

## EMISSION SOURCE (General)

## Instructions for Form B1

**B1 – EMISSION SOURCE (GENERAL)** – This form is used for any process or emission source which is not covered under other specific emission source forms (i.e., B2: Fuel Combustion Source, B2-G: Internal Combustion Engine/Generator, B3: Incinerator, B4: Coating Finishing/Printing, B5: Manufacture of Chemicals/Coating/Inks, B6: Storage Silos/Bins, and B7: Liquid Storage Tanks). Make as many copies of the form as necessary. Attach all calculations and assumptions used in determining the numbers entered on this form

**PRIMARY OR ALTERNATIVE OPERATING SCENARIO** – A Section B1 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 B1 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 B1 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 (i.e., 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 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/>

---

**MATERIALS ENTERING PROCESS FOR CONTINUOUS PROCESS** - A continuous process has a continual flow of material entering and exiting the process. Usually, continuous transfer, conveying, or B1-2 station to station assembly line type operations are considered continuous processes.

**TYPE** - Identify each material or product going into the process excluding the combustion of fuels. Be as specific as possible without going into the constituent level for compounds (e.g., tobacco, lead oxide, sand, gravel, asphalt, etc.).

**UNITS** - Enter the units by which each material is measured into the process (e.g., lbs., tons, square feet, cubic feet). If any unit other than weight is used please indicate in the comment section how to convert the unit to weight.

**MAXIMUM DESIGN CAPACITY (UNIT/HR)** - Enter the maximum amount of material per hour that the source is capable of processing.

**REQUESTED CAPACITY LIMITATION (UNIT/HR)** - Enter the maximum amount of material per hour that you propose to introduce to the process keeping in mind that the operation will be limited to these amounts and all potential emissions will be based on these amounts. Explain in the comments section calculations used in determining the permitted maximum throughput.

---

**MATERIALS ENTERING PROCESS FOR BATCH PROCESS** - A batch operation is when the materials enter the process at one time rather than having a continuous flow of material. There is usually a holding time required to allow extensive mixing or to allow a chemical reaction or physical process (i.e., settling) to occur.

**TYPE & UNITS** - Same definition as explained under "continuous process" above.

**MAXIMUM DESIGN CAPACITY (UNIT/BATCH)** - Enter the maximum amount of material per batch that the source is capable of processing.

**REQUESTED CAPACITY LIMITATION (UNIT/BATCH)** - Enter the maximum amount of material per batch that you propose to introduce to the process keeping in mind that the operation will be limited to these amounts and all potential emissions will be based on these amounts. Explain in the comments section calculations used in determining the permitted maximum throughput.

---

**MAXIMUM DESIGN CAPACITY (BATCHES/HR)** - Enter the maximum number of batches you propose to process in one hour. Keep in mind that the operation will be limited by permit condition to this amount and recordkeeping and reporting requirements may be required.

---

**MAXIMUM DESIGN CAPACITY (BATCHES/YEAR)** - Enter the maximum number of batches you propose to process in one year. Keep in mind that the operation will be limited by permit condition to this amount and recordkeeping and reporting requirements may be required.

---

**FOR PARTICULATE EMISSION SOURCES ONLY: TOTAL MAXIMUM PROCESS WEIGHT RATE (tons/hour) –**

---

---

Total weight of all material introduced into the process. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels are not. Example: A sandblasting process would include the weight of the item(s) being blasted as well as the weight of the blasting media.

---

**FUEL USAGE (INCLUDE STARTUP FUEL) -**

**FUEL TYPE** - List the fuel to be combusted and the startup fuel.

**UNITS** - List fuel units for the amounts listed (e.g., pounds, tons, gallons, cubic feet, etc.).

**MAXIMUM DESIGN CAPACITY (UNIT/HR)** - List the maximum amount of fuel capable of being burned per hour.

**FUEL CHARACTERISTICS (COMPLETE ALL THAT ARE APPLICABLE) -**

**BTU CONTENT** - List heat content of fuel expressed in Btu.

**UNITS** - List units for applicable fuel type (e.g., Btu per gallon-oil, Btu per pound-coal, Btu per cubic foot-natural gas).

**SULFUR CONTENT (% BY WEIGHT)** - Enter the sulfur content of both the start-up and operating fuel expressed as a percentage. *Note: Attach a Fuel Supplier Certification for this information.*

**ASH CONTENT (% BY WEIGHT)** - Enter the ash content of both the start-up and operating fuel expressed as a percentage.

---

**DESCRIBE FUEL BURNING EQUIPMENT** - If fuel is consumed in the process, describe the fuel burning equipment (i.e., dryer, oven, process heater).

---

**DIRECT-FIRED OR INDIRECT-FIRED** - Select Direct-Fired if the material being heated comes in contact with and/or adds substance to the products of combustion. Select Indirect-Fired if the material being heated is not contacted by and adds no substance to the products of combustion.

---

**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 (i.e., hours of operation, material usage rates, emission rates) a facility may avoid applicability to certain regulations (i.e., 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**  
**EMISSION SOURCE (GENERAL)**

**B1**

Operating Scenario: <input type="checkbox"/> Primary Operating Scenario <input type="checkbox"/> Alternative Operating Scenario		AOS #:				
Emission Source Description:		Emission Source ID No.:				
		Control Device ID No.:				
Manufacturer:		Model No.:				
<b>STACK PARAMETERS</b>						
Release Point Type:	Height:	Inside Diameter:	Emission Point (Stack) ID No.:			
Fence Line Distance:	X Coordinate:	Y Coordinate:				
Exit Gas Temperature:	Exit Gas Flow Rate:		Exit Gas Velocity:			
Sampling Ports, Compliant With EPA Method 1 Will Be Installed On The Stacks: <input type="checkbox"/> Yes <input type="checkbox"/> No						
<b>PROCESS DESCRIPTION</b>						
<b>MATERIALS ENTERING PROCESS – CONTINUOUS PROCESS</b>						
Type	Units	Max. Design Capacity (Units/Hr)	Requested Capacity Limitation (Unit/Hr)			
<b>MATERIALS ENTERING PROCESS – BATCH OPERATION</b>						
Type	Units	Max. Design Capacity (Unit/Batch)	Requested Capacity Limitation (Unit/Batch)			
Maximum Design (Batches/Hr):		Requested Limitation: (Batches/Hr): (Batches/Yr):				
<b>FOR PARTICULATE EMISSION SOURCES ONLY:</b> <i>(See instructions for definition; include documentation)</i>						
TOTAL MAXIMUM PROCESS WEIGHT RATE (TONS/HOUR):						
<b>FUEL USAGE (Include Start-up Fuels)</b>						
Fuel Type	Units	Maximum Design Capacity (Unit/Hr)	BTU Content	Units	Sulfur Content (% By Weight)	Ash Content (% By Weight)
Describe Fuel Burning Equipment:			Is The Fuel Burning Equipment: <input type="checkbox"/> Direct-Fired <input type="checkbox"/> Indirect-Fired			
Comments:						

**Attach Additional Sheets As Necessary**

**SECTION B**  
**EMISSION SOURCE (GENERAL)**

**B1**

**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)
<i>Examples:</i>	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: