



OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
GENERAL AIR CONTAMINANT DISCHARGE PERMIT
ATTACHMENT

Department of Environmental Quality
Air Quality Division
Air Operations Section
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Telephone: (503) 229-5696

This permit is being issued in accordance with the provisions of ORS 468A.040 and OAR 340-216-0062.

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Signed Copy on File with DEQ

September 16, 2021

Ali Mirzakhali, Air Quality Division Administrator

Dated

Large Metal Fabrication and Finishing Operations; Area sources primarily engaged in one of the following operations: (1) Electrical and Electronic Equipment Finishing Operations; (2) Fabricated Metal Products; (3) Fabricated Plate Work (Boiler Shops); (4) Fabricated Structural Metal Manufacturing; (5) Heating Equipment, except Electric; (6) Industrial Machinery and Equipment Finishing Operations; (7) Iron and Steel Forging; (8) Primary Metal Products Manufacturing; and (9) Valves and Pipe Fittings.

Primarily engaged means the manufacturing, fabricating, or forging of one or more products listed in one of the nine metal fabrication and finishing source category descriptions above, where this production represents at least 50 percent of the production at a facility, and where production quantities are established by the volume, linear foot, square foot, or other value (e.g., revenue generation where other common industry measurements are not applicable) suited to the specific industry. The period used to determine production should be the previous continuous 12 months of operation. Facilities must document and retain their rationale for the determination that their facility is not "primarily engaged" pursuant to §63.10(b)(3) of the 40 C.F.R. General Provisions.

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1.0 PERMIT ATTACHMENT ASSIGNMENT

1.1. Qualifications

The permittee must meet all of the following conditions in order to qualify for assignment to this General Air Contaminant Discharge Permit (ACDP) attachment:

- a. The permittee is primarily engaged in one or more metal fabrication activities listed on the cover page of this permit, including supporting activities;
- b. The permittee uses materials that contain or have the potential to emit metal fabrication and finishing Hazardous Air Pollutants (MFHAP). MFHAP are compounds of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form with the exception of lead. If a material contains any of these MFHAP at the following levels, it is a material containing MFHAP: **0.1 percent by weight of cadmium, chromium, lead, or nickel; 1.0 percent by weight for manganese.**
- c. **The permittee performs one or more** of the following operations:
 - i. Dry abrasive blasting performed in a vented enclosure that uses materials that contain MFHAP or has the potential to emit MFHAP;
 - ii. Dry abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension that uses materials that contain MFHAP or has the potential to emit MFHAP;
 - iii. Spray-applied painting operation using MFHAP containing paints; or
 - iv. Welding operation that uses materials that contain MFHAP or has the potential to emit MFHAP and uses 2,000 pounds or more of MFHAP containing welding wire and rod (calculated on a rolling 12-month basis).
- d. A Simple or Standard ACDP is not required for the source; and
- e. The source is not having ongoing, recurring or serious compliance problems.

1.2. Excluded Activities and Operations

For facilities that meet the Qualifications criteria established in Condition 1.1, the following are not subject to this permit attachment or the requirements of this permit attachment:

- a. Research or laboratory activities;
- b. Tool or equipment repair operations;
- c. Facility maintenance;
- d. Quality control activities;
- e. Operations performed on site at installations owned or operated by the Armed Forces of the United States, the National Aeronautics and Space Administration, or the National Nuclear Security Administration; or

Operations that produce military munitions manufactured by or for the Armed Forces of the United States, or equipment directly and exclusively used for the purposes of transporting military munitions.

1.3. Assignment

DEQ will assign qualifying permittees to this attachment that have and maintain a good record of compliance with DEQ's Air Quality regulations and that DEQ determines would be appropriately regulated by a General ACDP. DEQ may rescind assignment if the permittee no longer meets the qualifications in Condition **Error! Reference source not found.**, conditions of OAR 340-216-0062, or the Conditions of this permit attachment.

