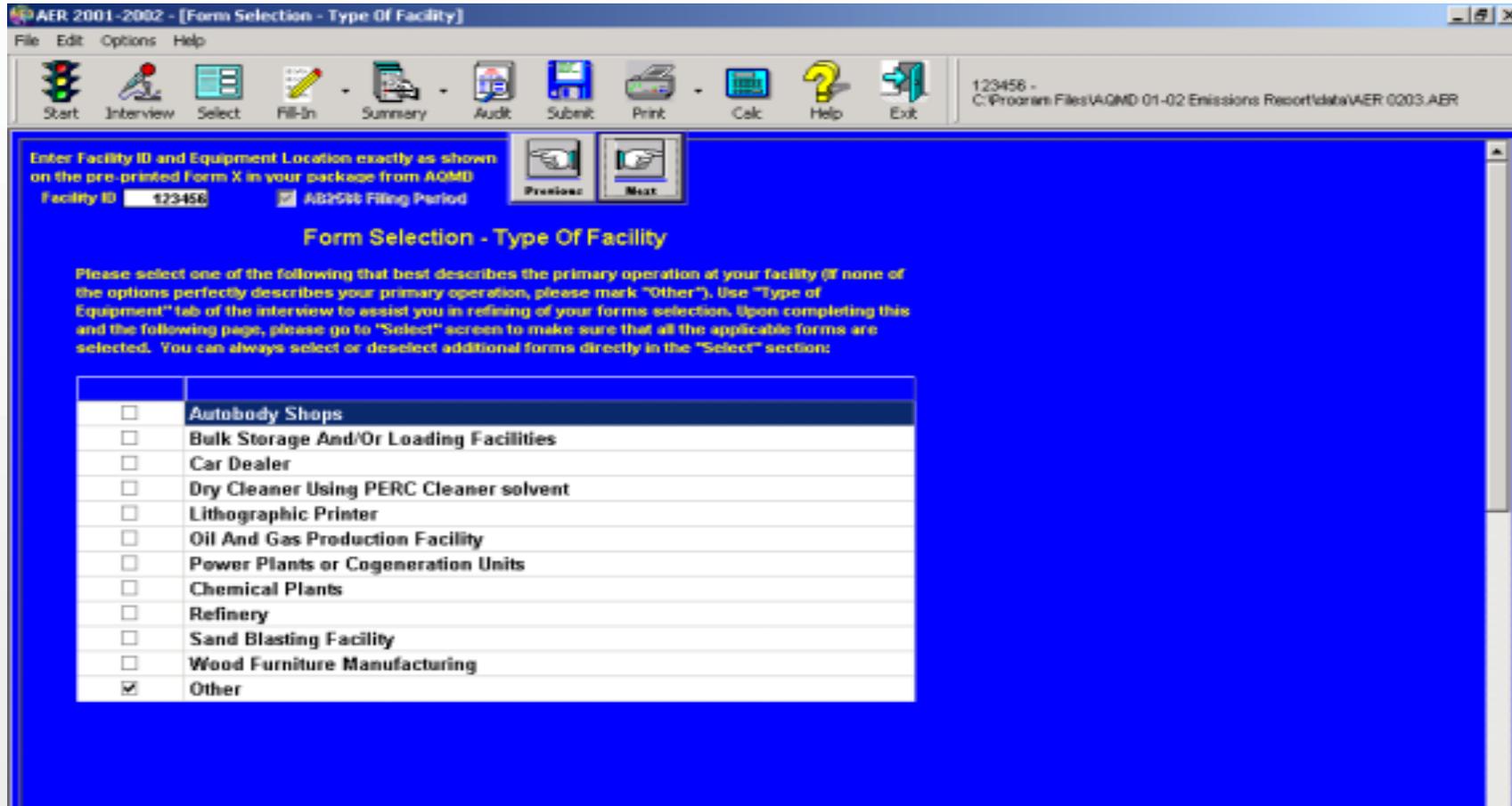
City

State Zip

Previous Next

This form collects general information about your facility – Name of Company, Phone and Fax numbers and other useful information. After completing all the required fields on this screen, click next to complete the rest of Form X.

What's the type of your facility?



AER 2001-2002 - [Form Selection - Type Of Facility]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 -
C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

Enter Facility ID and Equipment Location exactly as shown on the pre-printed Form X in your package from AQMD

Facility ID AG2588 Filing Period

Previous Next

Form Selection - Type Of Facility

Please select one of the following that best describes the primary operation at your facility (if none of the options perfectly describes your primary operation, please mark "Other"). Use "Type of Equipment" tab of the interview to assist you in refining of your forms selection. Upon completing this and the following page, please go to "Select" screen to make sure that all the applicable forms are selected. You can always select or deselect additional forms directly in the "Select" section:

<input type="checkbox"/>	Autobody Shops
<input type="checkbox"/>	Bulk Storage And/Or Loading Facilities
<input type="checkbox"/>	Car Dealer
<input type="checkbox"/>	Dry Cleaner Using PERC Cleaner solvent
<input type="checkbox"/>	Lithographic Printer
<input type="checkbox"/>	Oil And Gas Production Facility
<input type="checkbox"/>	Power Plants or Cogeneration Units
<input type="checkbox"/>	Chemical Plants
<input type="checkbox"/>	Refinery
<input type="checkbox"/>	Sand Blasting Facility
<input type="checkbox"/>	Wood Furniture Manufacturing
<input checked="" type="checkbox"/>	Other

By clicking next you will assist you with selecting the reporting forms for your operation. If none of the options perfectly describe your primary operation, please mark "Other". Your choice will determine the questions on the following page.

What is the type of your equipment?

AER 2001-2002 - [Form Selection - Type Of Equipments]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

Enter Facility ID and Equipment Location exactly as shown on the pre-printed Form X in your package from AQMD

Facility ID AG2588 Filing Period

Previous Next

Form Selection - Type Of Equipments

Please confirm or deselect the proposed selections, and select applicable equipment/processes. Does this facility have any of the following:

<input type="checkbox"/>	Waste Recycling of Liquid Organic TAC / ODC compounds?
<input checked="" type="checkbox"/>	Permitted Boilers, Dryers, Ovens, Furnaces, Heaters or Afterburner?
<input type="checkbox"/>	Unpermitted Boilers, Dryers, Ovens, Furnaces or Heaters?
<input type="checkbox"/>	Permitted Internal Combustion Engines (Excluding Vehicle Engines) or
<input type="checkbox"/>	Unpermitted Internal Combustion Engines (Excluding Vehicle Engines)
<input checked="" type="checkbox"/>	Permitted Organics(Coatings, Solvents, Inks, Adhesives, Etc.)?
<input type="checkbox"/>	Permitted Liquid Organic Materials Waste Recycling?
<input type="checkbox"/>	Unpermitted Organics(Coatings, Solvents, Inks, Adhesives, Etc.)?
<input type="checkbox"/>	Unpermitted Liquid Organic Materials Waste Recycling?

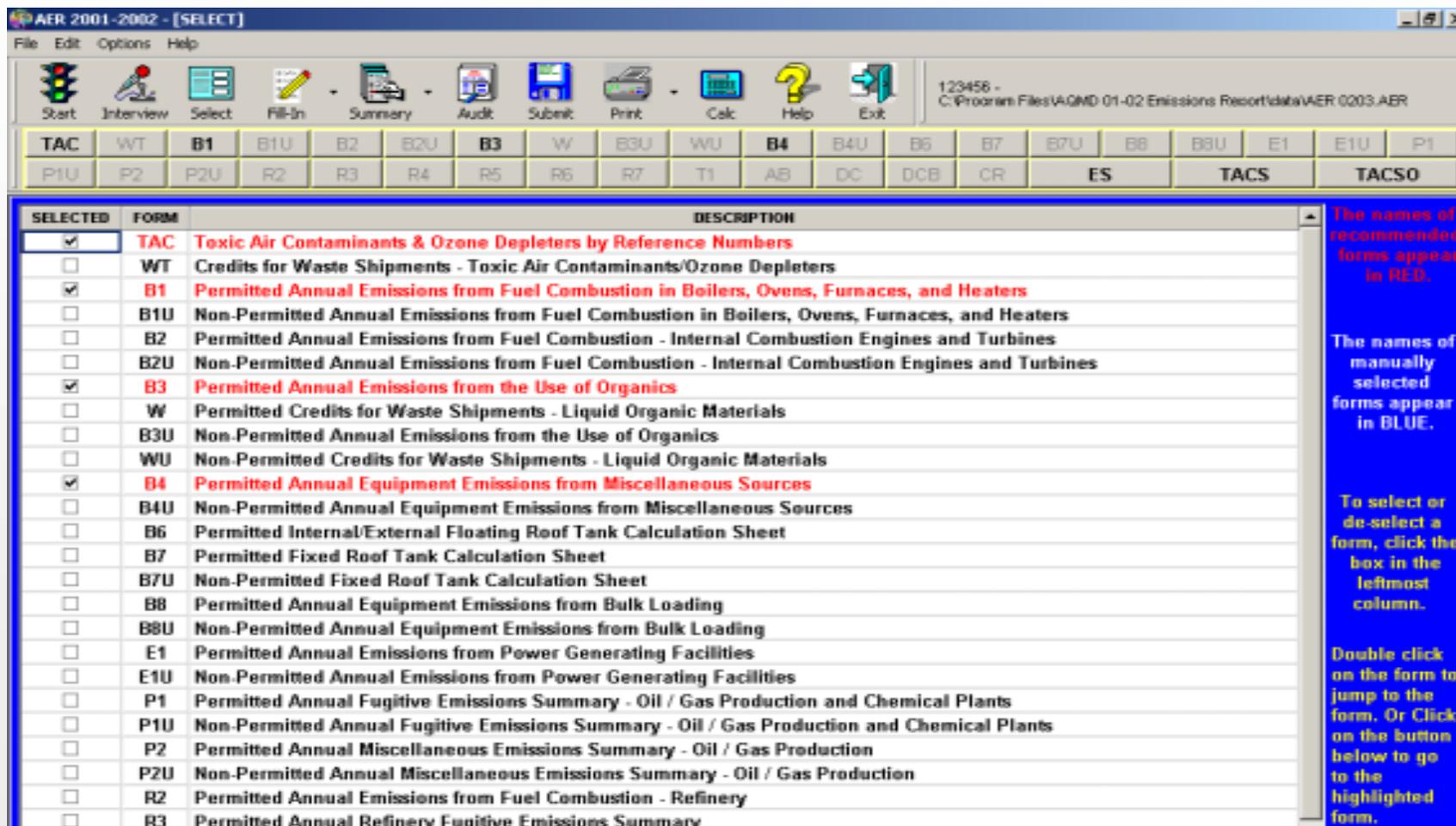
Other Emissions Sources Not Covered Above? **Example:**

	Permitted	Non-Permitted
RECLAIM -- H0x	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RECLAIM -- S0x	<input type="checkbox"/>	<input type="checkbox"/>
	Cycle 1	Cycle 2
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

03/13/2003 Summary Updated

In this list, check all boxes applicable to processes in your facility (uncheck all marked questions not applicable to your facility). If you are filing a report for a RECLAIM Facility please mark the applicable boxes for cycle and pollutant.

Select Forms



SELECTED	FORM	DESCRIPTION
<input checked="" type="checkbox"/>	TAC	Toxic Air Contaminants & Ozone Depleters by Reference Numbers
<input type="checkbox"/>	WT	Credits for Waste Shipments - Toxic Air Contaminants/Ozone Depleters
<input checked="" type="checkbox"/>	B1	Permitted Annual Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters
<input type="checkbox"/>	B1U	Non-Permitted Annual Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters
<input type="checkbox"/>	B2	Permitted Annual Emissions from Fuel Combustion - Internal Combustion Engines and Turbines
<input type="checkbox"/>	B2U	Non-Permitted Annual Emissions from Fuel Combustion - Internal Combustion Engines and Turbines
<input checked="" type="checkbox"/>	B3	Permitted Annual Emissions from the Use of Organics
<input type="checkbox"/>	W	Permitted Credits for Waste Shipments - Liquid Organic Materials
<input type="checkbox"/>	B3U	Non-Permitted Annual Emissions from the Use of Organics
<input type="checkbox"/>	WU	Non-Permitted Credits for Waste Shipments - Liquid Organic Materials
<input checked="" type="checkbox"/>	B4	Permitted Annual Equipment Emissions from Miscellaneous Sources
<input type="checkbox"/>	B4U	Non-Permitted Annual Equipment Emissions from Miscellaneous Sources
<input type="checkbox"/>	B6	Permitted Internal/External Floating Roof Tank Calculation Sheet
<input type="checkbox"/>	B7	Permitted Fixed Roof Tank Calculation Sheet
<input type="checkbox"/>	B7U	Non-Permitted Fixed Roof Tank Calculation Sheet
<input type="checkbox"/>	B8	Permitted Annual Equipment Emissions from Bulk Loading
<input type="checkbox"/>	B8U	Non-Permitted Annual Equipment Emissions from Bulk Loading
<input type="checkbox"/>	E1	Permitted Annual Emissions from Power Generating Facilities
<input type="checkbox"/>	E1U	Non-Permitted Annual Emissions from Power Generating Facilities
<input type="checkbox"/>	P1	Permitted Annual Fugitive Emissions Summary - Oil / Gas Production and Chemical Plants
<input type="checkbox"/>	P1U	Non-Permitted Annual Fugitive Emissions Summary - Oil / Gas Production and Chemical Plants
<input type="checkbox"/>	P2	Permitted Annual Miscellaneous Emissions Summary - Oil / Gas Production
<input type="checkbox"/>	P2U	Non-Permitted Annual Miscellaneous Emissions Summary - Oil / Gas Production
<input type="checkbox"/>	R2	Permitted Annual Emissions from Fuel Combustion - Refinery
<input type="checkbox"/>	R3	Permitted Annual Refinery Fugitive Emissions Summary

The names of recommended forms appear in RED.

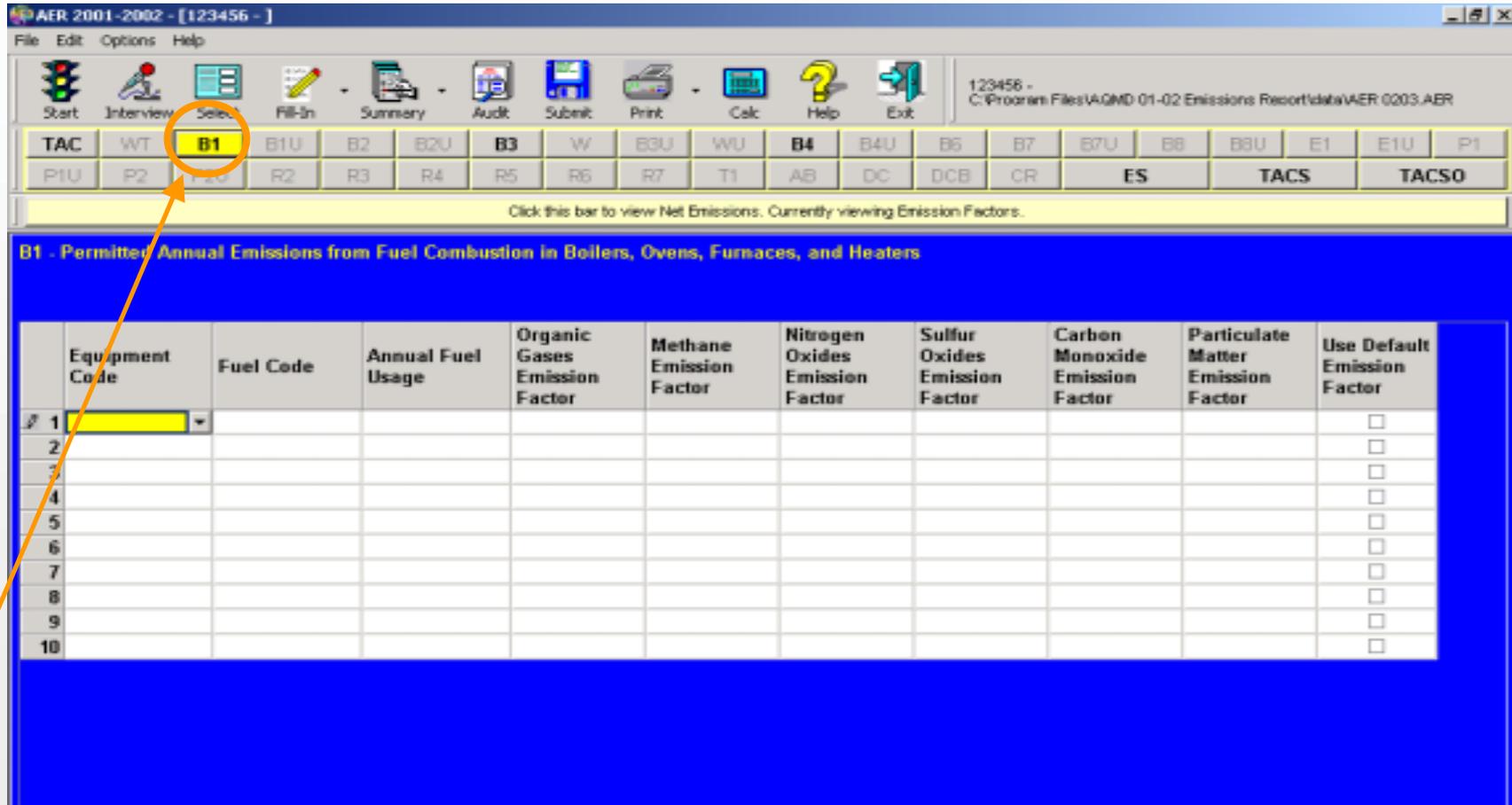
The names of manually selected forms appear in BLUE.

To select or de-select a form, click the box in the leftmost column.

Double click on the form to jump to the form. Or Click on the button below to go to the highlighted form.

Upon completing the interview, proceed to the "Select Forms" section. Use this complete list of all available forms to fine-tune your form selection. The Software pre-selected some of the forms based on your answers to Interview questions. You can select or deselect additional forms as needed.

Form B1



AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview **Fill-In** Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

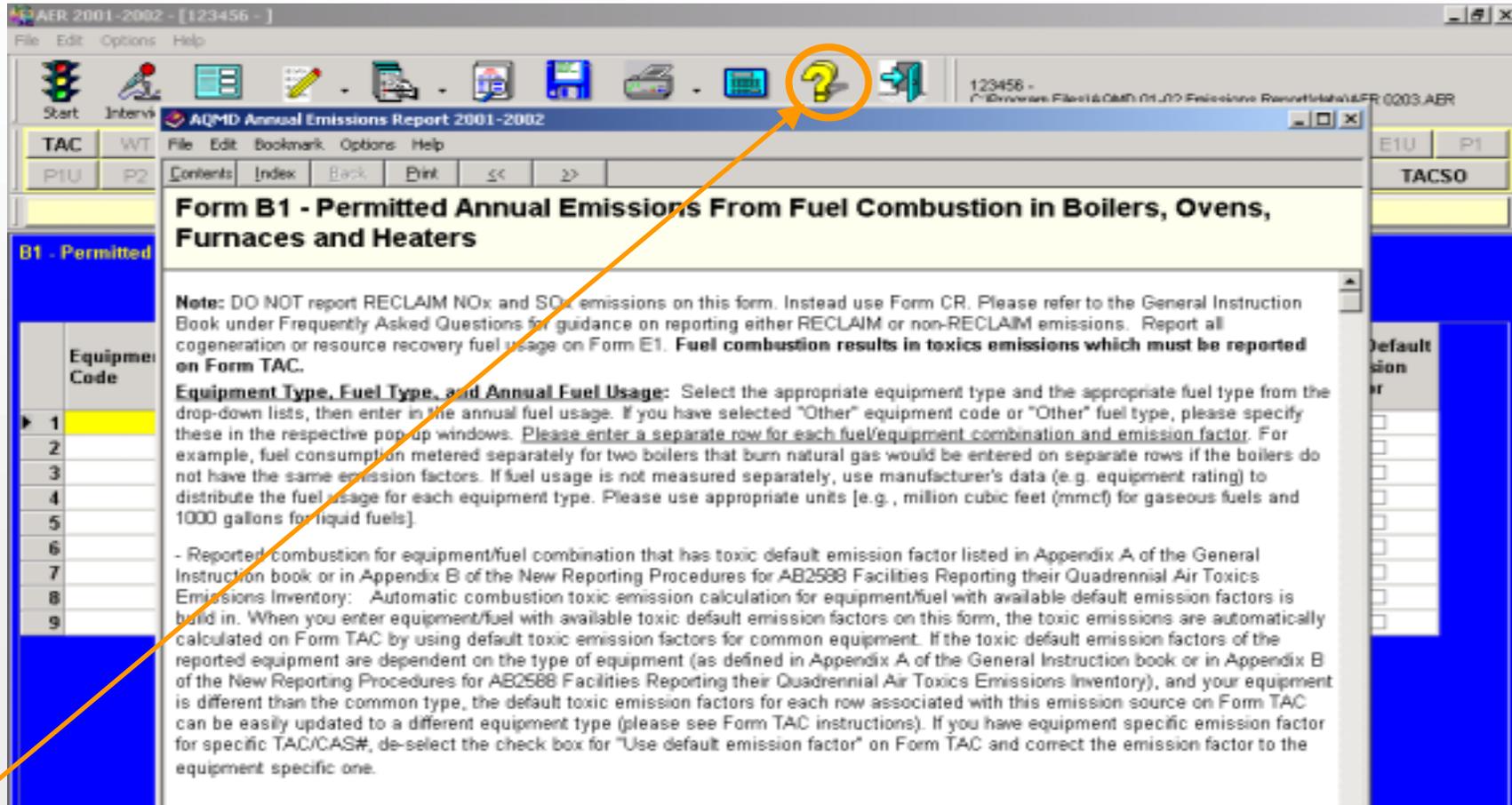
Click this bar to view Net Emissions. Currently viewing Emission Factors.

B1 - Permitted Annual Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters

	Equipment Code	Fuel Code	Annual Fuel Usage	Organic Gases Emission Factor	Methane Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor	Use Default Emission Factor
1										<input type="checkbox"/>
2										<input type="checkbox"/>
3										<input type="checkbox"/>
4										<input type="checkbox"/>
5										<input type="checkbox"/>
6										<input type="checkbox"/>
7										<input type="checkbox"/>
8										<input type="checkbox"/>
9										<input type="checkbox"/>
10										<input type="checkbox"/>

→ If you click on "Fill-In", a bar with all available forms is displayed. The forms that you selected appear in bold font. You should first report the criteria emissions. Click on Form B1 to report your emissions from Permitted Boilers, Ovens, Furnaces and Heaters.

Need Help? Just click on Icon



Form B1 - Permitted Annual Emissions From Fuel Combustion in Boilers, Ovens, Furnaces and Heaters

Note: DO NOT report RECLAIM NO_x and SO_x emissions on this form. Instead use Form CR. Please refer to the General Instruction Book under Frequently Asked Questions for guidance on reporting either RECLAIM or non-RECLAIM emissions. Report all cogeneration or resource recovery fuel usage on Form E1. **Fuel combustion results in toxics emissions which must be reported on Form TAC.**

Equipment Type, Fuel Type, and Annual Fuel Usage: Select the appropriate equipment type and the appropriate fuel type from the drop-down lists, then enter in the annual fuel usage. If you have selected "Other" equipment code or "Other" fuel type, please specify these in the respective pop-up windows. Please enter a separate row for each fuel/equipment combination and emission factor. For example, fuel consumption metered separately for two boilers that burn natural gas would be entered on separate rows if the boilers do not have the same emission factors. If fuel usage is not measured separately, use manufacturer's data (e.g. equipment rating) to distribute the fuel usage for each equipment type. Please use appropriate units [e.g., million cubic feet (mmcf) for gaseous fuels and 1000 gallons for liquid fuels].

- Reported combustion for equipment/fuel combination that has toxic default emission factor listed in Appendix A of the General Instruction book or in Appendix B of the New Reporting Procedures for AB2588 Facilities Reporting their Quadrennial Air Toxics Emissions Inventory: Automatic combustion toxic emission calculation for equipment/fuel with available default emission factors is built in. When you enter equipment/fuel with available toxic default emission factors on this form, the toxic emissions are automatically calculated on Form TAC by using default toxic emission factors for common equipment. If the toxic default emission factors of the reported equipment are dependent on the type of equipment (as defined in Appendix A of the General Instruction book or in Appendix B of the New Reporting Procedures for AB2588 Facilities Reporting their Quadrennial Air Toxics Emissions Inventory), and your equipment is different than the common type, the default toxic emission factors for each row associated with this emission source on Form TAC can be easily updated to a different equipment type (please see Form TAC instructions). If you have equipment specific emission factor for specific TAC/CAS#, de-select the check box for "Use default emission factor" on Form TAC and correct the emission factor to the equipment specific one.

When viewing any form for the first time, the Software will ask if you would like to read the help page for this form, which contains step by step instructions. Help is also available at any time by clicking on the help icon in the icon menu.

Form B1 – Choose Equipment Code

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Click this bar to view Net Emissions. Currently viewing Emission Factors.

B1 - Permitted Annual Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters

	Equipment Code	Fuel Code	Annual Fuel Usage	Organic Gases Emission Factor	Methane Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor	Use Default Emission Factor
1	1									<input type="checkbox"/>
2	1. Boiler									<input type="checkbox"/>
3	2. Oven									<input type="checkbox"/>
4	3. Dryer									<input type="checkbox"/>
5	4. Furnace									<input type="checkbox"/>
6	5. Heater									<input type="checkbox"/>
7	6. Flare (Non-Refinery)									<input type="checkbox"/>
8	7. Afterburner									<input type="checkbox"/>
9	8. 999. Other									<input type="checkbox"/>
10										<input type="checkbox"/>

While completing the forms, the software provides options to make your work easier whenever possible. Select equipment code from pull-down menu. In this example we picked boiler, which is Equip. Code 1.

Form B1 – Fuel Code

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Click this bar to view Net Emissions. Currently viewing Emission Factors.

B1 - Permitted Annual Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters

	Equipment Code	Fuel Code	Annual Fuel Usage	Organic Gases Emission Factor	Methane Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor	Use Default Emission Factor
1	1. Boiler									<input type="checkbox"/>
2		1. Natural Gas (mmcf)								<input type="checkbox"/>
3		2. LPG, Propane, Butane (1000 gals)								<input type="checkbox"/>
4		3. Diesel/Distillate Oil (1000 gals)								<input type="checkbox"/>
5		5. Landfill Gas (mmcf)								<input type="checkbox"/>
6		6. Digester Gas (mmcf)								<input type="checkbox"/>
7		7. Residual Fuel Oil (1000 gals)								<input type="checkbox"/>
8		9. Refinery Gas/Refinery Mixed Gas (mmcf)								<input type="checkbox"/>
9		999. Other								<input type="checkbox"/>
10										<input type="checkbox"/>

03/10/2003

Choose Fuel Code from pull-down list...

Form B1 – Annual Fuel Usage

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Click this bar to view Net Emissions. Currently viewing Emission Factors.

B1 - Permitted Annual Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters

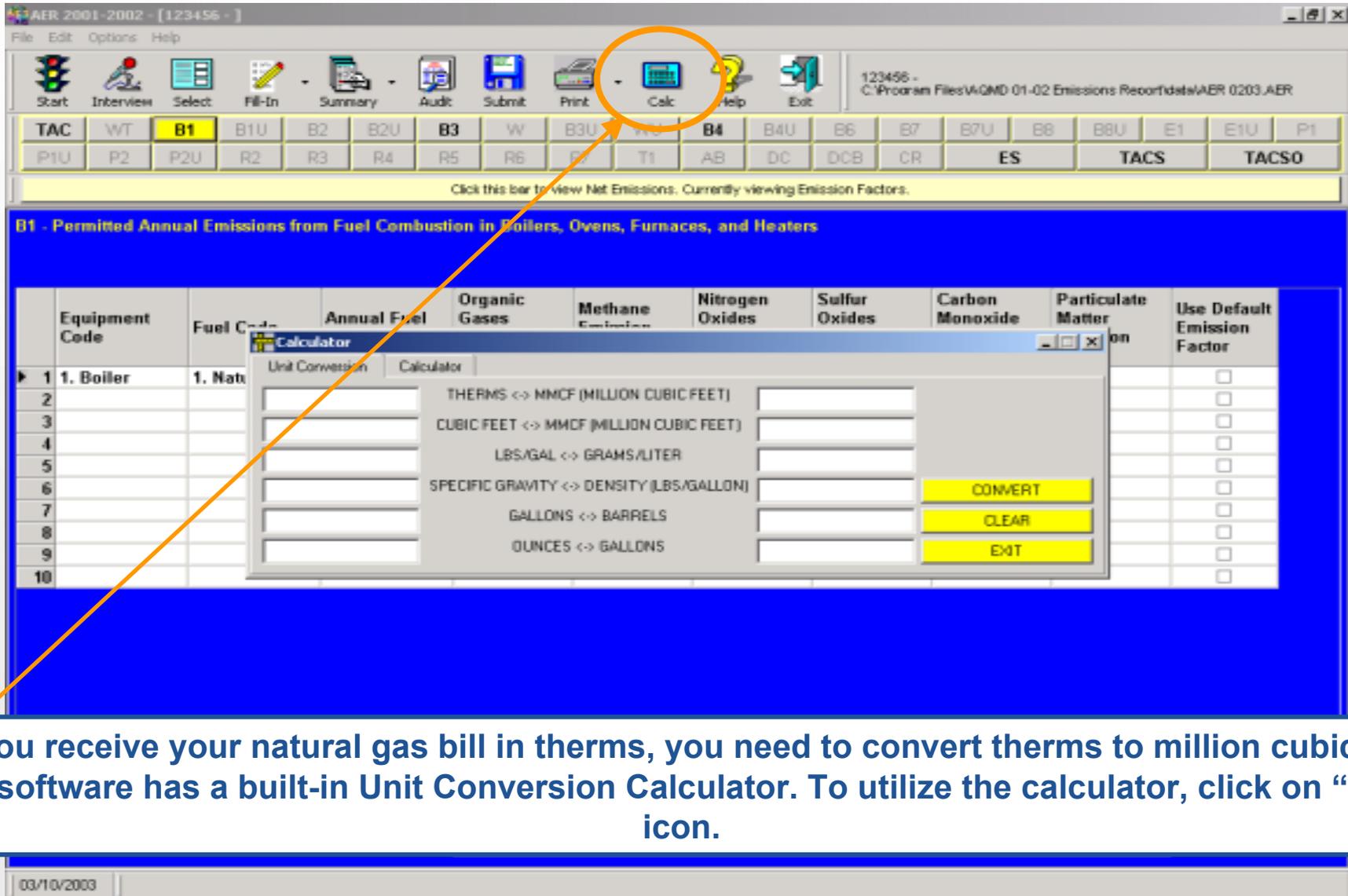
	Equipment Code	Fuel Code	Annual Fuel Usage	Organic Gases Emission Factor	Methane Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor	Use Default Emission Factor
▶ 1	1. Boiler	1. Natural Ga...								<input type="checkbox"/>
2										<input type="checkbox"/>
3										<input type="checkbox"/>
4										<input type="checkbox"/>
5										<input type="checkbox"/>
6										<input type="checkbox"/>
7										<input type="checkbox"/>
8										<input type="checkbox"/>
9										<input type="checkbox"/>
10										<input type="checkbox"/>

Unit Code: 3. mscf

...and enter Annual Fuel Usage in the displayed units. In this example you need to enter the usage of Natural Gas in million cubic feet.

