

EMISSION SOURCE (Manufacturing of Chemicals/Coating/Inks)

Instructions for Form B5

Form B5 should be completed for each emission source used in the manufacture of chemicals (e.g., HCl, SO₂, solvent containing coatings, inks, or other solvent containing products). Make as many copies of the form as necessary. Attach all calculations and assumptions used in determining the numbers entered on this form.

Note: An **EMISSION SOURCE** is defined as any stationary article, machine, process equipment, or other contrivance, or combination thereof, from which air pollutants are emitted, either directly or indirectly. Groups of equipment that are interconnected as a single continuous process can be labeled as a single emission source (e.g., a chain of reaction vessels).

PRIMARY OR ALTERNATIVE OPERATING SCENARIO – A Section B5 form must be submitted for each scenario that the emission source may operate under. In addition to operating under a primary operating scenario, an emission source may operate under one or more alternative operating scenarios. Examples of operating scenarios are as follows:

1. For boilers that combust different types of fuels, the combustion of each fuel is classified as an operating scenario. Many boilers combust both natural gas and No. 6 fuel oil. Each of these fuels constitutes a separate operating scenario.
2. For reaction vessels that produce different products from different formulations, production of each product is classified as an operating scenario.
3. For a storage silo that stores different materials, the storage of each material is classified as an operating scenario.
4. For control devices that are used to control emissions from different emission streams at separate times, each emission stream that is controlled is classified as an operating scenario.
5. A spray booth may coat wood furniture and be subject to MCAPCO Regulation 2.0958, but it may also coat metal furniture and be subject to NSPS Subpart EE.

Note: Some emission sources that emit volatile organic compounds (VOCs) are considered unique in that only the product/solvent formulations that produce the worst-case VOC emissions need to be included in the permit application even though different solvents will be utilized at the emission source.

PRIMARY OPERATING SCENARIO - Select this scenario if information is being entered for the conditions under which the emission source operates the majority of the time. A separate B5 form must be completed for each scenario.

ALTERNATIVE OPERATING SCENARIO - Select this scenario if information is being entered for any secondary conditions under which the emission source operates.

AOS # (Alternative Operating Scenario ID No.) – Include a unique ID No. for each alternative operating scenario. A separate B7 form must be completed for each scenario.

EMISSION SOURCE DESCRIPTION – Describe each emission source for which application is made. Emission source is defined as any stationary article, machine, process equipment, or other contrivance, or combination thereof, from which air pollutants emanate or are emitted, either directly or indirectly. Groups of equipment that are interconnected as a single continuous process can be labeled a single emission source (e.g., a chain of reaction vessels). However, this description should specify the number of individual pieces of equipment that make up this emission source.

EMISSION SOURCE DESCRIPTION - Describe the emission source for which this form is completed. This description should specify the number of individual pieces of equipment that make up this emission source.

EMISSION SOURCE ID No. - Enter the emission source ID No. for the emission source being described on this form. Fugitive emissions must also be assigned an ID No. (e.g., valves, pumps, compressors = ID No. F195).

Note: The choice of ID Nos. is at the discretion of the applicant. It is recommended that each emission source ID No. start with ES____, control device ID No. CD____ and emission point ID No. EP____.

CONTROL DEVICE ID No. - Enter the ID No. for the control device associated with this emission source. For multiple control devices on the same emission source, list in series according to the exhaust air stream direction (i.e., from the emission source to the final emission point). For different emission sources with a common control device, use the same control device ID No. for each emission source.

MANUFACTURER - Enter the manufacturer of the emission source.

MODEL No. - Enter the model number of the emission source as defined by the manufacturer. If the source was custom designed, a PE seal may be required pursuant to MCAPCO 1.5233.

RELEASE POINT TYPE – Enter or select one of the following stack/emission point release orientation: downward facing vent, fugitive, goose neck, horizontal, vertical or vertical with rain cap.

HEIGHT – Enter the height of the stack in units of feet.

INSIDE DIAMETER – Enter the inside diameter of the stack in units of feet.

EMISSION POINT (Stack) ID No. - Enter the ID No. for the emission point (e.g., stack, vent, etc.) associated with this emission source. Emission sources with a common emission point will have the same emission point ID No. For fugitive emissions enter "FUGITIVE".

FENCE LINE DISTANCE – Enter the distance to the fence line of the property

X-Coordinate – Enter the latitude coordinates

Y-Coordinate – Enter the longitude coordinates

EXIT GAS TEMPERATURE – Enter the temperature of the gas exiting the stack in degrees Fahrenheit (°F).

EXIT GAS FLOW RATE – Enter the flow rate of the gas exiting the stack in cubic feet per min (cfm).

EXIT GAS VELOCITY – Enter the velocity of the gas exiting the stack in feet per seconds (ft/s).

SAMPLING PORTS, COMPLIANT WITH EPA METHOD 1 – Answer Yes or No. Additional information about EPA Method 1 can be found at the following website <http://www.epa.gov/ttn/emc/>

DESCRIBE ALL POSSIBLE PROCESSES, MIXTURES, and/or REACTIONS (Attach Flow Diagram) – Specify all of the processes, mixtures, and/or reactions, as well as include a flow diagram.

EQUIPMENT LISTING

NO. – Enter the number of sources identical to that as described in the “Equipment Listing” description.

DESCRIPTION – List equipment for which a quantity of throughput can be measured. They must be similar in function and identical in capacity to list together on the same line (e.g., 100 gallon mixers, 55 gallon portable mixers, etc.).

MAXIMUM VOC WEIGHT (LB/GAL) – Enter the permitted maximum lb/gal by weight of Volatile Organic Compounds (VOC) in the product you are producing that you propose for this emission source. Keep in mind that the operation may be limited by permit condition to this amount and recordkeeping and reporting requirements may be required.

EVAPORATION RATE (%THROUGHPUT) – Enter the evaporation rate as a percent of the total product throughput.

PRODUCT THROUGHPUT (GALLONS)

MAXIMUM CAPACITY

- **HOURLY** – List the maximum hourly throughput in gallons that you propose to process in this emission source. Keep in mind that the operation may be limited by permit condition to this amount and recordkeeping and reporting requirements may be required.
- **ANNUAL** – List the maximum annual throughput in gallons that you propose to process in this emission source. Keep in mind that the operation may be limited by permit condition to this amount and recordkeeping and reporting requirements may be required.

ANNUAL CAPACITY

- **HOURLY** – List the actual hourly throughput in gallons that is typically processed through this emission source. This would be the total gallons/hour from all of the equipment types listed.
 - **ANNUAL** – List the actual annual throughput in gallons that is typically processed through this emission source. This would be the total gallons/year from all of the equipment types listed.
-

PRODUCT DESCRIPTION – Specify the product description and attach the material safety data sheet(s) (MSDS).

METHOD FOR DETERMINING EVAPORATION RATE – Enter your method for determining the above “Evaporation Rate” (i.e., material balance, test results, literature search, Federal/State/Local Factor, etc.).

TOTAL MAXIMUM FIRING RATE (million Btu/hour) – Enter the total maximum firing rate for all burners based on the heat input.

HEATING METHOD – Specify the method of heating for the heaters as either direct fired, electric, steam or other (specify).

NUMBER OF HEATERS – Enter the number of bake ovens, heaters or dryers used in the drying process.

FUEL USED – Many coating operations require the use of dryers, heaters, or ovens to speed the drying process. Specify the type of fuel used if there are any associated with the process. If there is a separate boiler used for drying then this information should be supplied on form B2.

ACTUAL FUEL USAGE

- ANNUAL – Enter the actual amount of fuel consumed in one year.
- HOURLY – Enter the actual amount of fuel consumed in one hour.
- UNITS – Enter the units of the listed fuel (e.g., gallons, cubic feet, pounds, etc.)