1.4. Permitted Activities

Until this permit attachment expires, is modified, or is revoked, the permittee is allowed to discharge air contaminants from processes and activities directly related to or associated with the air contaminant source(s) listed on the first page of this permit attachment in addition to any categorically insignificant activities, as defined in OAR 340-200-0020, at the source. Discharge of air contaminants from any other equipment or activity not identified herein is not authorized by this permit.

1.5. Relation to Local Land Use Laws

This permit is not valid in Lane County, or at any location where the operation of the permittee's processes, activities, or insignificant activities would be in violation of any local land use or zoning laws. For operation in Lane County, contact Lane Regional Air Protection Agency for any necessary permits at (541) 736-1056. The permittee must obtain local land use approvals as, or where, applicable before operating this facility at any location.

2.0 GENERAL EMISSION STANDARDS AND LIMITS

2.1. Visible Emissions

The permittee must comply with applicable visible emissions requirements established in OAR 340-208-0110.

2.2. Fugitive Emissions

The permittee must comply with applicable fugitive emissions requirements established in OAR 340-208-0210.

2.3. Particulate Matter Fallout

The permittee must comply with the particulate matter requirements established in OAR 340-208-0450.

2.4. Nuisance Odors

The permittee must comply with applicable nuisance and nuisance odor requirements established in OAR 340-208-0300 and OAR 340-208-0550.

2.5. Startup, Shutdown, and Malfunction Provisions

At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain any affected source, including associated air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the permittee reduce emissions from the source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved.

Malfunctions must be corrected as soon as practicable after their occurrence.

2.6. Particulate Emissions

The permittee must comply with applicable grain loading standard particulate emission limits for non-fugitive emissions pursuant to OAR 340-226-0210.

3.0 NESHAP 6X APPLICABILITY

3.1. 40 C.F.R. Part 63 Subpart XXXXXX – Emission Standards for Nine Metal Fabrication and Finishing Source Categories

The permittee must comply with all applicable provisions of 40 C.F.R. §63.11514 – §63.11523 for all affected emissions to which this subpart applies by the applicable date in §63.11515. The permittee must also comply with all applicable provisions of 40 C.F.R. Part 63, Subpart A – NESHAP General Provisions. For a full text of the federal standard, please refer to 40 C.F.R. Part 63, Subpart XXXXXX.

NESHAP Subpart XXXXXX is adopted and incorporated by reference in OAR chapter 340 division 244.

4.0 OPERATION AND MAINTENANCE REQUIREMENTS

4.1. NESHAP Compliance Dates

For an existing affected source (began construction or reconstruction before April 3, 2008), the permittee must have achieved compliance with applicable requirements by July 25, 2011.

For a new affected source (began construction or reconstruction on or after April 3, 2008), the permittee must be in compliance with applicable requirements upon startup.

4.2. Dry Abrasive Blasting

The permittee must comply with the requirements in Conditions 4.3 through 4.5, as applicable, for each dry abrasive blasting operation that uses materials that contain MFHAP or has the potential to emit MFHAP.

These requirements do not apply when abrasive blasting operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

Hydroblasting, wet abrasive blasting, or other abrasive blasting operations which employ liquids to reduce emissions are not dry abrasive blasting.

4.3. Dry Abrasive Blasting Performed in Totally Enclosed and Unvented Blast Chambers

For abrasive blasting chambers that are totally enclosed and unvented, the permittee must implement the following management practices to minimize emissions of MFHAP:

- a. The permittee must **minimize dust generation during emptying** of abrasive blasting enclosures. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, written Standard Operating Procedures (or equivalent) that describes how dust generation is minimized onsite; and
- b. The permittee must **operate all equipment** associated with dry abrasive blasting operations **according to the manufacturer's instructions**. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, the manufacturer's written instructions.

4.4. Dry Abrasive Blasting Performed in Vented Enclosures

For dry abrasive blasting operations which have a vent allowing any air or blast material to escape, the permittee must comply with the following requirements. For dry abrasive blasting operations of items that exceed 8 feet (2.4 meters) in any dimension, the permittee may elect to comply with the requirements in Condition 4.5 in lieu of this Condition unless or until notified by DEQ in writing that the permittee must comply with this Condition 4.4.

