

Step by Step Procedure for Using the Rule 1401 Evaluation Program

NOTE: Due to the extensive use of macros and programming in this spreadsheet, you will need to lower your Microsoft Excel computer security setting to at least "Medium" prior to opening this file in order to use the Rule 1401 Evaluation Calculator. Setting your security to "Medium" allows you the ability to decide whether to enable the macros in this calculator or not. If you choose to not enable the macros, the calculator will not work!

To do this, open Excel and click on Tools / Macro / Security and select either "Medium" or "Low". The selection window provides an explanation of what the selections mean. When this security is set you can then open the Rule 1401 Evaluation Calculator.

Instructions:

1. From the INTRO Worksheet, click on Emissions button.
2. In the Emissions worksheet, all cells highlighted in yellow are for data-entry.
3. Enter the Deemed Complete Date
4. Enter the Operating Schedule
5. For the Emission Units, from the drop list, pick either the lbs/hour or PPMv.
6. Enter the combustion efficiency, 0.0 to 1.0 for non-combustion sources. This will calculate the R2 values.
7. The T-BACT question is a Yes or No drop-down list (when you click on the field, a drop-down arrow appears. Click on the arrow for the selection.
8. Similarly pick P for point source or V for Volume source.
9. Enter the stack or building height and building area for volume source.
10. Enter the nearest commercial and residential receptor distances
11. The Meteorology station is a drop-down list also. Pick the appropriate station.
12. **Source type - Drop down list. It is critical that for Non-Combustion Source, pick O -other. The other choices are for LeanBurn ICE, RichBurn ICE, and boiler.**
13. **Screening Mode Pick Yes only for Tier 3 analysis (If using SCREEN or TSCREEN program).**
14. Scroll down to the Emissions area.
15. Select the code for the toxic air contaminant by either entering the code, e.g. C1, G4, etc or click on the Go to Chemical Code Table to identify the code to enter. The toxic air contaminants are arranged in alphabetic order.
16. Enter the emissions in lb/hour or in PPMv in the lb/hr or PPMv column (the pollutant name may cover the cell, but you can still enter the data).

The spreadsheet program will calculate Tier I and Tier II values and will provide the results. You can go back to the INTRO worksheet by clicking on the INTRO button on the upper left hand corner. You can then go to the Tier I or Tier II worksheet from here or by directly clicking on the bottom worksheet.

Result:

The program will calculate the MICR, HIA, HIC and the cancer burden when the cancer risk is greater than 1 in a million.

COMBUSTION SOURCE -Tier II

There are 3 choices for combustion sources: RichBurn ICE, LeanBurn ICE, and boiler and these are to be used only if they are fired on natural gas.

The differences when using these worksheets are:

- a. It obtains the X/Q values from tables developed by the Gas Co (approved by AQMD) based on engine size for ICEs' and Btu rating for boilers.
 - b. The X/Q values are based on default stack height and flow (conservative).
 - c. The emissions are calculated based on default emission factors (AP-42 and Ventura County AB 2588 database)
1. Select the desired combustion source from the Source type:
 - L - LeanBurn ICE
 - R - RichBurn ICE
 - B - Boiler
 2. For the Boiler, enter the Btu and the operating schedule, and the efficiency if available.
 3. For the ICEs, enter the HP and the operating schedule. You have the choice of selecting separate efficiencies for VOC and PAH control.
 4. Go to the Emission tab and enter the same operating schedule and make sure that **Point Source, P** is selected.
 5. Make sure that the Screening Mode - No. Pick Yes only for Tier 3 analysis (If using SCREEN or TSCREEN program).

SCREENING - Tier III

This is also a new worksheet. You have to run SCREEN3 or TSCREEN program independently. Enter the peak 1 hour concentrations for the two receptors. The program will calculate the annualized concentration (peak 1-hour x 0.08).

In the **Screening Model** Worksheet:

1. Enter the emission rate in pounds/hour (lb/hr).
2. Enter the operating schedule.
3. Enter the peak 1-hour concentration values for the two receptors.
4. In Table B (on the right hand side) you will have to enter two additional distances and concentration values (near and far based from the peak 1-hour value) obtained from SCREEN output. This is necessary for the program to interpolate and calculate the distance for the cancer burden if the risk is greater than 1 in a million.
5. In the **Emissions** table, select the pollutant and enter the emission rates.
6. Change the **Screening mode to Yes**.
7. The heading will change now to read Tier 3 Screening Risk Assessment.