Emissions Reporting Software

Unit Conversion Calculator

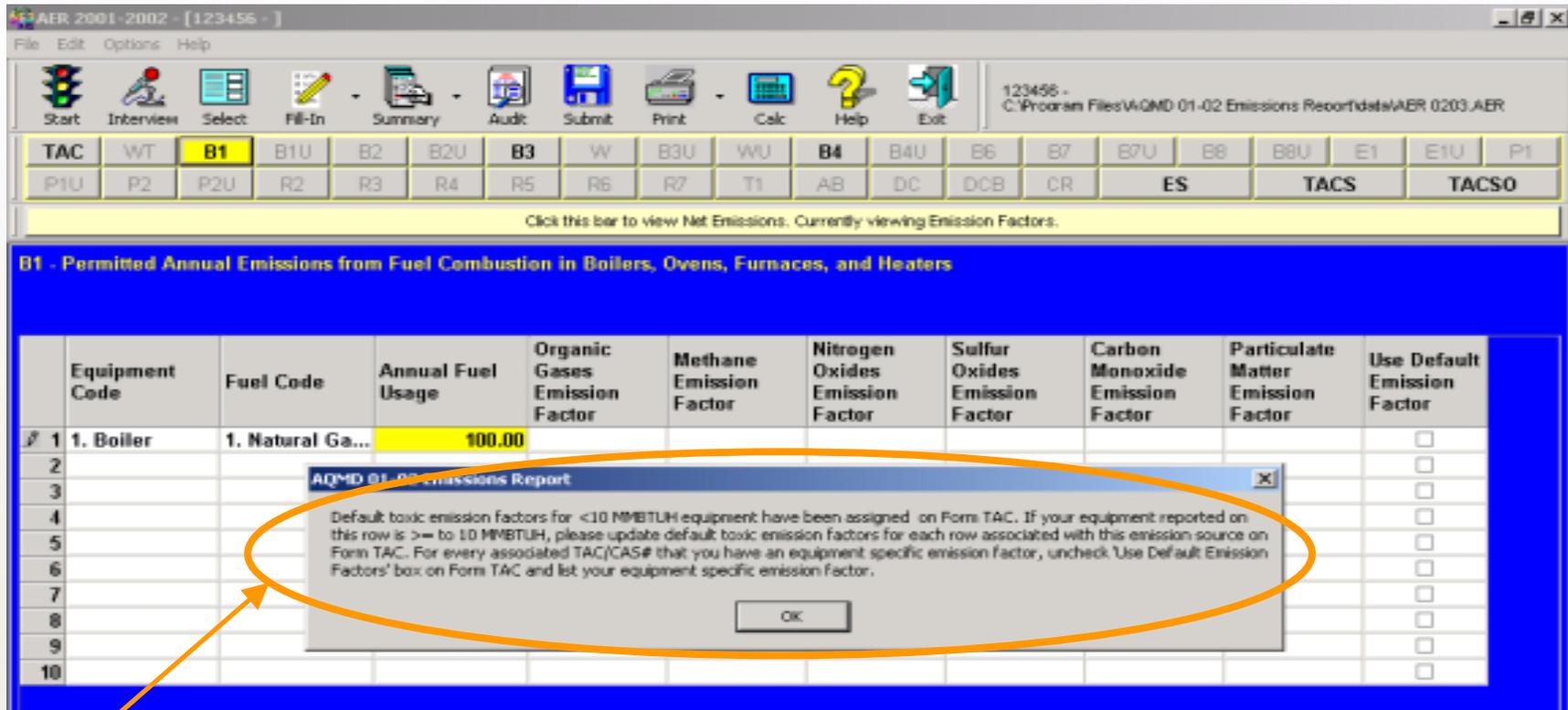


The screenshot shows the 'AER 2001-2002' software interface. The 'Calc' icon in the toolbar is circled in orange. A 'Unit Conversion Calculator' dialog box is open, displaying conversion options for THERMS, CUBIC FEET, LBS/GAL, SPECIFIC GRAVITY, GALLONS, and OUNCES. The background table shows emission factors for various equipment codes, with '1. Boiler' selected.

Equipment Code	Fuel Code	Annual Fuel	Organic Gases	Methane	Nitrogen Oxides	Sulfur Oxides	Carbon Monoxide	Particulate Matter	Use Default Emission Factor
1	1. Boiler	1. Natu							<input type="checkbox"/>
2									<input type="checkbox"/>
3									<input type="checkbox"/>
4									<input type="checkbox"/>
5									<input type="checkbox"/>
6									<input type="checkbox"/>
7									<input type="checkbox"/>
8									<input type="checkbox"/>
9									<input type="checkbox"/>
10									<input type="checkbox"/>

If you receive your natural gas bill in therms, you need to convert therms to million cubic feet. Our software has a built-in Unit Conversion Calculator. To utilize the calculator, click on "Calc" icon.

Form B1 – Assigned Toxic Emission Factors



B1 - Permitted Annual Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters

Equipment Code	Fuel Code	Annual Fuel Usage	Organic Gases Emission Factor	Methane Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor	Use Default Emission Factor
1	1. Boiler	1. Natural Ga...	100.00						<input type="checkbox"/>
2									<input type="checkbox"/>
3									<input type="checkbox"/>
4									<input type="checkbox"/>
5									<input type="checkbox"/>
6									<input type="checkbox"/>
7									<input type="checkbox"/>
8									<input type="checkbox"/>
9									<input type="checkbox"/>
10									<input type="checkbox"/>

AQMD B1 - Emissions Report

Default toxic emission factors for <10 MMBTUH equipment have been assigned on Form TAC. If your equipment reported on this row is >= to 10 MMBTUH, please update default toxic emission factors for each row associated with this emission source on Form TAC. For every associated TAC/CAS# that you have an equipment specific emission factor, uncheck 'Use Default Emission Factors' box on Form TAC and list your equipment specific emission factor.

OK

→ If default toxic emissions factors are available for your reported equipment/fuel, the Software will automatically perform the associated toxic calculations based on the most common equipment type. A pop-up window informs you and explains the calculation performed. Please read carefully since some equipment/fuels have different sets of default toxic emission factors depending on equipment type/size. Depending on your equipment type/size you may have to updated data on Form TAC.

Form B1 – Emission Factors

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC WT **B1** B1U B2 B2U B3 W B3U WU B4 B4U B6 B7 B7U B8 B8U E1 E1U P1

P1U P2 P2U R2 R3 R4 R5 R6 R7 T1 AB DC DCB CR ES TACS TACSO

Click this bar to view Net Emissions. Currently viewing Emission Factors.

B1 - Permitted Annual Emissions from Fuel Combustion in Boilers, Ovens, Furnaces, and Heaters

	Equipment Code	Fuel Code	Annual Fuel Usage	Organic Gases Emission Factor	Methane Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor	Use Default Emission Factor
▶ 1	1. Boiler	1. Natural Ga...	100.00	5.50	2.30	100.00	0.60	84.00	7.60	<input checked="" type="checkbox"/>
2										<input type="checkbox"/>
3										<input type="checkbox"/>
4										<input type="checkbox"/>
5										<input type="checkbox"/>
6										<input type="checkbox"/>
7										<input type="checkbox"/>
8										<input type="checkbox"/>
9										<input type="checkbox"/>
10										<input type="checkbox"/>

Total Emissions in Pounds 550.00 230.00 10,000.00 60.00 8,400.00 760.00

Total Emissions in Tons 0.28 0.12 5.00 0.03 4.20 0.38

03/10/2003 Checked

To complete the first row, you will need to enter Emission Factors for Criteria Pollutants. If you decide to use default Emission Factors, just check the applicable box at the end of the row to populate all defaults (numbers in red). All emission calculations will be performed automatically and transferred to appropriate summary forms.

Form TAC

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1	
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO				

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00	3. mmcf	0.00800000	<input checked="" type="checkbox"/>	0.800000	<input type="checkbox"/>
2	B1-1	12	50000	100.00	3. mmcf	0.01700000	<input checked="" type="checkbox"/>	1.700000	<input type="checkbox"/>
3	B1-1	19	1151	100.00	3. mmcf	0.00010000	<input checked="" type="checkbox"/>	0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00	3. mmcf	0.00030000	<input checked="" type="checkbox"/>	0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00	3. mmcf	0.00430000	<input checked="" type="checkbox"/>	0.430000	<input type="checkbox"/>
6	B1-1	30	107028	100.00	3. mmcf	0.00270000	<input checked="" type="checkbox"/>	0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00	3. mmcf	0.00950000	<input checked="" type="checkbox"/>	0.950000	<input type="checkbox"/>
8	B1-1	44	110543	100.00	3. mmcf	0.00630000	<input checked="" type="checkbox"/>	0.630000	<input type="checkbox"/>
9	B1-1	68	108883	100.00	3. mmcf	0.03660000	<input checked="" type="checkbox"/>	3.660000	<input type="checkbox"/>
10	B1-1	70	1330207	100.00	3. mmcf	0.02720000	<input checked="" type="checkbox"/>	2.720000	<input type="checkbox"/>
11							<input type="checkbox"/>		<input type="checkbox"/>

→ You are required to report your Toxic Air Contaminants and Ozone Depleters emissions on Form TAC . In the example shown previously on Form B-1, a Boiler was reported and you received a pop up message informing you that Default Toxic Emission Factors have been assigned on Form TAC for most common equipment size/type. Toxic emissions as a result of burning Natural Gas in Boiler are calculated by the Software and automatically reported on Form TAC, as shown. However...

Form TAC – Equipment Type Change

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File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

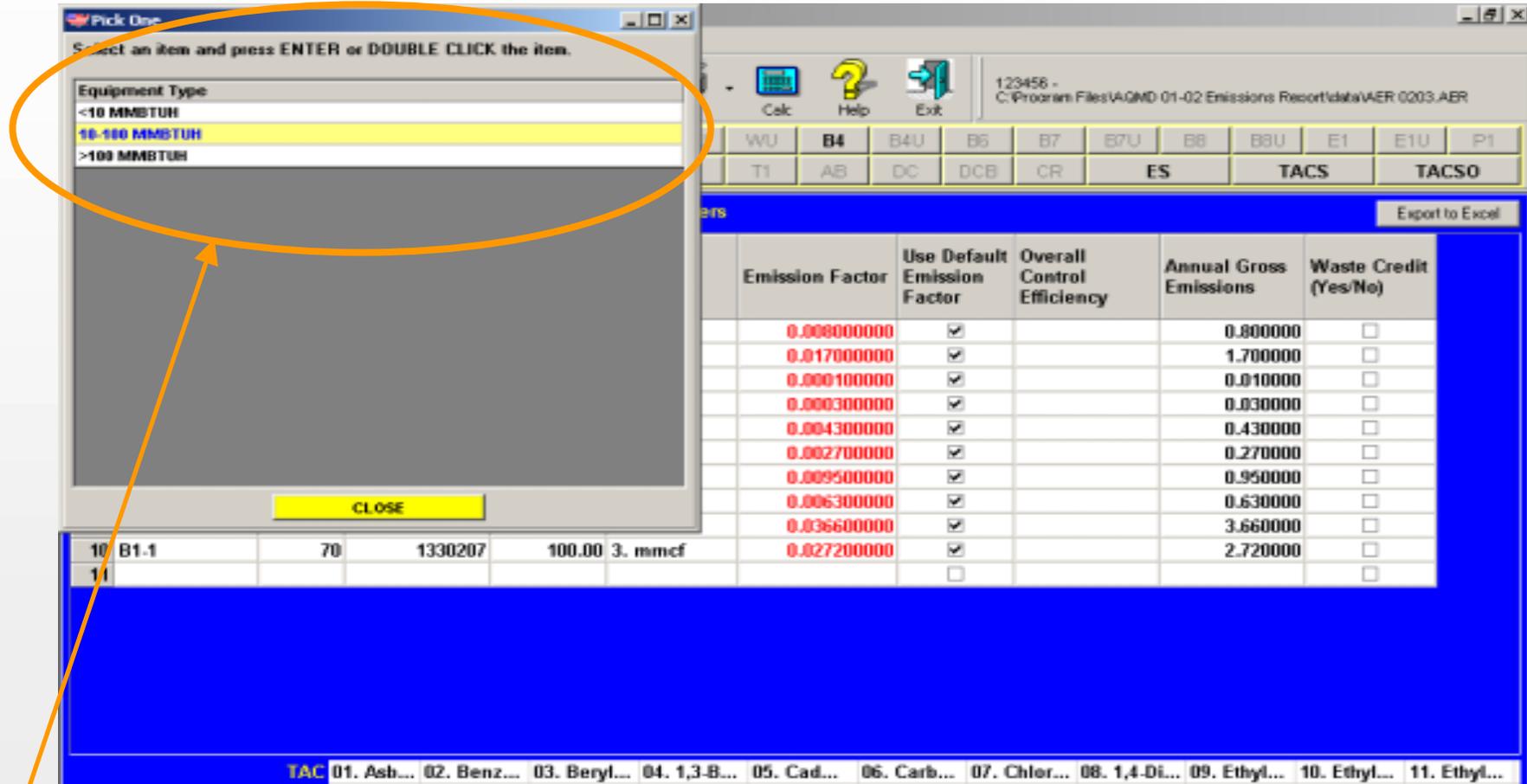
TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00 3. mmcf	0.0000			0.800000	<input type="checkbox"/>
2	B1-1	12	50000	100.00 3. mmcf	0.01			1.700000	<input type="checkbox"/>
3	B1-1	19	1151	100.00 3. mmcf	0.00			0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00 3. mmcf	0.00			0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00 3. mmcf	0.00			0.430000	<input type="checkbox"/>
6	B1-1	30	107028	100.00 3. mmcf	0.00			0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00 3. mmcf	0.00300000			0.950000	<input type="checkbox"/>
8	B1-1	44	110543	100.00 3. mmcf	0.00630000	<input checked="" type="checkbox"/>		0.630000	<input type="checkbox"/>
9	B1-1	68	108883	100.00 3. mmcf	0.03660000	<input type="checkbox"/>		3.660000	<input type="checkbox"/>
10	B1-1	70	1330207	100.00 3. mmcf	0.02720000	<input checked="" type="checkbox"/>		2.720000	<input type="checkbox"/>
11						<input type="checkbox"/>			<input type="checkbox"/>

TAC 01. Ash... 02. Benz... 03. Beryl... 04. 1,3-B... 05. Cad... 06. Carb... 07. Chlor... 08. 1,4-Di... 09. Ethyl... 10. Ethyl... 11. Ethyl...

...you must check the size/type of your equipment and change the emission factor value if necessary. To change it: right click on any associated row and click on "Change Equipment Type".

Form TAC – Change Equipment Type



	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
	0.00800000	<input checked="" type="checkbox"/>		0.800000	<input type="checkbox"/>
	0.01700000	<input checked="" type="checkbox"/>		1.700000	<input type="checkbox"/>
	0.00100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
	0.00300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
	0.00430000	<input checked="" type="checkbox"/>		0.430000	<input type="checkbox"/>
	0.00270000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
	0.00950000	<input checked="" type="checkbox"/>		0.950000	<input type="checkbox"/>
	0.00630000	<input checked="" type="checkbox"/>		0.630000	<input type="checkbox"/>
	0.03660000	<input checked="" type="checkbox"/>		3.660000	<input type="checkbox"/>
	0.02720000	<input checked="" type="checkbox"/>		2.720000	<input type="checkbox"/>
10	B1.1	70	1330207	100.00	3. mmcf
11					

A pop up window offers the available specific equipment size/type options. Double-click on applicable and close pop up window...

Form TAC – Change Equipment Type

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File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

	Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
▶	1	B1-1	02	71432	100.00 3. mmcf	0.005800000	<input checked="" type="checkbox"/>		0.580000	<input type="checkbox"/>
	2	B1-1	12	50000	100.00 3. mmcf	0.012300000	<input checked="" type="checkbox"/>		1.230000	<input type="checkbox"/>
	3	B1-1	19	1151	100.00 3. mmcf	0.000100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
	4	B1-1	19	91203	100.00 3. mmcf	0.000300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
	5	B1-1	29	75070	100.00 3. mmcf	0.003100000	<input checked="" type="checkbox"/>		0.310000	<input type="checkbox"/>
	6	B1-1	30	107028	100.00 3. mmcf	0.002700000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
	7	B1-1	40	100414	100.00 3. mmcf	0.006900000	<input checked="" type="checkbox"/>		0.690000	<input type="checkbox"/>
	8	B1-1	44	110543	100.00 3. mmcf	0.004600000	<input checked="" type="checkbox"/>		0.460000	<input type="checkbox"/>
	9	B1-1	68	108883	100.00 3. mmcf	0.026500000	<input checked="" type="checkbox"/>		2.650000	<input type="checkbox"/>
	10	B1-1	70	1330207	100.00 3. mmcf	0.019700000	<input checked="" type="checkbox"/>		1.970000	<input type="checkbox"/>
	11						<input type="checkbox"/>			<input type="checkbox"/>

You may not change this value. Please change the value on the form indicated by the reference number

TAC 01. Ash... 02. Benz... 03. Beryl... 04. 1,3-B... 05. Cad... 06. Carb... 07. Chlor... 08. 1,4-Di... 09. Ethyl... 10. Ethyl... 11. Ethyl...

04/01/2003 05. Carbon Tetrachloride = 0.000000

The Software changes the Default Emission Factor automatically for all associated rows. After we finish reporting other criteria emissions for this sample facility, we will come back to the TAC Form to complete it.

Form B3 – Reporting Use of Organics

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Material Codes

B3 - Permitted Annual Emissions from the Use of Organics

	Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Annual Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
1				<input type="checkbox"/>					<input type="checkbox"/>			
2				<input type="checkbox"/>					<input type="checkbox"/>			
3				<input type="checkbox"/>					<input type="checkbox"/>			
4				<input type="checkbox"/>					<input type="checkbox"/>			
5				<input type="checkbox"/>					<input type="checkbox"/>			
6				<input type="checkbox"/>					<input type="checkbox"/>			
7				<input type="checkbox"/>					<input type="checkbox"/>			
8				<input type="checkbox"/>					<input type="checkbox"/>			
9				<input type="checkbox"/>					<input type="checkbox"/>			
10				<input type="checkbox"/>					<input type="checkbox"/>			

Net Emissions in Tons 0.00

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Our next sample form is the form
B3 - Permitted Annual Emissions from the Use of Organics.

Form B3 – Material Code

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Material Codes

B3 - Permitted Annual Emissions from the Use of Organics

Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Annual Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
1			<input type="checkbox"/>					<input type="checkbox"/>			
2		COATING MATERIALS									
3	110	Adhesives							lbs/gal lbs/lb	5.200	
4	112	Enamel								2.800	
5	114	Lacquer								2.300	
6	116	Urethane / Polyurethane (Hi-Gloss)								3.500	
7	118	Urethane / Polyurethane (Non-Hi-Gloss)								2.800	
8	120	Primer								2.300	
9	122	Sealer								2.300	
10	124	Shellac (Clear)								6.100	
	126	Shellac (Pigmented)								4.600	
	128	Stains								4.600	
	130	Varnish								4.100	

Net Emissions in Pounds 0.00

Net Emissions in Tons 0.00

03/10/2003

To choose applicable Material Code, open pull down menu as shown and double click on the material code that best describes your material.

Form B3 – Activity Code

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Material Codes

B3 - Permitted Annual Emissions from the Use of Organics

	Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Annual Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
1	112			<input type="checkbox"/>					<input type="checkbox"/>			
2		4. Wood Coating		<input type="checkbox"/>					<input type="checkbox"/>			
3		5. Metal Coating		<input type="checkbox"/>					<input type="checkbox"/>			
4		6. Paper, Fabric, or Film Coating		<input type="checkbox"/>					<input type="checkbox"/>			
5		7. Plastic, Rubber, or Glass Coating		<input type="checkbox"/>					<input type="checkbox"/>			
6		999. Other		<input type="checkbox"/>					<input type="checkbox"/>			
7				<input type="checkbox"/>					<input type="checkbox"/>			
8				<input type="checkbox"/>					<input type="checkbox"/>			
9				<input type="checkbox"/>					<input type="checkbox"/>			
10				<input type="checkbox"/>					<input type="checkbox"/>			

If selected Material Code does not have an associated Activity Code, the "Activity Code" column will automatically be populated with n/a. If your material code is a coating or solvent, you need to choose applicable Activity Code from the pull down menu as shown.

Form B3 – Units and Emission Factor

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

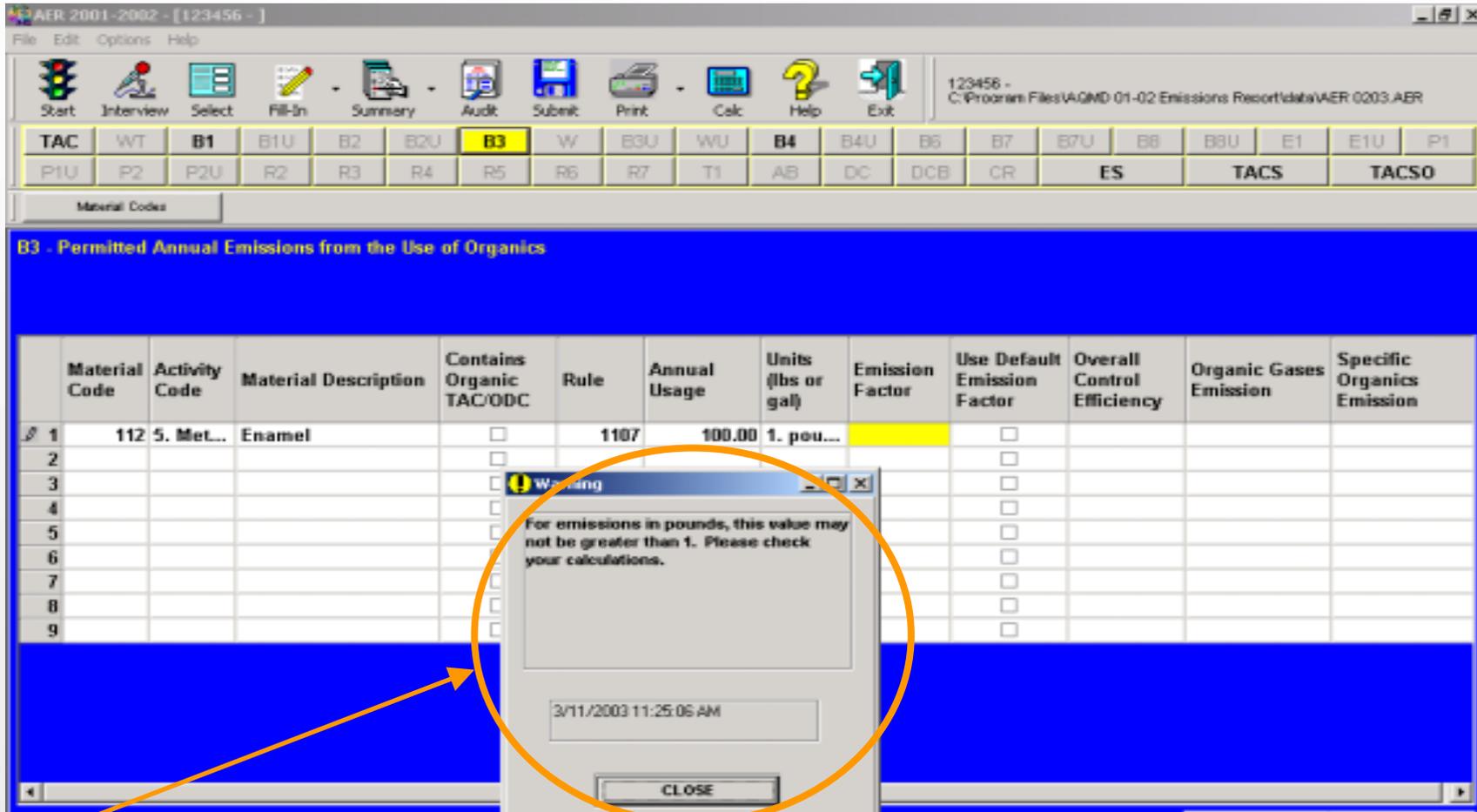
Material Codes

B3 - Permitted Annual Emissions from the Use of Organics

	Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Annual Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
1	112	5. Me...	Enamel	<input type="checkbox"/>	1107	100.00	1. pou...	2.37	<input type="checkbox"/>			
2				<input type="checkbox"/>					<input type="checkbox"/>			
3				<input type="checkbox"/>					<input type="checkbox"/>			
4				<input type="checkbox"/>					<input type="checkbox"/>			
5				<input type="checkbox"/>					<input type="checkbox"/>			
6				<input type="checkbox"/>					<input type="checkbox"/>			
7				<input type="checkbox"/>					<input type="checkbox"/>			
8				<input type="checkbox"/>					<input type="checkbox"/>			
9				<input type="checkbox"/>					<input type="checkbox"/>			

After entering Material Description, we don't check the box for "Contains organic TAC/ODC" since our Enamel has no toxic, according to its MSDSs. Next steps are selecting the Rule number from the list, entering the Annual Usage and selecting the Unit Code from pull down list. The VOC emission factor has to be reported in the units corresponding to the annual usage (if our annual usage is in gallons, emission factor has to be in lbs/gal; if our annual usage is in pounds the emission factor has to be in lbs/lb). If we attempt to enter the VOC value in lbs/gal for material reported in pounds...

Form B3 – Units and Emission Factor



The screenshot shows the 'B3 - Permitted Annual Emissions from the Use of Organics' form. The table below is a representation of the data visible in the interface:

Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Annual Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
112	5. Met...	Enamel	<input type="checkbox"/>	1107	100.00	1. pou...		<input type="checkbox"/>			
2			<input type="checkbox"/>					<input type="checkbox"/>			
3			<input type="checkbox"/>					<input type="checkbox"/>			
4			<input type="checkbox"/>					<input type="checkbox"/>			
5			<input type="checkbox"/>					<input type="checkbox"/>			
6			<input type="checkbox"/>					<input type="checkbox"/>			
7			<input type="checkbox"/>					<input type="checkbox"/>			
8			<input type="checkbox"/>					<input type="checkbox"/>			
9			<input type="checkbox"/>					<input type="checkbox"/>			

The warning dialog box contains the following text:

Warning
 For emissions in pounds, this value may not be greater than 1. Please check your calculations.
 3/11/2003 11:25:06 AM
 CLOSE

A warning pops up to remind us that the Emission Factor cannot be greater than 1, if units are in Pounds (you can not have more that 1 lbs of VOC in 1 lbs of material). This is a sample of the validation checks that are built-in throughout the software, they will not allow us to do some obvious mistakes.

Form B3 – Units and Emission Factor

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Material Codes

B3 - Permitted Annual Emissions from the Use of Organics

	Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Annual Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
▶ 1	112	5. Met...	Enamel	<input type="checkbox"/>	1107	100.00	1. pou...	0.6500	<input type="checkbox"/>		65.00	
2				<input type="checkbox"/>					<input type="checkbox"/>			
3				<input type="checkbox"/>					<input type="checkbox"/>			
4				<input type="checkbox"/>					<input type="checkbox"/>			
5				<input type="checkbox"/>					<input type="checkbox"/>			
6				<input type="checkbox"/>					<input type="checkbox"/>			
7				<input type="checkbox"/>					<input type="checkbox"/>			
8				<input type="checkbox"/>					<input type="checkbox"/>			
9				<input type="checkbox"/>					<input type="checkbox"/>			

Unit: lbs/pound

Once all information necessary to calculate the emissions is entered, emissions are automatically calculated and transferred to appropriate summaries.

