

ENCLOSURE 1G — CONTROLS

Capture device means a hood, enclosure, room, floor sweep, or other means of containing, controlling or collecting emissions.

Capture efficiency or capture system efficiency means the portion (expressed as a percentage) of the pollutants from an emission source that is contained by a capture device.

Add-on control means an air pollution control device, such as a thermal oxidizer or carbon adsorber, or any another device that reduces pollution in an air stream by destruction or other means of removal before discharge to the atmosphere.

Control efficiency means the percentage of pollutants vented to an add-on control device that are not then emitted or released to the atmosphere.

1. Do you currently have fume hoods to capture emissions from welding? Yes No
(If **yes**, please answer questions a - g)

a. Estimate the percentage of welding done under fume hoods: _____%

b. Indicate the location of fume hoods using Enclosure 1C and your Facility Diagram.
Indicate the number of fume hoods at each location.

c. What is the percent capture efficiency of your fume hoods? _____%

d. What is the approximate distance from the fume hood(s) to the source?

e. What was the capital cost of installing fume hoods (please include year installed)?
\$ _____ Year _____

f. What are the annual operating costs associated with fume hoods?
\$ _____

g. Are fume hoods vented to an add-on control device? Yes No
If **yes**, please describe control equipment and emission stream:

What is the control efficiency? _____

What was the capital cost of installing the control equipment (please include year installed)? \$ _____

What are the estimated annual operating costs associated with the control equipment? \$ _____

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2. Do you currently use articulated fume extraction arms to capture emissions from welding? Yes No (If **yes**, please answer questions a - g)

a. Estimate the percentage of welding done using fume extraction arms:
_____ %

b. Indicate the location of fume extraction arms using Enclosure 1B and your Facility Diagram. Indicate the number of fume extraction arms at each location.

c. What is the percent capture efficiency of your fume extraction arms? _____ %

d. What is the approximate distance from the extraction arm(s) to the source?

e. What was the capital cost of installing extraction arms (please include year of installation)?

\$ _____ Year _____

f. What are the estimated annual operating costs associated with extraction arms?

\$ _____

g. Are fume extraction arms vented to an add-on control device?

Yes No

If **yes**, please describe control equipment and emission stream:

What is the control efficiency? _____

What was the capital cost of installing the control equipment (please include year installed)? \$ _____ Year _____

What are the estimated annual operating costs associated with the control equipment? \$ _____

3. Do you currently use fume guns and/or suction nozzles to capture emissions from welding? Yes No (If **yes**, please answer questions a - f)

a. Estimate the percentage of welding done using fume guns and/or suction nozzles:
_____ %

b. Indicate the location of fume guns and/or suction nozzles using Enclosure 1B and your Facility Diagram. Indicate the number of fume guns and/or suction nozzles at

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each location. _____

c. What is the percent capture efficiency of your fume guns and/or suction nozzles?
_____ %

d. What was the capital cost of installing fume guns and/or suction nozzles? (please include year of installation) \$ _____ Year _____

e. What are the estimated annual operating costs associated with fume guns and/or suction nozzles? \$ _____

f. Are fume guns and/or suction nozzles vented to an add-on control device?
 Yes No If **yes**, please describe control equipment and emission stream:

What is the control efficiency? _____

What was the capital cost of installing the control equipment (please include year installed)? \$ _____ Year _____

What are the estimated annual operating costs associated with the control equipment? \$ _____

4. What percentage of your welding is conducted inside a building? _____ %

a. What are the ventilation rates of the building(s)? _____

b. Are buildings vented to an add-on control device? Yes No

If **yes**, please describe control equipment and emission stream:

What is the control efficiency? _____ %

What was the capital cost of installing the control equipment (please include year installed)? \$ _____ Year _____

What are the estimated annual operating costs associated with the control equipment? \$ _____

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5. Do you currently use substituted welding materials to reduce worker exposure to fumes from welding or surface coating? Yes No
(If **yes**, please answer questions a and b)

a. Describe the substitution(s) made, including estimated costs: _____

b. What quantities or levels of reduction of nickel, manganese, and hexavalent chromium did you achieve from these substitutions? _____

6. Please describe any automation of welding operations in use at your facility (i.e., mechanization, automation, and/or robotic welding) including the type of welding where these are used. _____

a. Indicate the location of automated welding operations using Enclosure 1B and your Facility Diagram. Indicate the extent of automated welding operations at each location. _____

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b. Describe any fume extraction devices used in conjunction with automated welding processes. _____

c. What were the capital costs of installing automated welding systems ? (please include year) \$ _____ Year _____

7. Please list any additional control equipment or work practices currently used to reduce emissions from the following, and the estimated annual cost of each:

a. Welding Operations:

b. Surface Coating Operations:

c. Abrasive Blasting Operations:

d. Cleaning Operations (related to coating):

