



ADDITIONAL TECHNICAL INFORMATION FOR WELDING OPERATIONS

The following information will be used for the technical review of a permit to install application for a **welding process**. This information is in addition to the general requirements outlined in the AQD document "Information for an Administratively Complete Permit to Install Application", Part 2 - Additional Supporting Information, Items A through F. All of the information may not be needed for each application. Also, this document may not be all inclusive. Additional information beyond that identified may be necessary to complete the technical review of any individual application. In the event a determination is made that new additional information is needed for a technical review, this document will be updated.

All referenced guidance documents are available at <http://www.deq.state.mi.us/aps> or you may contact the Permit Section at 517-373-7023.

NOTE: A welding process may be exempt from the requirements to obtain a Permit to Install pursuant to Rule 285(i) of the State of Michigan, Department of Environmental Quality, Act 451 of 1994, Natural Resources and Environmental Protection Act and Air Pollution Control Rules. Please review these rules and contact the appropriate district office with any questions.

A. Process Description

1. Describe all process equipment and any air pollution control equipment including make, model number, the number of welding stations and the type of welding. Identify which pieces of process equipment are tied into each control device and associated stack.
2. Describe any air pollution control bypass operations. Include the reason for the bypass, the proposed location of the bypassed emissions, and the projected length and frequency of these bypasses.
3. Provide the composition of the rod or wire which will be used in the welding process. This should be in the form of a list of the components and the percent by weight of each. Include the normal and maximum amounts of welding rod or wire which will be used in one hour and one year, in pounds.
4. Indicate if the exhaust air from an air pollution control device will be returned to the in-plant environment.

B. Regulatory Discussion

The following state air pollution control regulations may be applicable. Please review these regulations carefully to determine if they apply to your process and summarize the results in the application. The Air Pollution Control Rules may be viewed and downloaded from the AQD website at: www.michigan.gov/deqair.

1. State of Michigan, Department of Environmental Quality, Act 451 of 1994, Natural Resources and Environmental Protection Act, Part 55 Air Pollution Control and the following promulgated rules:
 - a) Rules 215 and 216 apply to an existing facility which has a current Renewable Operating Permit (ROP). A Permit to Install issued for the installation of new equipment or modifications to existing equipment is incorporated into an ROP pursuant to Rules 215 and 216.
 - b) Rule 220 applies to a major source and/or a major modification at a source which is located in a non-attainment area. A non-attainment area is one where the National Ambient Air Quality Standards (NAAQS) are not being met. Rule 220 requires compliance with the lowest achievable emission rate (LAER) and an emission reduction (offset) for each non-attainment air contaminant emitted in significant quantities as defined by Rule 119(e). However, a source may choose to "net out" of the requirements of Rule 220. This may be applicable for welding processes which consume more than 1,000,000 pounds of rod or wire per year. Refer to "Guidelines for a Netting Demonstration" for additional detailed information.
 - c) Rule 301 specifies a process or process equipment shall not discharge visible emissions of a density greater than the most stringent of a 6-minute average of 20% opacity, or a limit specified by an applicable federal NSPS or as a condition of a Permit to Install.

- d) Rule 331 specifies a maximum allowable particulate emission rate for material handling equipment if no federal limit applies.
2. Federal Prevention of Significant Deterioration (PSD), 40 CFR Part 52.21. The federal PSD regulations apply to a major source and/or a major modification at a source which is located in an attainment area. An attainment area is one where all the NAAQS are being met. However, as with the non-attainment permitting, a source subject to the PSD regulations may choose to “net out” of the requirements. Refer to “Federal PSD Requirements,” “Instructions for Conducting a BACT Analysis,” and “Guidelines for a Netting Demonstration” for additional detailed information.
- The Clean Unit test is an alternate method for determining PSD applicability. It encourages industries to invest in control equipment by providing greater operational flexibility after the control equipment is installed. Refer to “Federal PSD Requirements” and the “PSD Workbook” which is available on the Internet at <http://www.deq.state.mi.us/aps/downloads/permits/PSD%20Workbook.pdf>.
3. The PSD increments (40 CFR 52.21 (c)) and the NAAQS (40 CFR 52.21(d)) apply to all sources throughout the United States, regardless of size. Compliance with these air quality standards can be demonstrated using computerized dispersion modeling. An applicant for a PSD permit is required to submit PSD increment modeling for PM-10, SO₂ and NO_x, and NAAQS modeling for PM-10, SO₂, NO_x, CO, Ozone, and Lead as part of the application. Modeling for sources not subject to PSD may be done by the AQD. Refer to “Dispersion Modeling Guidance” for additional detailed information.