Form B3 – Reporting next material

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Material Codes

B3 - Permitted Annual Emissions from the Use of Organics

	Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Annual Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
1	112	5. Met...	Enamel	<input type="checkbox"/>	1107	100.00	1. pou...	0.6500	<input type="checkbox"/>		65.00	
2	120	5. Met...	Primer	<input checked="" type="checkbox"/>	1107	10.00	2. gall...		<input type="checkbox"/>			
3				<input type="checkbox"/>					<input type="checkbox"/>			
4				<input type="checkbox"/>					<input type="checkbox"/>			
5				<input type="checkbox"/>					<input type="checkbox"/>			
6				<input type="checkbox"/>					<input type="checkbox"/>			
7				<input type="checkbox"/>					<input type="checkbox"/>			
8				<input type="checkbox"/>					<input type="checkbox"/>			
9				<input type="checkbox"/>					<input type="checkbox"/>			

If we report Primer as a second material, we have to check "Contains Organic TAC/ODC" since Primer contains Benzene. Note that the Emission Factor is missing and without it, Primer emissions cannot be calculated.

Form B4 – Emissions from Misc. Sources

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B6	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	T5	DC	DCB	CR	ES	TACS	TACSO			

Click this bar to view Net Emissions. Currently viewing Emission Factors.

B4 - Permitted Annual Equipment Emissions from Miscellaneous Sources

	Activity Code	Contains TAC/ODC	Rule	Annual Throughput or Operating...	Unit Code	Organic Gases Emission Factor	Specific Organics Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor
1		<input type="checkbox"/>									
2		<input type="checkbox"/>									
3		<input type="checkbox"/>									
4		<input type="checkbox"/>									
5		<input type="checkbox"/>									
6		<input type="checkbox"/>									
7		<input type="checkbox"/>									
8		<input type="checkbox"/>									
9		<input type="checkbox"/>									
10		<input type="checkbox"/>									

03/10/2003

Form B4, for reporting Permitted Annual Equipment Emissions from Miscellaneous Sources.

Form B4 – Emissions from Misc. Sources

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

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TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

Click this bar to view Net Emissions. Currently viewing Emission Factors.

B4 - Permitted Annual Equipment Emissions from Miscellaneous Sources

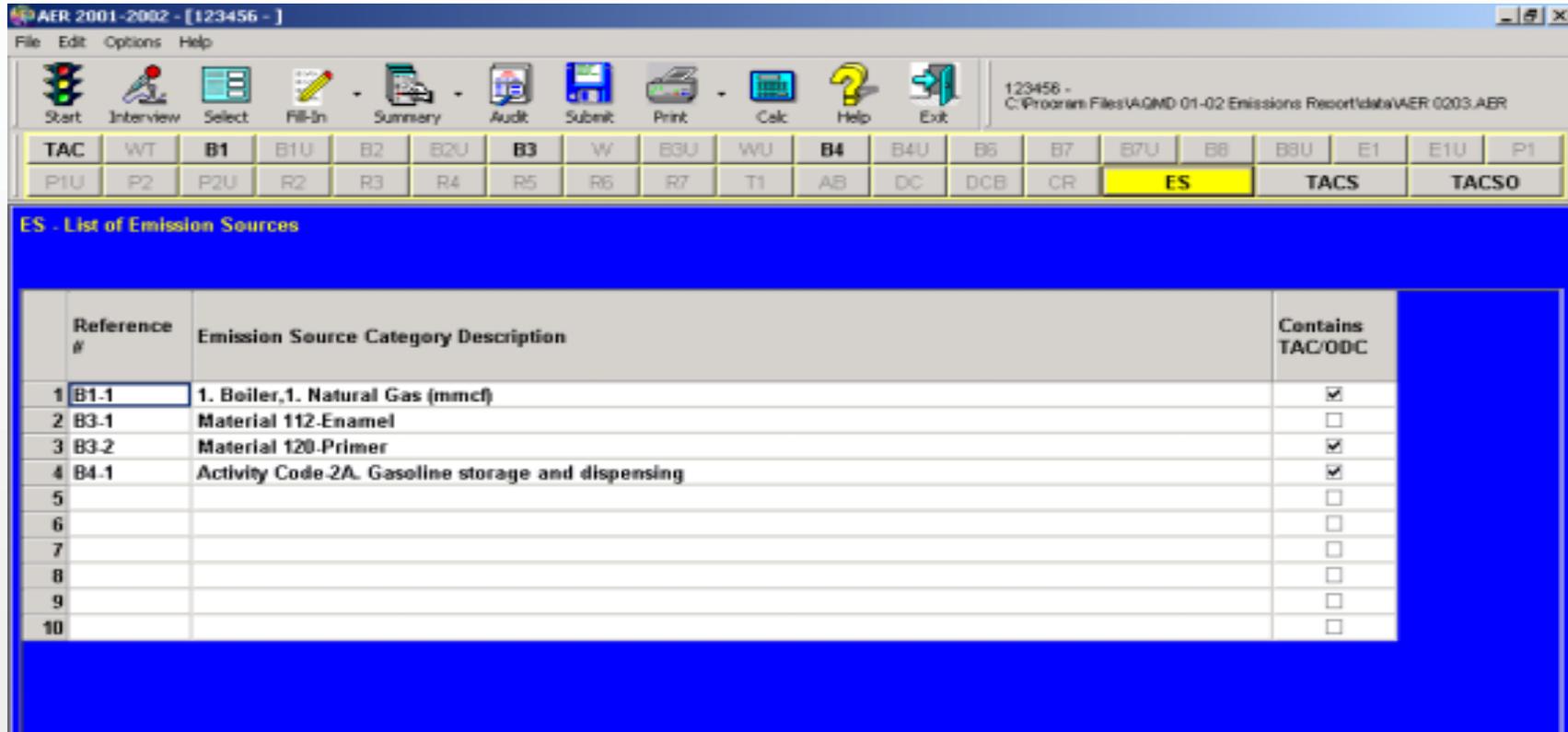
	Activity Code	Contains TAC/ODC	Rule	Annual Throughput or Operating...	Unit Code	Organic Gases Emission Factor	Specific Organics Emission Factor	Nitrogen Oxides Emission Factor	Sulfur Oxides Emission Factor	Carbon Monoxide Emission Factor	Particulate Matter Emission Factor
▶ 1	2A. Gasoline stor...	<input checked="" type="checkbox"/>	463	100.00	4. 1000 gallons	1.8000					
2		<input type="checkbox"/>									
3		<input type="checkbox"/>									

→ In this example, we reported Gasoline UST Storage and Dispensing on Form B4. Filling this form is similar to the procedure in previous forms. We either choose from the built-in list, such as for the Activity Code and annual throughput Unit Code, or we type the required values such as the applicable rule number, annual throughput and emission factor. Since gasoline contains Benzene, which is a toxic, we check the box for TAC/ODC. All criteria emissions are automatically calculated and transferred to appropriate summary forms.

Total Emissions in Pounds	180.00	0.00	0.00	0.00	0.00	0.00
Total Emissions in Tons	0.09	0.00	0.00	0.00	0.00	0.00

03/13/2003

Summary Forms – Form ES



The screenshot shows the software interface for 'AER 2001-2002'. The menu bar includes File, Edit, Options, and Help. The toolbar contains icons for Start, Interview, Select, Fill-In, Summary, Audit, Submit, Print, Calc, Help, and Exit. The status bar shows the file path: C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER. A grid of buttons is visible, with 'ES' highlighted in yellow. Below the grid is a table titled 'ES - List of Emission Sources'.

Reference #	Emission Source Category Description	Contains TAC/ODC
1 B1.1	1. Boiler,1. Natural Gas (mmcf)	<input checked="" type="checkbox"/>
2 B3-1	Material 112-Enamel	<input type="checkbox"/>
3 B3-2	Material 120-Primer	<input checked="" type="checkbox"/>
4 B4.1	Activity Code 2A. Gasoline storage and dispensing	<input checked="" type="checkbox"/>
5		<input type="checkbox"/>
6		<input type="checkbox"/>
7		<input type="checkbox"/>
8		<input type="checkbox"/>
9		<input type="checkbox"/>
10		<input type="checkbox"/>

Form ES is automatically created based on the data you entered on each form. It provides a complete list of all reported emission sources in your facility as well as a reminder to report toxic emissions for emitting sources. An Emission Source Reference number is a combination of the Form and Row where the specific source was originally reported. This reference must be used for reporting toxics on Form TAC.

Form TAC – Reporting Toxics

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

	Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00	3. mmcf	0.005800000	<input checked="" type="checkbox"/>		0.580000	<input type="checkbox"/>
2	B1-1	12	50000	100.00	3. mmcf	0.012300000	<input checked="" type="checkbox"/>		1.230000	<input type="checkbox"/>
3	B1-1	1. Boiler, 1. Natural Gas (mmcf)	1151	100.00	3. mmcf	0.000100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00	3. mmcf	0.000300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00	3. mmcf	0.003100000	<input checked="" type="checkbox"/>		0.310000	<input type="checkbox"/>
6	B1-1	30	107028	100.00	3. mmcf	0.002700000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00	3. mmcf	0.006900000	<input checked="" type="checkbox"/>		0.690000	<input type="checkbox"/>
8	B1-1	44	110543	100.00	3. mmcf	0.004600000	<input checked="" type="checkbox"/>		0.460000	<input type="checkbox"/>
9	B1-1	68	108883	100.00	3. mmcf	0.026500000	<input checked="" type="checkbox"/>		2.650000	<input type="checkbox"/>
10	B1-1	70	1330207	100.00	3. mmcf	0.019700000	<input checked="" type="checkbox"/>		1.970000	<input type="checkbox"/>
11							<input type="checkbox"/>			<input type="checkbox"/>

On Form TAC, we have to report toxic emissions from all combustions and all materials and equipment previously checked as containing toxics. Combustion Toxics resulting from natural gas combustion in a boiler reported on row 1 of Form B1 (reference B1-1) were automatically transferred. To see a description of the equipment/process/material for the reported Emission Source Reference, point your cursor on the specific Reference.

Form TAC – Reporting Toxics

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

	Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00	3. mmcf	0.005800000	<input checked="" type="checkbox"/>		0.580000	<input type="checkbox"/>
2	B1-1	12	50000	100.00	3. mmcf	0.012300000	<input checked="" type="checkbox"/>		1.230000	<input type="checkbox"/>
3	B1-1	19	1151	100.00	3. mmcf	0.000100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00	3. mmcf	0.000300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00	3. mmcf	0.003100000	<input checked="" type="checkbox"/>		0.310000	<input type="checkbox"/>
6	B1-1	30	107028	100.00	3. mmcf	0.002700000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00	3. mmcf	0.006900000	<input checked="" type="checkbox"/>		0.690000	<input type="checkbox"/>
8	B1-1	44	110543	100.00	3. mmcf	0.004600000	<input checked="" type="checkbox"/>		0.460000	<input type="checkbox"/>
9	B1-1	68	108883	100.00	3. mmcf	0.026500000	<input checked="" type="checkbox"/>		2.650000	<input type="checkbox"/>
10	B1-1	70	1330207	100.00	3. mmcf	0.019700000	<input checked="" type="checkbox"/>		1.970000	<input type="checkbox"/>
							<input type="checkbox"/>			<input type="checkbox"/>

- B1-1
- B3-2
- B4-1
- Other

03/13/2003

We must add Benzene from gasoline UST storage and dispensing originally reported on the 1st row of Form B4. First select the appropriate Reference from the pull-down menu, then...

Form TAC – Reporting Toxics

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

	Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00	3. mmcf	0.005800000	<input checked="" type="checkbox"/>		0.580000	<input type="checkbox"/>
2	B1-1	12	50000	100.00	3. mmcf	0.012300000	<input checked="" type="checkbox"/>		1.230000	<input type="checkbox"/>
3	B1-1	19	1151	100.00	3. mmcf	0.000100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00	3. mmcf	0.000300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00	3. mmcf	0.003100000	<input checked="" type="checkbox"/>		0.310000	<input type="checkbox"/>
6	B1-1	30	107028	100.00	3. mmcf	0.002700000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00	3. mmcf	0.006900000	<input checked="" type="checkbox"/>		0.690000	<input type="checkbox"/>
8	B1-1	44	110543	100.00	3. mmcf	0.004600000	<input checked="" type="checkbox"/>		0.460000	<input type="checkbox"/>
9	B1-1	68	108883	100.00	3. mmcf	0.026500000	<input checked="" type="checkbox"/>		2.650000	<input type="checkbox"/>
10	B1-1	70	133020	100.00	3. mmcf	0.019700000	<input checked="" type="checkbox"/>		1.970000	<input type="checkbox"/>
...	B4-1	02		100.00	4. 1000 gall...		<input type="checkbox"/>			<input type="checkbox"/>
12		01 Asbestos					<input type="checkbox"/>			<input type="checkbox"/>
		02 Benzene					<input type="checkbox"/>			<input type="checkbox"/>
		03 Beryllium					<input type="checkbox"/>			<input type="checkbox"/>
		04 1,3-Butadiene					<input type="checkbox"/>			<input type="checkbox"/>
		05 Cadmium					<input type="checkbox"/>			<input type="checkbox"/>
		06 Carbon Tetrachloride					<input type="checkbox"/>			<input type="checkbox"/>
		07 Chlorinated Dioxins & Dibenzofurans					<input type="checkbox"/>			<input type="checkbox"/>
		08 1,4-Dioxane					<input type="checkbox"/>			<input type="checkbox"/>
		09 Ethylene Dibromide					<input type="checkbox"/>			<input type="checkbox"/>
		10 Ethylene Dichloride					<input type="checkbox"/>			<input type="checkbox"/>
		11 Ethylene Oxide					<input type="checkbox"/>			<input type="checkbox"/>
		12 Formaldehyde					<input type="checkbox"/>			<input type="checkbox"/>

Gross Emissions in

... 05. Cad... 06. Carb... 07. Chlor... 08. 1,4-Di... 09. Ethyl... 10. Ethyl... 11. Ethyl...
000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000

... select Benzene from the list as shown.

Form TAC – Reporting Toxics

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

	Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00	3. mmcf	0.005800000	<input checked="" type="checkbox"/>		0.580000	<input type="checkbox"/>
2	B1-1	12	50000	100.00	3. mmcf	0.012300000	<input checked="" type="checkbox"/>		1.230000	<input type="checkbox"/>
3	B1-1	19	1151	100.00	3. mmcf	0.000100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00	3. mmcf	0.000300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00	3. mmcf	0.003100000	<input checked="" type="checkbox"/>		0.310000	<input type="checkbox"/>
6	B1-1	30	107028	100.00	3. mmcf	0.002700000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00	3. mmcf	0.006900000	<input checked="" type="checkbox"/>		0.690000	<input type="checkbox"/>
8	B1-1	44	110543	100.00	3. mmcf	0.004600000	<input checked="" type="checkbox"/>		0.460000	<input type="checkbox"/>
9	B1-1	68	108883	100.00	3. mmcf	0.026500000	<input checked="" type="checkbox"/>		2.650000	<input type="checkbox"/>
10	B1-1	70	1330207	100.00	3. mmcf	0.019700000	<input checked="" type="checkbox"/>		1.970000	<input type="checkbox"/>
▶ 11	B4-1	02	71432	100.00	4. 1000 gall...		<input type="checkbox"/>			<input type="checkbox"/>
12							<input type="checkbox"/>			<input type="checkbox"/>

03/13/2003

Since Benzene is the only toxic component, the CAS number will be automatically populated. Annual Usage and Units are transferred automatically from the form where this equipment's emissions were originally reported.

Form TAC – Reporting Toxics

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

	Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00	3. mmcf	0.005800000	<input checked="" type="checkbox"/>		0.580000	<input type="checkbox"/>
2	B1-1	12	50000	100.00	3. mmcf	0.012300000	<input checked="" type="checkbox"/>		1.230000	<input type="checkbox"/>
3	B1-1	19	1151	100.00	3. mmcf	0.000100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00	3. mmcf	0.000300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00	3. mmcf	0.003100000	<input checked="" type="checkbox"/>		0.310000	<input type="checkbox"/>
6	B1-1	30	107028	100.00	3. mmcf	0.002700000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00	3. mmcf	0.006900000	<input checked="" type="checkbox"/>		0.690000	<input type="checkbox"/>
8	B1-1	44	110543	100.00	3. mmcf	0.004600000	<input checked="" type="checkbox"/>		0.460000	<input type="checkbox"/>
9	B1-1	68	108883	100.00	3. mmcf	0.026500000	<input checked="" type="checkbox"/>		2.650000	<input type="checkbox"/>
10	B1-1	70	1330207	100.00	3. mmcf	0.019700000	<input checked="" type="checkbox"/>		1.970000	<input type="checkbox"/>
▶ 11	B4-1	02	71432	100.00	4. 1000 gall.	0.018000000	<input type="checkbox"/>		1.800000	<input type="checkbox"/>
12							<input type="checkbox"/>			<input type="checkbox"/>

TAC 01. Ash... 02. Benz... 03. Beryl... 04. 1,3-B... 05. Cad... 06. Carb... 07. Chlor... 08. 1,4-Di... 09. Ethyl... 10. Ethyl... 11. Ethyl...

After entering the emission factor, the Annual Gross Emissions are automatically calculated and transferred to the appropriate summary form.

Form TAC – Reporting Toxics

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

	Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00	3. mmcf	0.005800000	<input checked="" type="checkbox"/>		0.580000	<input type="checkbox"/>
2	B1-1	12	50000	100.00	3. mmcf	0.012300000	<input checked="" type="checkbox"/>		1.230000	<input type="checkbox"/>
3	B1-1	19	1151	100.00	3. mmcf	0.000100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00	3. mmcf	0.000300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00	3. mmcf	0.003100000	<input checked="" type="checkbox"/>		0.310000	<input type="checkbox"/>
6	B1-1	30	107028	100.00	3. mmcf	0.002700000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00	3. mmcf	0.006900000	<input checked="" type="checkbox"/>		0.690000	<input type="checkbox"/>
8	B1-1	44	110543	100.00	3. mmcf	0.004600000	<input checked="" type="checkbox"/>		0.460000	<input type="checkbox"/>
9	B1-1	68	108883	100.00	3. mmcf	0.026500000	<input checked="" type="checkbox"/>		2.650000	<input type="checkbox"/>
10	B1-1	70	1330207	100.00	3. mmcf	0.019700000	<input checked="" type="checkbox"/>		1.970000	<input type="checkbox"/>
11	B4-1	02	71432	100.00	4. 1000 gall...	0.018000000	<input type="checkbox"/>		1.800000	<input type="checkbox"/>
...	TAC-12						<input type="checkbox"/>			<input type="checkbox"/>

- 16 Methylene Chloride
- 18 Perchloroethylene
- 22 Chlorofluorocarbons (CFCs/Freons)
- 23 1,1,1-Trichloroethane (Methyl chloroform)
- 32 Ammonia
- 33 Carbonyl sulfide
- 34 Chlorine
- 45 Hydrazine
- 47 Hydrogen sulfide

Gross Emissions In

0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
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Since Freon is classified as “Only ODC” it has to be directly reported on Form TAC. For Reference choose “Other” (which results in a TAC-row Reference), then choose Freon toxic family. Note that if you choose “Other” Reference, your only options for “TAC Code” are materials that are classified as only TAC or ODC.

Form TAC – Reporting Toxics

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TAC - Toxic Air Contaminants & Ozone Depleters by Reference Numbers Export to Excel

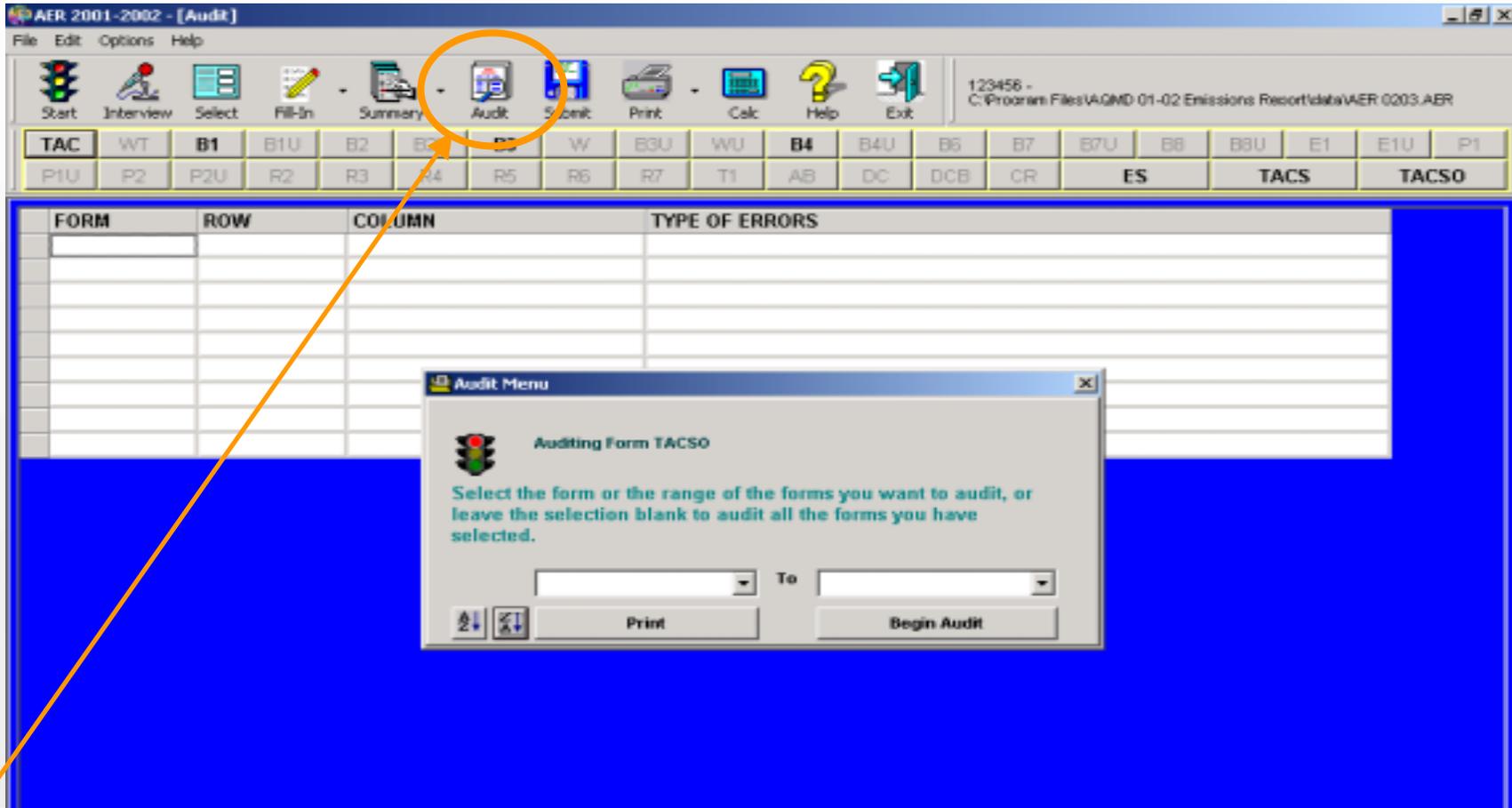
Reference (Form-Row)	TAC Code	CAS#	Annual Usage	Unit Code	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Annual Gross Emissions	Waste Credit (Yes/No)
1	B1-1	02	71432	100.00 3. mmcf	0.005800000	<input checked="" type="checkbox"/>		0.580000	<input type="checkbox"/>
2	B1-1	12	50000	100.00 3. mmcf	0.012300000	<input checked="" type="checkbox"/>		1.230000	<input type="checkbox"/>
3	B1-1	19	1151	100.00 3. mmcf	0.000100000	<input checked="" type="checkbox"/>		0.010000	<input type="checkbox"/>
4	B1-1	19	91203	100.00 3. mmcf	0.000300000	<input checked="" type="checkbox"/>		0.030000	<input type="checkbox"/>
5	B1-1	29	75070	100.00 3. mmcf	0.003100000	<input checked="" type="checkbox"/>		0.310000	<input type="checkbox"/>
6	B1-1	30	107028	100.00 3. mmcf	0.002700000	<input checked="" type="checkbox"/>		0.270000	<input type="checkbox"/>
7	B1-1	40	100414	100.00 3. mmcf	0.006900000	<input checked="" type="checkbox"/>		0.690000	<input type="checkbox"/>
8	B1-1	44	110543	100.00 3. mmcf	0.004600000	<input checked="" type="checkbox"/>		0.460000	<input type="checkbox"/>
9	B1-1	68	108883	100.00 3. mmcf	0.026500000	<input checked="" type="checkbox"/>		2.650000	<input type="checkbox"/>
10	B1-1	70	1000207	100.00 3. mmcf	0.019700000	<input checked="" type="checkbox"/>		1.970000	<input type="checkbox"/>
11	B4-1	02	71432	100.00 4. 1000 gall...	0.018000000	<input type="checkbox"/>		1.800000	<input type="checkbox"/>
12	TAC-12	22				<input type="checkbox"/>			<input type="checkbox"/>
13						<input type="checkbox"/>			<input type="checkbox"/>

1104 Fluorocarbons (chlorinated)
 75434 Dichlorofluoromethane (Freon 12)
 75694 Trichlorofluoromethane (Freon 11)
 76131 Chlorinated fluorocarbon (CFC-113)

TAC	01. Ash...	02. Benz...	03. Beryl...	04. 1,3-B...	05. Cad...	06. Carb...	07. Chlor...	08. 1,4-Di...	09. Ethyl...	10. Ethyl...	11. Ethyl...
Gross Emissions in pounds	0.000000	2.380000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Since the Freon family contains various compounds, you have to select your Freon specific CAS number. All available choices are Freon toxic family options. After completing the annual usage, units and emission factor, the emissions are automatically calculated and transferred to the appropriate summary form.

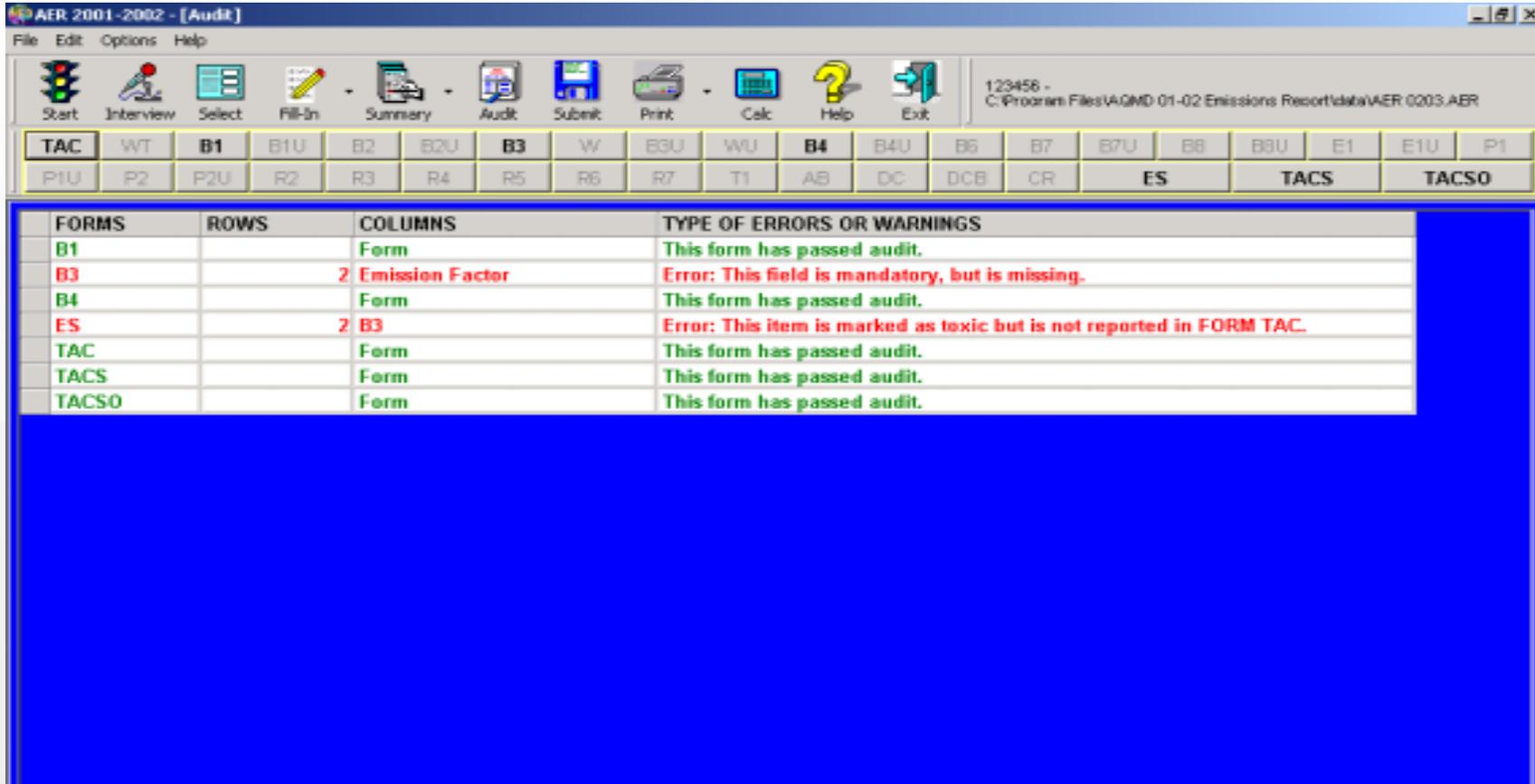
Audit – Check Errors



The screenshot shows the 'AER 2001-2002 - [Audit]' application window. The menu bar includes File, Edit, Options, and Help. The toolbar contains icons for Start, Interview, Select, Fill-In, Summary, Audit (circled in orange), Submit, Print, Calc, Help, and Exit. The main window displays a grid of form identifiers (TAC, WT, B1, B1U, B2, B3, W, B3U, WU, B4, B4U, B5, B7, B7U, B8, B8U, E1, E1U, P1, P1U, P2, P2U, R2, R3, R4, R5, R6, R7, T1, AB, DC, DCB, CR, ES, TACS, TACSO). An 'Audit Menu' dialog box is open, titled 'Auditing Form TACSO'. It contains a traffic light icon and the text: 'Select the form or the range of the forms you want to audit, or leave the selection blank to audit all the forms you have selected.' Below this text are two dropdown menus labeled 'To', a 'Print' button, and a 'Begin Audit' button.

The preparer can run AUDIT at any time during reporting to check for possible warnings or errors, such as missing or omitted information.

Audit Result



The screenshot shows the 'AER 2001-2002 - [Audit]' window. The menu bar includes File, Edit, Options, and Help. The toolbar contains icons for Start, Interview, Select, Fill-In, Summary, Audit, Submit, Print, Calc, Help, and Exit. The file path is C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER. Below the toolbar is a grid of form tabs including TAC, WT, B1, B1U, B2, B2U, B3, W, B3U, WU, B4, B4U, B5, B7, B7U, B8, B8U, E1, E1U, P1, P1U, P2, P2U, R2, R3, R4, R5, R6, R7, T1, AB, DC, DCB, CR, ES, TACS, and TACSO. The main area displays an audit results table:

FORMS	ROWS	COLUMNS	TYPE OF ERRORS OR WARNINGS
B1		Form	This form has passed audit.
B3	2	Emission Factor	Error: This field is mandatory, but is missing.
B4		Form	This form has passed audit.
ES	2	B3	Error: This item is marked as toxic but is not reported in FORM TAC.
TAC		Form	This form has passed audit.
TACS		Form	This form has passed audit.
TACSO		Form	This form has passed audit.


 Audit result shows all errors that need to be fixed in red color. The audit In this example has found two errors on Form B3: an Emission Factor is missing and row 2 on Form B3 marked as containing toxics but none was reported On Form TAC. By clicking on the error, the software will go back to the problematic area to allow the user to fix the error...

Form B3 - Fixing mistake found by Audit

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

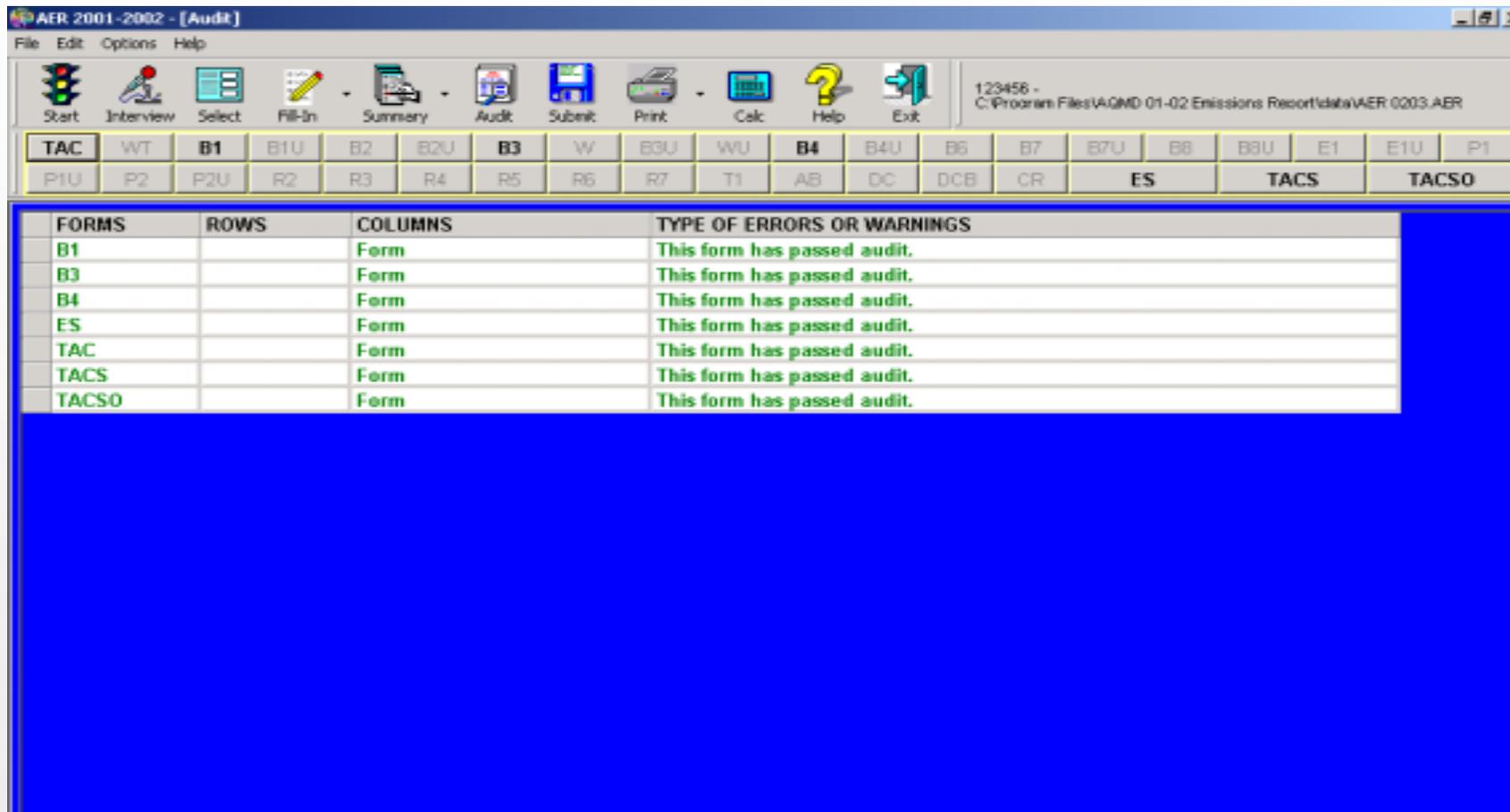
Material Codes

B3 - Permitted Annual Emissions from the Use of Organics

	Material Code	Activity Code	Material Description	Contains Organic TAC/ODC	Rule	Annual Usage	Units (lbs or gal)	Emission Factor	Use Default Emission Factor	Overall Control Efficiency	Organic Gases Emission	Specific Organics Emission
1	112	5. Met...	Enamel	<input type="checkbox"/>	1107	100.00	1. pou...	0.0500	<input type="checkbox"/>		65.00	
2	120	5. Met...	Primer	<input checked="" type="checkbox"/>	1107	10.00	2. gal...		<input type="checkbox"/>			
3				<input type="checkbox"/>					<input type="checkbox"/>			
4				<input type="checkbox"/>					<input type="checkbox"/>			
5				<input type="checkbox"/>					<input type="checkbox"/>			
6				<input type="checkbox"/>					<input type="checkbox"/>			
7				<input type="checkbox"/>					<input type="checkbox"/>			
8				<input type="checkbox"/>					<input type="checkbox"/>			
9				<input type="checkbox"/>					<input type="checkbox"/>			
10				<input type="checkbox"/>					<input type="checkbox"/>			

Emission Factor is missing. After completing the emission factor, we must add benzene emissions from our Primer on Form TAC.

Successful Audit

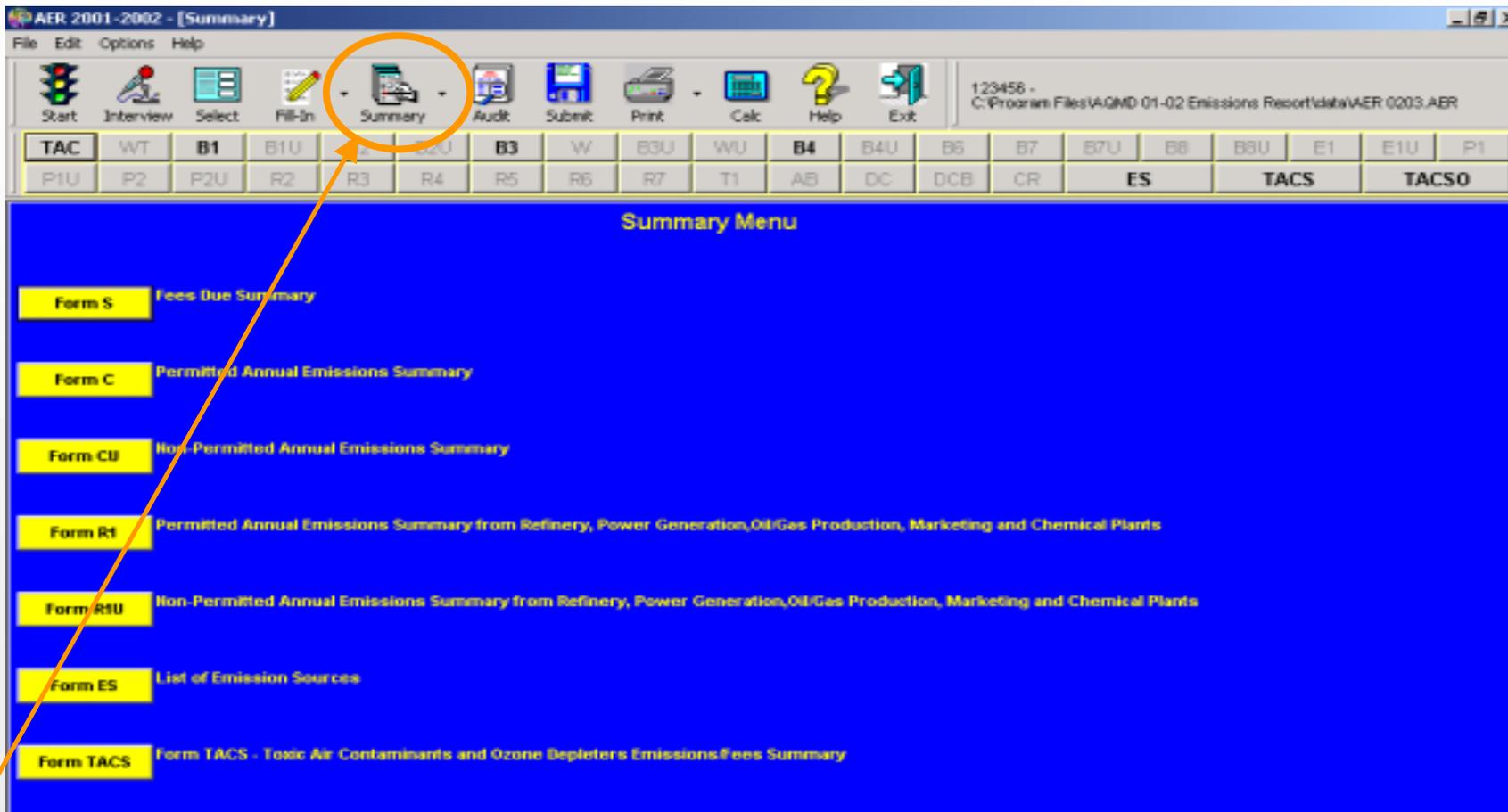


The screenshot shows the 'AER 2001-2002 - [Audit]' window. The menu bar includes File, Edit, Options, and Help. The toolbar contains icons for Start, Interview, Select, Fill-In, Summary, Audit, Submit, Print, Calc, Help, and Exit. The status bar shows the file path: C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER. Below the toolbar is a grid of form identifiers: TAC, WT, B1, B1U, B2, B2U, B3, W, B3U, WU, B4, B4U, B5, B7, B7U, B8, B8U, E1, E1U, P1, P1U, P2, P2U, R2, R3, R4, R5, R6, R7, T1, AB, DC, DCB, CR, ES, TACS, TACSO. The main area displays a table with the following data:

FORMS	ROWS	COLUMNS	TYPE OF ERRORS OR WARNINGS
B1		Form	This form has passed audit.
B3		Form	This form has passed audit.
B4		Form	This form has passed audit.
ES		Form	This form has passed audit.
TAC		Form	This form has passed audit.
TACS		Form	This form has passed audit.
TACSO		Form	This form has passed audit.

Once we fix all errors, the Audit shows that all Forms have passed. Please note that the Audit only recognizes the most common mistakes. You must review all of the completed forms and all summary forms prior to submitting the report.

Summary Forms



The screenshot shows the 'AER 2001-2002 - [Summary]' window. The menu bar includes File, Edit, Options, and Help. The toolbar contains icons for Start, Interview, Select, Fill-In, Summary (circled in orange), Audit, Submit, Print, Calc, Help, and Exit. The status bar shows the file path: C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER. Below the toolbar is a grid of buttons labeled with codes like TAC, WT, B1, B1U, B2, B2U, B3, W, B3U, WU, B4, B4U, B5, B7, B7U, B8, B8U, E1, E1U, P1, P1U, P2, P2U, R2, R3, R4, R5, R6, R7, T1, AB, DC, DCB, CR, ES, TACS, and TACSO. The main area is a blue 'Summary Menu' with several yellow buttons: Form S (Fees Due Summary), Form C (Permitted Annual Emissions Summary), Form CU (Non-Permitted Annual Emissions Summary), Form R1 (Permitted Annual Emissions Summary from Refinery, Power Generation, Oil/Gas Production, Marketing and Chemical Plants), Form RSU (Non-Permitted Annual Emissions Summary from Refinery, Power Generation, Oil/Gas Production, Marketing and Chemical Plants), Form ES (List of Emission Sources), and Form TACS (Form TACS - Toxic Air Contaminants and Ozone Depleters Emissions Fees Summary). An orange arrow points from the 'Summary' icon in the toolbar to the 'Form TACS' button.

→ To check the Summaries, open the Summary Menu and click on the yellow button for the Summary Form you want to see. Summary forms are created based on information reported on the detailed forms.

Summary Forms – Form C

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

C - Annual Emissions Summary - Permitted

	Organic Gases (tons)	Methane (tons)	Specific Organics (tons)	Nitrogen Oxides (tons)	Sulfur Oxides (tons)	Carbon Monoxide (tons)	Particulate Matter (tons)
1 Form B1, DCB or AB	0.28	0.12		5.00	0.03	4.20	0.38
2 Form B2							
3 B3 - W	0.03		0.00				
4 Form B4	0.09		0.00	0.00	0.00	0.00	0.00
5 Form E1							
6 Form R1							
7 Total Permitted Emissions	0.40	0.12	0.00	5.00	0.03	4.20	0.38

03/13/2003

Form C shows the total permitted emissions in tons from each of the listed forms (e.g., B1, B2, etc.).

Summary Forms – Form TACS

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TACS - Toxic Air Contaminants and Ozone Depleters Emissions / Fee Summary

TAC Code	Toxic Air Contaminants (TAC)/Ozone Depleters (ODC)	References	Annual Gross Emissions (lbs)	Recycling Credit (lbs)	Annual Net Emissions (lbs)	Fee (\$/lb)	Fee Due
1 01	Asbestos					\$3.62	
2 02	Benzene		2.580000		3	\$1.20	\$3.60
3 03	Beryllium					\$3.62	
4 04	1,3-Butadiene					\$3.62	
5 05	Cadmium					\$3.62	
6 06	Carbon Tetrachloride					\$1.20	
7 07	Chlorinated Dioxins & Dibenzof...					\$6.02	
8 08	1,4-Dioxane					\$0.25	
9 09	Ethylene Dibromide					\$1.20	
10 10	Ethylene Dichloride					\$1.20	
11 11	Ethylene Oxide					\$1.20	
12 12	Formaldehyde		1.230000		1	\$0.00	\$0.00
13 13	Hexavalent Chromium					\$4.82	
14 14	Inorganic Arsenic					\$3.62	
15 15	Lead					\$1.20	
16 16	Methylene Chloride					\$0.06	
17 17	Nickel					\$2.40	
18 18	Perchloroethylene					\$0.25	

Form TACS summarizes the emissions of Rule 301(e) TACs/ODCs (TAC Code 1 - 23). This form is automatically generated based on data reported on Form TAC. If you click on the reference (shown in yellow)...

Summary Forms – Form TACS - TAC References

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TACS - Toxic Air Contaminants and Ozone Depleters Emissions / Fee Summary

TAC Code	Toxic Air Contaminants (TAC)/Ozone Depleters (ODC)	References	Annual Gross Emissions (lbs)	Recycling Credit (lbs)	Annual Net Emissions (lbs)	Fee (\$/lb)	Fee Due
1 01	Asbestos					\$3.62	
2 02	Benzene		2.580000		3	\$1.20	\$3.60
3 03	Beryllium					\$3.62	
4 04	1,3-Butadiene					\$3.62	
5 05	Cadmium					\$3.62	
6 06	Carbon Tetrachloride					\$1.20	
7 07	Chlorinated Dioxins & Dibenzof...					\$6.02	
8 08	1,4-Dioxane					\$0.25	
9 09	Ethylene Dibromide					\$1.20	
10 10	Ethylene Dichloride					\$1.20	
11 11	Ethylene Oxide					\$1.20	
12 12	Formaldehyde				1	\$0.00	\$0.00
13 13	Hexavalent Chromium					\$4.82	
14 14	Inorganic Arsenic					\$3.62	
15 15	Lead					\$1.20	
16 16	Methylene Chloride					\$0.06	
17 17	Nickel					\$2.40	
18 18	Perchloroethylene					\$0.25	
19 19	Polynuclear Aromatic Hydrocar...				0	\$0.00	\$0.00
20 20	Trichloroethylene					\$0.11	
						Fee Due	8.44

TAC References

Reference	Emissions
B1-1	0.580000
B3-2	0.200000
B4-1	1.800000

CLOSE

... a pop up window will display amounts of emissions by source.

Summary Forms – Form TACS-O

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

TACSO - Other Toxic Air Contaminants Emissions Summary

	TAC Code	Toxic Air Contaminants (TAC)	References	Annual Gross Emissions (lbs)	Recycling Credit (lbs)	Annual Net Emissions (lbs)
1	24	1,1,2,2-Tetrachloroethane				
2	25	1,1,2-Trichloroethane (Vinyl tric...				
3	26	1,2,4-Trimethylbenzene				
4	27	1,2-Dicloropropane				
5	28	1,3-Dicloropropene				
6	29	Acetaldehyde		0.310000		0.310000
7	30	Acrolein		0.270000		0.270000
8	31	Acrylonitrile				
9	32	Ammonia				
10	33	Carbonyl sulfide				
11	34	Chlorine				
12	35	Chloroform				
13	36	Copper compounds				
14	37	Crystalline silica				
15	38	Di (2-ethylhexyl) phthalate (DEHP)				
16	39	Dimethyl phthalate				
17	40	Ethyl benzene		0.690000		0.690000
18	41	Glycol ethers and acetates				
19	42	Hexachlorobenzene				
20	43	Hexachlorocyclohexanes				

Form TACS-O summarizes the emissions for AB2588 TACs/ODCs (TAC Codes 24-71).

Summary Forms – Form S

AER 2001-2002 - [123456 -]

File Edit Options Help

Start Interview Select Fill-In Summary Audit Submit Print Calc Help Exit

123456 - C:\Program Files\AQMD 01-02 Emissions Report\data\AER 0203.AER

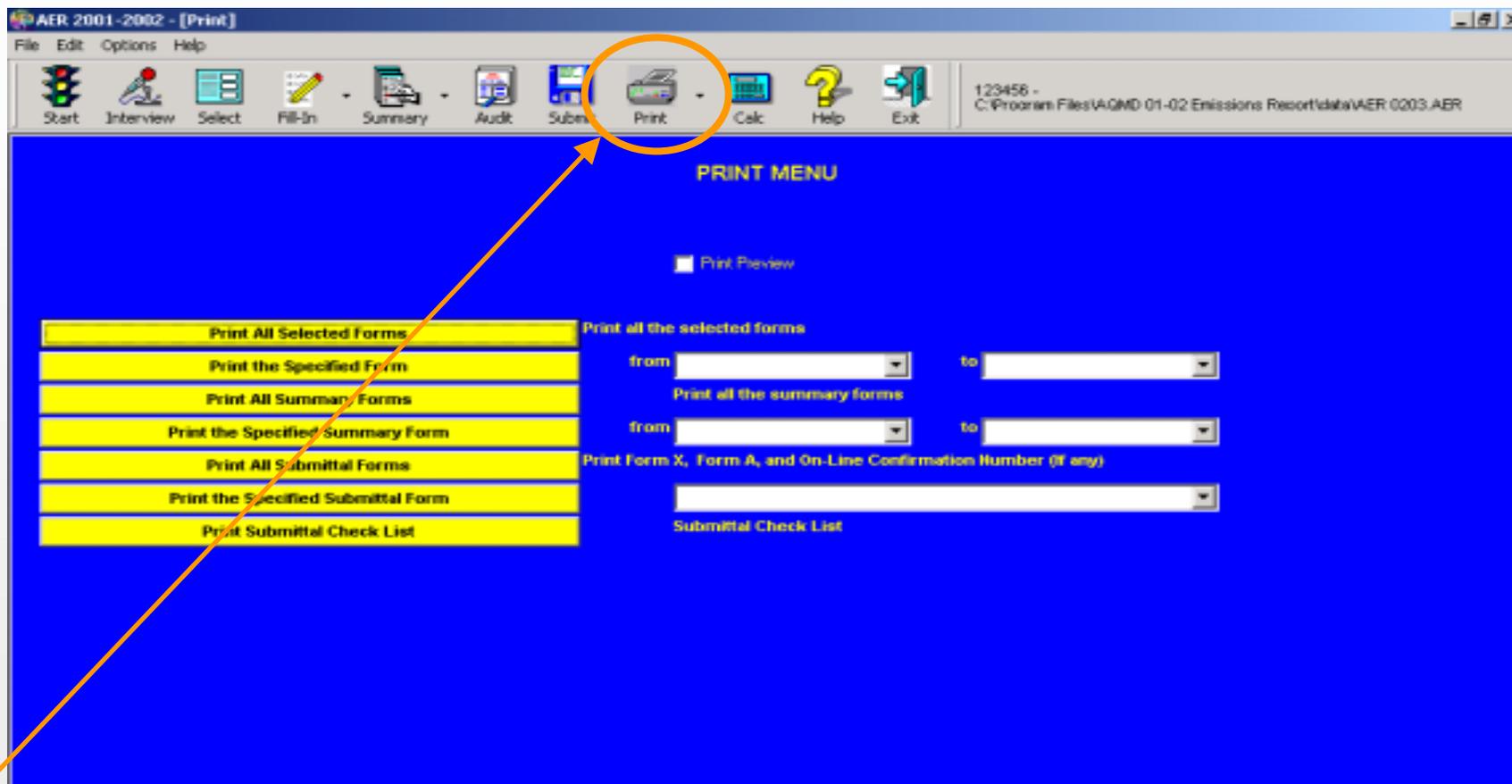
TAC	WT	B1	B1U	B2	B2U	B3	W	B3U	WU	B4	B4U	B5	B7	B7U	B8	B8U	E1	E1U	P1
P1U	P2	P2U	R2	R3	R4	R5	R6	R7	T1	AB	DC	DCB	CR	ES	TACS	TACSO			

S - Fees Due Summary Late Fee Schedule

	Submittal Date: No later than August 30, 2002	Total Permitted Emissions from Form C, Line 7 (tons)	Total Non-Permitted Emissions subject to fees from Form CU, Line 8 (tons)	Total Emissions from Form CR (tons)	Total Emissions	Emission Fees Due
1	ORGANIC GASES	0.40	0.00		0	\$0.00
2	SPECIFIC ORGANICS	0.00			0	\$0.00
3	NITROGEN OXIDES	5.00			5	\$404.22
4	SULFUR OXIDES	0.03			0	\$0.00
5	CARBON MONOXIDE	4.20			0	\$0.00
6	PARTICULATE MATTER	0.38			0	\$0.00
Enter any installment paid in Line 4 and 5 and calculate the late fee, if any.						
1	TOTAL EMISSION FEES FOR ALL CRITERIA POLLUTANTS					\$404.22
2	TOXIC AIR CONTAMINANTS/OZONE DEPLETER FEES					\$8.44
3	TOTAL FEES DUE					\$412.66
4	Installments Paid For FY 2001-2002 (if any) -- All Criteria Pollutants					\$0.00
5	Installments Paid For FY 2001-2002 (if any) -- Toxic Air Contaminants/Ozone Depleters					\$0.00
6	Balance Due (Line 3 - Line 4 - Line 5)					\$412.66
7	Late Fee (if any)					\$0.00
8	Amount Enclosed (please write Facility ID#(s) and 2001-2002 AER on the check)					\$412.66

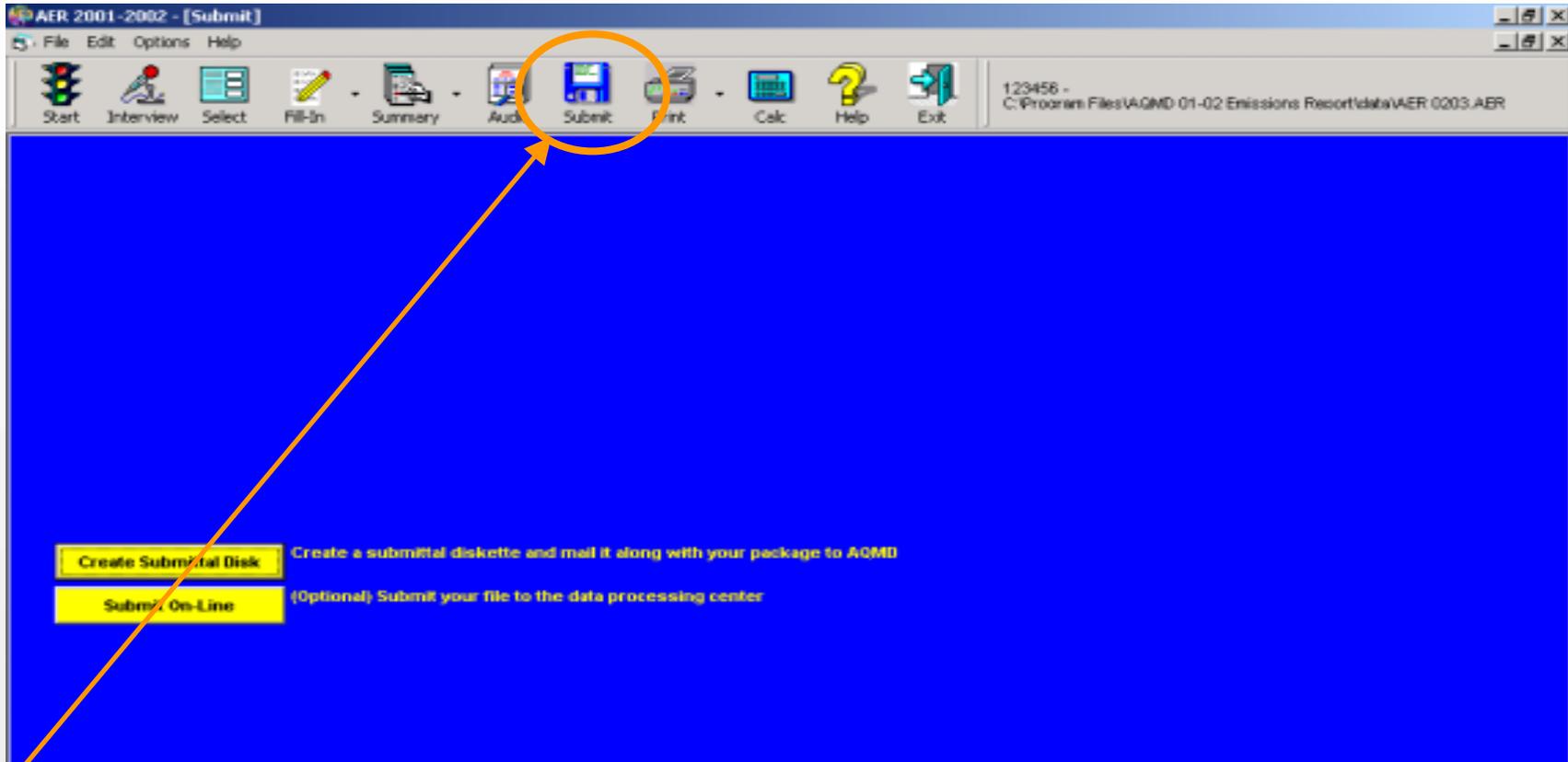
Form S is the Fee Due Summary

Print Forms



To print any Form click on "Print" and select an option from the menu list. A "Submittal Checklist" listing all supporting documentation to be enclosed to the report, is available for printing.

Submit report



→ To submit your report click on “Submit”. This section allows you to either create a submittal disk or submit your report on-line. An electronic copy of the data and submittal file, as well as a hard copy of the report including the supporting documentation should be kept for records. Please do not forget that the submittal forms, supporting documentation and check if applicable have to be mailed to District.

Contact Information

For Consolidated AER Program :

Annual Emission Report

AB2588

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SCAQMD

Or

Tom Chico
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