



# HAZARDOUS AIR CONTAMINANT

## EMISSION INVENTORY INSTRUCTION SHEET

# 2009

This instruction sheet pertains to the calculation of Hazardous Air Contaminants, herein called HAC's. There are three different FORMs included in this packet to aid you in calculating emissions of HAC's from process-related operations. In general, FORM A is the simplest and FORMs B and C the most complex to complete. Included on each FORM is an example of the type of data and format necessary to complete the FORM properly. FORMs A, B, and C are not intended for reporting or calculating HAC emissions from fuel combustion. Fees assessed for HAC emissions from fuel combustion are based on fuel usage data you submit as part of your "Criteria Pollutant" emission inventory (also included in this mailing).

*If available, please include the work email address of the person completing the forms.*

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### FORM A:

This FORM requires the least amount of effort for a facility to complete and asks for responses to  "***Itemized Instructions***" 1,3,4, & 5 (see page 2 of this instruction sheet). ***This FORM does not impart credit for any control devices that may be in use, nor does it necessarily account for HACs that may be retained in the industrial process or disposed of as solid or liquid waste, rather than being emitted to the air.*** While being the simplest FORM to complete, it does rely on many conservative assumptions made by the Air Division about your HAC emissions. We encourage you to submit FORM B if at all possible to ensure that your emissions are neither underestimated nor overestimated.  ***Please complete "Itemized Instruction #3" to assist us in quantifying your emissions more accurately. Include Material Safety Data Sheets (MSDS) for each emission source.***

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### FORM B:

This FORM is intended for use by industrial facilities that have control devices, sufficient knowledge of each production point, and the applicable product usage at each point. A facility also may use FORM B if it has reason to believe that a specific MSDS formulation is largely retained in the industrial process (i.e., not emitted, or only a fraction of the total usage is emitted to the air), whether or not a control device is present (Please submit supporting evidence / calculations if FORM B is used for this purpose). FORM B requires the applicant to answer  items 1 through 9 of the attached "***Itemized Instruction***" sheet. Any product that is not retained in the industrial process, or is used in a process that has no relevant control devices, should be submitted separately on FORM A (which assumes that all solvents are emitted to the air). An example shows the required format.  ***Please include MSDS(s) for each emission source.***

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### FORM C:

This FORM is designed for those industries that have done extensive emission calculations and / or have performed stack testing for the regulated HACs. This FORM does not have any specific instructions, but the example shows the required format. If this information is contained in a similar format or clearly explained in a spreadsheet, you may submit it in place of this FORM. Be sure to indicate the calculation method used to generate your FORM C data (method A, B, C, D, E or F).  ***Please indicate the Stack / Point Source / Segment at your facility where each HAC was emitted (use same Stack designation as for Criteria Pollutant VOC emissions), or provide a detailed description of the process(es) where each HAC listed on FORM C is being emitted (see "Itemized Instruction" 3).***

# ITEMIZED INSTRUCTIONS

- 1) **FACILITY NAME & Email:** Enter facility name (& Email address) as listed in the current registration.
  
- 2) **STACK / POINT / PRODUCT:** (Hierarchical specification of process related emissions release points). Submit product usage for a Stack / Point / Product combination that corresponds with the Stack Number and Source ID description for a given criteria pollutant registration form. If the current registration does not show adequate Stack / Point / Product detail for product usage, please include a site specific stack inventory diagram showing sources, control apparatus and stacks for clarity. Photocopy the originals as needed. For example, if the point is a spray booth, treat each different MSDS formulation as a product. For each product include the corresponding MSDS sheet.
  
- 3) **PROCESS NAME AND DESCRIPTION:** List process which utilizes Hazardous Air Contaminants (HAC's). In many cases, this description will be similar to the Source ID description on the registration forms. Include type of process equipment, such as "1-roll coater" or "3-vapor degreasers." Be specific: Indicate if air atomized or airless spray, dip coater, roll coater, electrostatic spray, etc.
  
- 4) **MANUFACTURER, TRADE NAME, & ID # of PRODUCT CONTAINING FORMULATION:** Be sure to use a name which clearly identifies the formulation. It should include the Manufacturer's Name and Product ID given on the MSDS sheet. Include a copy of each MSDS used at the facility for toxic inventory process calculations.
  
- 5) **NET ANNUAL USAGE:** To the nearest gallon (or pound), give the annual usage of the HAC-containing formulation for the current reporting period (Jan. 1 to Dec. 31).

**NOTE:** *Net Annual Usage = [Beginning of Year Formulation Inventory] + [New Formulation Purchases] - [End of Year Formulation Inventory] - [Unused Formulation Disposed or Transferred off-site (verifiable by shipment records, in gallons)]*

- 6) **TRANSFER EFFICIENCY:** Transfer efficiency for the solid components of coating operations.

## 7-8) EMISSION CONTROL VOLATILE / PARTICULATE:

**A. TYPE:** "End of process" technology which prevents the emission of HAC's to the ambient air. Examples: Carbon adsorption, incinerators (catalytic / thermal), refrigerated condensers, etc.

**B. OVERALL EFFICIENCY (%):** The overall control efficiency = the capture efficiency of the exhaust system (percent of the emitted HAC which is diverted to the control device), multiplied by the efficiency of the control device itself (percent destruction or removal from the exhaust).

**Example:** If a local hood diverts or captures 90% of the emitted HAC, and the afterburner control device destroys 95% of the captured HAC, the total control efficiency would be:  
 $(0.90) \times (0.95) = 0.855$  or 85.5%

- 9) **COMMENTS:** Please include any comments that may assist us in interpreting your FORM B inventory.