MAXIMUM FUEL USAGE

- ANNUAL – Enter the maximum amount of fuel consumed in one year.
 - HOURLY – Enter the maximum amount of fuel consumed in one hour.
 - UNITS – Enter the units of the listed fuel (e.g., gallons, cubic feet, pounds, etc.)
-

DESCRIBE DEVICES USED TO REDUCE EVAPORATION AND/OR LEAKS – Describe any device that is used at this emission source to reduce evaporation and/or leaks (i.e., bottom filled, sealed lids, etc.).

REGULATORY ANALYSIS –

1. FEDERAL REGULATIONS –

- a. Determine applicability or inapplicability of the emission source to each listed federal regulation. Provide explanation of determination.

Title V (MCAPCO 1.5500, 40 CFR 70)

NSPS = New Source Performance Standards (40 CFR 60, Specify Subpart)

NESHAP = National Emission Standards for Hazardous Air Pollutants (MCAPCO 2.1110, 40 CFR 61)

MACT/GACT = Maximum Achievable/Generally Available Control Technology (40 CFR 63, Specify Subpart)

PSD = Prevention of Significant Deterioration, Attainment Area (MCAPCO 2.0530, 40 CFR 51)

NSR = New Source Review, Non-attainment Area (MCAPCO 2.0531, 40 CFR 51)

- b. List all other applicable federal regulations. Provide explanation of determination.

2. LOCAL REGULATIONS – List all applicable local regulations, including but not limited to MCAPCO Sections 2.0900, 1.5700, 2.0500, and 2.1100. Provide explanation of determination.

LIMIT(S) REQUEST – List all locally and federally enforceable permit limits and/or any additional limits that currently exist or are requested by this application. By requesting a permit limit (e.g., hours of operation, material usage rates, emission rates) a facility may avoid applicability to certain regulations (e.g., Title V, Prevention of Significant Deterioration, etc.). List the motivating regulation for which applicability is to be avoided. Describe how these limits are or will be monitored and at what frequency.

SECTION B

B5

EMISSION SOURCE (MANUFACTURING OF CHEMICALS/COATINGS/INKS)

REGULATORY ANALYSIS:

Identify all federal and local (MCAPCO) regulations (including, but not limited to, the six regulations already listed below) to which the process may be subject, and provide an explanation of applicability.

Regulation Name (MCAPCO & CFR citations, as applicable)		Applicable?		Explanation of Applicability (provide an explanation of applicability or inapplicability)
Examples:	MCAPCO Reg. 2.0515 – “Particles from Miscellaneous Industrial Processes”	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	This regulation is applicable to this particulate emission source (no other particulate emission standards apply).
	MCAPCO Reg. 2.0958 – “Work Practices for Sources of Volatile Organic Compounds”	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	This regulation is applicable to this volatile organic compound emission source (no NSPS, NESHAP, MACT/GACT, RACT, or other volatile organic compound emission standards apply).

Federal Regulations:

Title V	MCAPCO Section 1.5500, 40 CFR 70	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
NSPS	40 CFR 60 (specify Subpart)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Subpart:
NESHAP	MCAPCO Reg. 2.1110, 40 CFR 61	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
MACT/GACT	40 CFR 63 (specify Subpart)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Subpart:
PSD	MCAPCO Reg. 2.0530, 40 CFR 51	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
NSR	MCAPCO Reg. 2.0531, 40 CFR 51	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Local Regulations:

MCAPCO Reg.	-	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
MCAPCO Reg.	-	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
MCAPCO Reg.	-	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
MCAPCO Reg.	-	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
MCAPCO Reg.	-	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
MCAPCO Reg.	-	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
MCAPCO Reg.	-	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

LIMIT(S) REQUEST:

Indicate all existing and requested local and federally enforceable limits (e.g., hours of operation, material usage, emission rates, etc.) and describe how these limits are or will be monitored and at what frequency).

Existing or Requested Limit	Motivating Regulation	Monitoring Method (parameters, method, frequency)

Comments: