

Form TAC – Toxic Air Contaminants/Ozone Depleters Emissions by Reference Number

Note 1: Please provide supporting documentation to substantiate all emission calculations for any reported TAC/ODC emissions (other than those using default emission factors associated with internal and external combustion).

Note 2: Make sure to use additional pages of this form to report all toxic air contaminants and ozone depleters emissions associated with all reference form/row numbers.

Note 3: TACs/ODCs which are considered VOC or PM have to be reported as TAC/ODC on this form and as VOC or PM on applicable forms. Organic solvents which are exclusively TACs/ODCs must only be reported on this form.

Facility Name and ID No.: Please fill in your facility name and facility ID number in the designated spaces, exactly as indicated on Form X (Signature Sheet) in your package.

Reference Form and Row: In column (a), enter the reference form and row numbers associated with all emission sources (listed on Form ES) which contain any toxic air contaminants or ozone depleters.

TAC Code: For each reference form/row identifying an emission source, enter the corresponding TAC code(s) from column (a) of Form TACS.

CAS No.: Enter the Chemical Abstract Service (CAS) number for each TAC/ODC from Appendix J of the General Instruction Book

Usage: For each toxic air contaminant (TAC) and ozone depleting compound (ODC) listed in each row enter in column (d) the usage of the material containing TAC/ODC for this six-month transitional reporting period (07/01/07-12/31/07). **Please report usage, not emissions.**

To calculate asbestos emissions from demolition or renovation activities, enter the total materials removed (tons) in column (d), which should be the same as the entry for throughput on Form B4 to report PM emissions.

Unit Code: In column (e), identify the unit code for the usage listed in column (d). Please refer to Table 2 of Appendix F of the General Instruction Book for the unit code.

Emission Factor: In column (f), enter the appropriate TAC/ODC emission factor for each emission source (up to 9 decimal points). Default toxics emission factors for internal and external combustion are listed in Appendix A of the General Instruction Book. For all other emission factors used to calculate TACs/ODCs, provide supporting documentation.

If you reported any liquid organic materials on Form B3 and B3U, which contained TAC/ODC, you can calculate the TAC/ODC emission factor based on the weight percent of TAC/ODC compound reported on the MSDS. Using the weight percentage (W%) of TAC/ODC compounds and density or specific gravity (from the MSDS) of the material containing TAC/ODC, the emission factor can be calculated as:

$$\text{TAC/ODC (lbs/gal)} = \frac{W\%}{100} \times \text{Density of material containing TAC/ODC (lbs/gal)}$$

where: Density = Specific gravity X 8.34 lbs/gal and W% = Total weight percent of TAC/ODC compounds

If you are reporting 100% TAC/ODC material, densities for some typical TAC/ODC materials are listed in Appendix I of the General Instruction Book. For other TAC/ODC, refer to your MSDS for density or specific gravity and enclose a copy of MSDS. For plating default emission factors you may refer to Appendix H of the General Instruction Book. The controlled default asbestos emission factor from demolition or renovation activities is 0.0015 lbs of Asbestos/tons of building material removed (Appendix H of the General Instruction Book). For detail instruction on calculating emissions for TAC materials that are PM used in spray coating operation (e.g., Hex. chromium and Lead) you may contact the Help Hotline at (714) 596-7456.

Please use consistent units. For example, **if the material usage is in gallons, the emission factor should be in lbs/gal; if the material usage is in pounds, the emission factor should be in lb/lb; if usage is in mmscf, the emission factor should be in lbs/mmscf; if material use is in 1000 gallons, emission factor should be in lbs/1000 gallons; if material use was in 1000 Amp-hr, emission factor should be in lbs/ 1000 Amp-hr, etc..**

Overall Control Efficiency: : If your facility does not have control equipment for processes where TAC is used, enter "0.00" in column (g). If your company has installed control equipment to reduce TAC emissions (for example, afterburner, carbon adsorber, etc.) determine the Overall Control Efficiency and enter it in column (g). Attach the results page from the most recent source test to substantiate the Overall Control Efficiency. The Overall Control Efficiency represents the emissions portion that is captured and destroyed by control equipment. To calculate the Overall Control Efficiency use the formula:

$$\text{Overall Control Efficiency} = \text{capture efficiency} \times \text{destruction efficiency}$$

Use decimal fractions to report efficiencies. If your Overall Control Efficiency is in percent, convert percent to decimal fraction (e.g. 0.85 for 85%, 0.925 for 92.5%, 0.9997 for 99.97%). For each TAC and ODC that is controlled by two individual control devices (such as an afterburner and a carbon adsorber), contact the Hotline for help on calculating the overall destruction efficiency.

If you used the default emission factor to calculate asbestos emissions from demolition, renovation activities, etc., enter "0.00" since default emission factor is controlled (Overall Control Efficiency is already incorporated).

Gross Emissions: Use the following formula to calculate the gross TAC/ODC emissions from each material:

$$(\text{Usage}) \times (\text{Emission Factor}) \times (1 - \text{Control Efficiency}) \quad \text{OR} \quad (\text{column d}) \times (\text{column f}) \times [1 - (\text{column g})]$$

Please use consistent units, you must make sure that calculated emissions are in pounds. You can use up to 6 decimal places for calculated emissions.

Waste Credit (Y/N): Enter Y (for Yes) and N (for No) to indicate whether or not you are claiming recycling waste credit for each specific row of TAC or ODC listed on this form.