- a. The permittee must **capture emissions and vent them to a filtration control device**. The permittee must operate the filtration control device according to manufacturer's instructions. The permittee must demonstrate compliance with this requirement by maintaining records of, any complying with, the manufacturer's written specifications and instructions.
- b. The permittee must minimize emissions of MFHAP by implementing the following management practices:
 - i. The permittee must **take measures necessary to minimize excess dust** in the surrounding area to reduce MFHAP emissions, as practicable and **enclose dusty abrasive material storage areas and holding bins, seal chutes and conveyors** that transport abrasive materials. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, written Standard Operating Procedures (or equivalent) that describes how excess dust is reduced onsite and having the identified components enclosed; and
 - ii. The permittee must **operate all equipment associated** with dry abrasive blasting operations **according to manufacturer's instructions**. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, the manufacturer's written specifications and instructions.

4.5. Dry Abrasive Blasting of Objects Greater than 8 Feet (2.4 meters) in any One Dimension

For dry abrasive blasting operations which are performed on objects greater than 8 feet in any one dimension, the permittee may comply with this Condition 4.5 instead of the practices required by Condition 4.4 unless or until notified by DEQ in writing that the permittee must comply with Condition 4.4.

- a. Management practices for dry abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension are as follows:
 - i. The permittee must **take measures necessary to minimize excess dust** in the surrounding area to reduce MFHAP emissions, as practicable; and
 - ii. The permittee must **enclose abrasive material storage areas** and holding bins, seal chutes and conveyors that transport abrasive material; and
 - iii. The permittee must **operate all equipment associated** with dry abrasive blasting operations **according to manufacturer's instructions**; and
 - iv. The permittee must **not re-use dry abrasive blasting media unless** contaminants (i.e., any material other than the base metal, such as paint residue) have been removed by filtration or screening, and the abrasive material conforms to its original size; and
 - v. Whenever practicable, the permittee must **switch from high particulate matter (PM)-emitting blast media (e.g., sand) to low PM-emitting blast media** (e.g., crushed glass, specular hematite, steel shot, aluminum oxide), where PM is a surrogate for MFHAP. The permittee must demonstrate compliance with this requirement by retaining documentation in the SOP or equivalent that describes the use of high particulate matter-emitting blast media and why it was (or would be) impracticable to use low PM-emitting blast media.
- b. The permittee must demonstrate compliance with the requirements of Conditions 4.5.a.i, ii, iv, and v by maintaining records of, and complying with, written Standard Operating Procedures (or equivalent). The permittee must demonstrate compliance with the requirements of Condition 4.5.a.iii by maintaining records of, and complying with, the manufacturer's written specifications and instructions.

- c. The permittee must perform visual determinations of fugitive emissions, as specified in Condition 7.2, according to the following, as applicable.
 - i. For abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension that is performed outdoors, the permittee must perform visual determinations of fugitive emissions at the fenceline or property border nearest to the outdoor dry abrasive blasting operation.
 - ii. For abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension that is performed indoors, the permittee must perform visual determinations of fugitive emissions at the primary vent, stack, exit, or opening from the building containing the abrasive blasting operations.
- d. The permittee must keep a record of all visual determinations of fugitive emissions along with any corrective action taken in accordance with the requirements in Condition 8.0.
- e. If visible fugitive emissions are detected, the permittee must perform corrective actions until the visible fugitive emissions are eliminated, at which time the permittee must comply with the following requirements:
 - i. The permittee must perform a follow-up inspection for visible fugitive emissions in accordance with Condition 7.1; and
 - ii. The permittee must report all instances where visible emissions are detected, along with any corrective action taken and the results of subsequent follow-up inspections for visible emissions, with the annual certification and compliance report as required by Condition 9.3.c.

4.6. Machining

These requirements do not apply when machining operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP. Other processes specifically excluded are hand-held devices and any process employing fluids for lubrication or cooling.

The permittee must implement the following management practices to minimize emissions of MFHAP:

- a. The permittee must **take measures necessary to minimize excess dust** in the surrounding area to reduce MFHAP emissions, as practicable. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, written Standard Operating Procedures (or equivalent) that describes how excess dust is reduced onsite; and
- b. The permittee must **operate all equipment associated with machining according to manufacturer's instructions**. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, written manufacturer's instructions.

4.7. Dry Grinding and Dry Polishing with Machines

These requirements do not apply when dry grinding and dry polishing operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP. Hand grinding, hand polishing, and bench top dry grinding and dry polishing are not subject to this Condition.

The permittee must comply with the following requirements for each fixed and stationary dry grinding and dry polishing machine that does not use lubricating oils or fluids to minimize emissions of MFHAP:

- a. The permittee must **capture emissions and vent them to a filtration control device**. The permittee must demonstrate compliance with this requirement by maintaining a record of, and complying with, written manufacturer's specifications and instructions for the filtration control device(s); and
- b. The permittee must implement management practices to minimize emissions of MFHAP as follows:
 - i. The permittee must **take measures necessary to minimize excess dust** in the surrounding area to reduce MFHAP emissions, as practicable. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, written Standard Operating Procedures (or equivalent) that describes how excess dust is minimized onsite; and
 - ii. The permittee must **operate all equipment** associated with the operation of dry grinding and dry polishing with machines **according to manufacturer's instructions**. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, written manufacturer's instructions.

4.8. Spray Painting

These requirements do not apply when spray-applied paints that do not contain MFHAP are being applied. These requirements do not apply to affected sources located at Fabricated Structural Metal Manufacturing facilities. These requirements do not apply to affected sources that spray paint objects greater than 15 feet (4.57 meters) when those objects are not spray painted in spray booths or spray rooms.

The permittee must implement the following management practices when a spray-applied paint that contains MFHAP is being applied:

- a. Spray painting. All spray-applied painting of objects must meet the following requirements:
 - i. Spray booths or spray rooms must have a full roof, at least two complete walls, and one or two complete side curtains or other barrier material so that all four sides are covered. The spray booths or spray rooms must be ventilated so that air is drawn into the booth and leaves only through the filter. The roof may contain narrow slots for connecting fabricated products to overhead cranes, and/or for cords or cables.
 - ii. All spray booths and spray rooms must be fitted with a type of filter technology that is demonstrated to achieve at least 98 percent capture of MFHAP. The permittee may use published filter efficiency data provided by filter vendors to demonstrate compliance with this requirement. If the permittee does not have filter efficiency data from the vendor, the permittee must follow the procedures for demonstrating filter efficiency as described in 40 C.F.R. §63.11516(d)(1)(ii).
 - iii. The permittee must perform regular inspection and replacement of the filters in all spray booths and spray rooms according to manufacturer's instructions, and maintain documentation of these activities, as described in Condition 8.0.
 - iv. As an alternative compliance requirement, spray booths or spray rooms equipped with a water curtain, called "waterwash" or "waterspray" booths or spray rooms that are operated and maintained according to the manufacturer's specifications and that achieve at least 98 percent control of MFHAP, may be used in lieu of the spray booths or spray rooms requirements of Conditions 4.8.a.i through 4.8.a.iii.

- b. Spray painting application equipment of all objects painted. All paints applied via spray-applied painting must be applied with a high-volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, air assisted airless spray gun. An equivalent technology that is demonstrated to achieve transfer efficiency comparable to one of these spray gun technologies for a comparable operation is allowed only after the permittee has obtained written approval from the Environmental Protection Agency or Oregon DEQ. The procedure used to demonstrate that spray gun transfer efficiency is equivalent to that of an HVLP spray gun must follow the requirements in 40 C.F.R. §63.11516(d)(2).
- c. Spray gun cleaning. All cleaning of paint spray guns must be done with either non-HAP gun cleaning solvents, or in such a manner that an atomized mist of spray of gun cleaning solvent and paint residue is not created outside of a container that collects the used gun cleaning solvent. Spray gun cleaning may be done, for example, by hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of these non-atomizing methods may be used.
- d. Spray painting worker certification. All workers performing painting must be certified that they have completed training in the proper spray application of paints and the proper setup and maintenance of spray equipment. The minimum requirements for training and certification are described in Condition 4.8.e. The spray application of paint is prohibited by persons who are not certified as having completed the training described in Condition 4.8.e. The requirements of this condition do not apply to the students of an accredited painting training program who are under the direct supervision of an instructor who meets the training requirements of Condition 4.8.e. The requirements of this condition do not apply to operators of robotic or automated painting operations.
- e. Spray painting training program content. The permittee must ensure and certify that all new and existing personnel, including contract personnel, who spray apply paints are trained in the proper application of paints as required by Condition 4.8.d. The training program must include, at a minimum, the following items:
- i. A list of all current personnel by name and job description who are required to be trained;
 - ii. Hands-on, or in-house, or external classroom instruction that addresses, at a minimum, initial and refresher training in the following topics:
 - Spray gun equipment selection, set up, and operation, including measuring paint viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.
 - Spray technique for different types of paints to improve transfer efficiency and minimize paint usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.
 - Routine spray booth and filter maintenance, including filter selection and installation.
 - Environmental compliance with the requirements of this permit.
 - iii. A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training. Alternatively, if the permittee can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training required in Condition 4.8.e.ii, they are not required to provide the initial training required by that condition to these painters but must continue to comply with the recertification training.

- f. Spray painting training dates. As required by Condition 4.8.d, all new and existing personnel at an affected spray painting affected source, including contract personnel, who spray apply paints must be trained by the following dates.
- i. If the source began construction or reconstruction on or after April 3, 2008, all personnel must be trained and certified no later than 180 days after startup, or 180 days after hiring, whichever is later. Training that was completed within 5 years prior to the date training is required, and that meets the requirements specified in Condition 4.8.f.ii, satisfies this requirement and is valid for a period not to exceed 5 years after the date the training was last completed.
 - ii. If the source began construction or reconstruction before April 3, 2008 all personnel must be trained and certified no later than 180 days after hiring. Worker training that was completed within 5 years prior to the date training is required, and that meets the requirements specified in Condition 4.8.e.ii, satisfies this requirement and is valid for a period not to exceed 5 years after the date the training was last completed.
- g. Duration of training validity. Training and certification will be valid for a period not to exceed 5 years after the date the training is completed. All personnel must receive refresher training that meets the requirements of this section and be re-certified every 5 years.

4.9. Welding (all MFHAP welding)

The permittee must comply with the requirements in Conditions 4.9.a and 4.9.b for all welding operations that use materials that contain MFHAP or has the potential to emit MFHAP.

- a. The permittee must **operate all equipment, capture devices, and control devices** associated with welding operations **according to manufacturer's instructions**. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, written manufacturer's instructions.
- b. The permittee must **implement one or more of the following management practices** to minimize emissions of MFHAP, as practicable, while maintaining the required welding quality through the application of sound engineering judgment. The permittee must demonstrate compliance with this requirement by maintaining records of, and complying with, written Standard Operating Procedures (or equivalent) that describes which management practice(s) are implemented onsite.
 - i. Use welding processes with reduced fume generation capabilities (e.g., gas metal arc welding (GMAW)—also called metal inert gas welding (MIG));
 - ii. Use welding process variations (e.g., pulsed current GMAW), which can reduce fume generation rates;
 - iii. Use welding filler metals, shielding gases, carrier gases, or other process materials which are capable of reduced welding fume generation;
 - iv. Optimize welding process variables (e.g., electrode diameter, voltage, amperage, welding angle, shield gas flow rate, travel speed) to reduce the amount of welding fume generated;
 - v. Use a welding fume capture and control system according to the manufacturer's specifications and instructions. The permittee must maintain records of, and comply with, written manufacturer's instructions.
- c. The permittee must retain documentation of which management practices are employed on site and the date(s) of any changes to the work practices employed on site.

4.10. Welding (2,000 pounds or more of MFHAP wire and rod per year)

If the permittee uses 2,000 pounds, or more, per year of welding wire and rod containing MFHAP (calculated on a rolling 12-month basis), the permittee must comply with the following:

- a. **Welding Activity Observations (Tier 1)**: The permittee must perform visual determinations of welding fugitive emissions as specified in Condition 7.2 (e.g. daily, weekly, monthly, and quarterly Method 22 schedule) at the primary vent, stack, exit, or opening from the building containing the welding operations. The permittee must keep records of all visual determinations in accordance with Condition 8.0.
 - i. **Detecting Visible Emissions From Welding**: If visible fugitive emissions are detected during any visual determination required by Condition 4.10.a, the permittee must perform, and keep record of, corrective actions that include, but are not limited to, inspection of welding fume sources and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with Condition 4.9.b. After completing such corrective actions, the permittee must perform a follow-up inspection for visible fugitive emissions in accordance with Condition 7.1 at the primary vent, stack, exit, or opening from the building containing the welding operations.
 - ii. The permittee must keep records of all visible emission detection instances, corrective actions taken, and results of follow-up observations for visible emissions. This information must be submitted with the annual report.
- b. **Visible Emission Detection Twice in a 12-month Period (Tier 2)**: If visible fugitive emissions are detected more than once during any consecutive 12-month period (notwithstanding the results of any follow-up inspections), the permittee must conduct a visual determination of emissions opacity, as specified in Condition 7.3 (e.g. Method 9) at the primary vent, stack, exit, or opening from the building containing the welding operations. This first opacity observation must be conducted within 24 hours of the end of the visual determination of fugitive emissions. The permittee must now also comply with the following:
 - i. **Method 9 in lieu of Method 22 Now Required**: In lieu of the requirements of Condition 4.10.a to perform visual determinations of fugitive emissions with EPA Method 22, the permittee must perform visual determinations of emissions opacity in accordance with Condition 7.4 using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations.
 - ii. The permittee must keep records of all visual determinations of emissions opacity in accordance with Condition 8.0. This information must be submitted with the annual report.
 - iii. **Method 9 Opacity Results above 0% but less than or equal to 20%**: For each visual determination of emissions opacity performed in accordance with Condition 4.10.b that shows opacity of 20 percent or less but greater than zero, the permittee must perform, and keep records of, corrective actions, including inspection of all welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with Condition 4.9.b.
- c. **If Tier 2 Reading Results above 20% (Tier 3)**: If any visual determination of emissions opacity performed in accordance with Condition 4.10.b shows opacity of greater than 20 percent, the permittee must comply with the following requirements:
 - i. **Develop or Revise Welding Management Plan**: The permittee must prepare and implement a Site-Specific Welding Emissions Management Plan, as specified in Condition 4.10.d, within 30 days of the opacity exceedance. If the permittee

- already has a Site-Specific Welding Emissions Management Plan, the permittee must prepare and implement a revised Site-Specific Welding Emissions Management Plan within 30 days.
- ii. **Daily Method 9 Readings:** During the 30 day-period for preparation or revision of the Site-Specific Welding Emissions Management Plan, the permittee must perform daily visual determinations of emissions opacity as specified in Condition 7.3 and 7.4 using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations.
 - iii. The permittee must keep all records of visual determinations of emissions opacity performed during the 30-day Site-Specific Welding Emissions Management Plan preparation period in accordance with Condition 8.0. This information must be submitted with the annual report.
 - iv. The permittee must report all exceedances of 20 percent opacity with the annual report in accordance with Condition 9.3.
- d. **Site-Specific Welding Emissions Management Plan:** The Site-Specific Welding Emissions Management Plan must comply with the following requirements:
- i. Site-Specific Welding Emissions Management Plan must contain the following information:
 - Company name and address;
 - A list and description of all affected welding operations;
 - A description of all management practices and/or fume control methods in place at the time of the opacity exceedance;
 - A list and description of all management practices and/or fume control methods currently employed for the welding affected source;
 - A description of additional management practices and/or fume control methods to be implemented pursuant to Condition 4.9, and the projected date of implementation; and
 - Any revisions to a Site-Specific Welding Emissions Management Plan must contain copies of all previous plan entries.
 - ii. The following information within the Site-Specific Welding Emissions Management Plan must be updated annually and submitted with the annual report required by Condition 9.3:
 - Company name and address;
 - A list and description of all affected welding operations;
 - A description of all management practices and/or fume control methods in place at the time of the opacity exceedance;
 - iii. The permittee must maintain a copy of the current Site-Specific Welding Emissions Management Plan onsite in a readily accessible location for review during an inspection, in accordance with the requirements in Condition 8.0.

5.0 RISK MITIGATION REQUIREMENTS

5.1. Welding Operations

Beginning January 1, 2022, the permittee must install and operate a fume capture and control system compliant with Condition 5.2 before:

- a. **The permittee uses any** welding wire or rod electrode E310, E310-15, or 14Mn-4Cr;
- b. **The permittee uses over 60 pounds** of any manganese-containing welding wire or rod in any 24 hour period;
- c. **The permittee uses over 180 pounds** of any chromium VI (chrome 6) containing welding wire or rod in a 12 consecutive month period; or
- d. **The permittee uses over 20,000 pounds** of any nickel-containing welding wire or rod in a 12 consecutive month period.

5.2. Operation

The permittee must operate and maintain the fume capture and control system according to the manufacturer's specifications and recommended procedures. Fume capture and control systems must be one of the following and route emission to either a high efficiency filter, particulate scrubber, electrostatic precipitator, or activated carbon filter:

- a. Torch fume extractor (portable collection and control units);
- b. Permanent hoods, vents, and ducting; or
- c. Enclosed welding booths.

5.3. Fume Capture and Control System Installation

Permittees required to install and operate a fume capture and control system must submit a Notice of Intent to Construct according to Condition 9.4 before commencing construction or installation of the pollution control equipment.

6.0 PLANT SITE EMISSION LIMITS

6.1. Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following. These PSELs are **not** in addition to the PSELs in the source's General ACDP and other General ACDP Attachments.

| Pollutant | Limit | Units |
|-------------------|-------|---------------|
| PM | 24 | tons per year |
| PM ₁₀ | 14 | |
| PM _{2.5} | 9 | |
| VOC | 39 | |
| Single HAP | 9 | |
| Combined HAPs | 24 | |

6.2. PM10 PSEL for Medford-Ashland AQMA

For sources operating in the Medford-Ashland AQMA, the permittee must not allow the plant site emissions of PM10 to exceed the following:

| Pollutant | Limit | Units |
|------------------|-------|----------------|
| PM ₁₀ | 4.5 | tons per year |
| | 49 | pounds per day |

6.3. Annual Period

The annual plant site emissions limits apply to any 12-consecutive calendar month period.

7.0 COMPLIANCE DEMONSTRATION

7.1. Visual Determination of Fugitive Emissions, General

Visual determination of fugitive emissions must be performed according to the procedures of EPA Method 22, of 40 C.F.R. part 60, Appendix A-7. The permittee must conduct the EPA Method 22 test while the affected source is operating under normal conditions. The duration of each EPA Method 22 test must be at least 15 minutes, and visible emissions will be considered to be present if they are detected for more than six minutes of the fifteen minute period.

7.2. Visual Determination of Fugitive Emissions, Graduated Schedule

Visual determinations of fugitive emissions must be performed in accordance with Condition 7.1 and according to the following schedule:

- a. **Daily:** Perform an observation of visible emissions **once per day** during operation of the process. If observations and records demonstrate that no visible emissions are detected in 10 consecutive daily Method 22 tests, the permittee may elect to comply with Condition 7.2b in lieu of this 7.2a.
- b. **Weekly:** Perform an observation of visible emissions **once every five business days (or one calendar week)** during operation of the process. If visible fugitive emissions are detected during these tests, the permittee must resume Method 22 testing once per day during operation of the process according to Condition 7.2a. If observations and records demonstrate that no visible fugitive emissions are detected in four consecutive weekly Method 22 tests, the permittee may elect to comply with Condition 7.2c in lieu of this 7.2b.
- c. **Monthly:** Perform an observation of visible emissions **once per 21 business days (or one calendar month)** during operation of the process. If visible fugitive emissions are detected during these tests, the permittee must resume Method 22 testing once every five business days (one calendar week) during operation of the process according to Condition 7.2b. If observations and records demonstrate that no visible fugitive emissions are detected in three consecutive monthly Method 22 tests, the permittee may elect to comply with Condition 7.2d in lieu of this 7.2c.
- d. **Quarterly:** Perform an observation of visible emissions **once per 60 business days (or 3 calendar months)** during operation of the process. If visible fugitive emissions are detected during these tests, the permittee must resume Method 22 testing once per 21 business days (one calendar month) during operation of the process according to Condition 7.2c.

7.3. Visual Determination of Emissions Opacity for Welding Tier 2 or 3, General

Visual determination of emissions opacity must be performed in accordance with the procedures of EPA Method 9, of 40 C.F.R. part 60, Appendix A-4, and while the affected source is operating under normal conditions. The duration of the EPA Method 9 test must be thirty minutes.

7.4. Visual Determination of Emissions Opacity for Welding Tier 2 or 3, Graduated Schedule

The permittee must perform visual determination of emissions opacity in accordance with Condition 4.10.b and 4.10.c and according to the following schedule.

- a. Daily Method 9 testing for welding, Tier 2 or 3. Perform visual determination of emissions opacity once per day during each day that the process is in operation. If observations and records demonstrate that no exceedances of 20 percent opacity are detected in 10 consecutive daily Method 9 tests, the permittee may elect to comply with Condition 7.4b in lieu of this 7.4a.
- b. Weekly Method 9 testing for welding, Tier 2 or 3. Perform visual determination of emissions opacity once per calendar week when the source is in operation. If opacity greater than 20 percent is detected during any of these tests, the permittee must resume testing every day of operation according to the requirements of Condition 7.4a. If observations and records demonstrate that no exceedances of 20 percent opacity are detected in four consecutive weekly Method 9 tests, the permittee may elect to comply with Condition 7.4c in lieu of this 7.4b.

- c. Monthly Method 9 testing for welding, Tier 2 or 3. Perform visual determination of emissions opacity once per every calendar month when the source is in operation. If visible emissions opacity greater than 20 percent is detected during any monthly test, the permittee must resume testing every week of operation of the process according to the requirements of Condition 7.4b. If observations and records demonstrate that no exceedances of 20 percent opacity are detected in three consecutive monthly Method 9 tests, the permittee may elect to comply with Condition 7.4d in lieu of this 7.4c.
- d. Quarterly Method 9 testing for welding, Tier 2 or 3. Perform visual determination of emissions opacity once per every three months when the source is in operation. If visible emissions opacity greater than 20 percent is detected during any quarterly test, the permittee must resume testing every month of operation of the process according to the requirements of Condition 7.4.c.
- e. Return to Method 22 testing for welding, Tier 2 or 3. If, after two years of quarterly testing according to Condition 7.4.d (eight observations), the results of all Method 9 tests show no exceedances of 20 percent opacity, the permittee may resume Method 22 testing according to Conditions 7.1 and 7.2.a (daily) in lieu of the visual determinations required by Condition 7.4.

7.5. VOC and HAP PSEL Compliance Monitoring for Surface Coating Operations PSEL Compliance Monitoring

Compliance with the VOC and HAP PSELs is determined for each 12-consecutive calendar month period based on material throughput.

- a. Facilities will be presumed to be in compliance with the yearly VOC and HAP PSELs provided total VOC and HAP containing coating and solvent consumption does not exceed 2,500 gallons during any 12-consecutive calendar month period.
- b. If the permittee exceeds the total VOC and HAP containing coating and solvent consumption stated above, the permittee must demonstrate compliance with the yearly VOC and HAP PSELs on a monthly basis as follows:

$$E_{\text{VOC or HAP}} = [\sum(C_X * K_X)] \times 1 \text{ ton}/2000 \text{ pounds}$$

where,

| | | |
|-------------------------|---|--|
| $E_{\text{VOC or HAP}}$ | = | VOC or HAP emissions (tons/yr); |
| C | = | Material usage for the period in gallons (gals); |
| K | = | VOC or HAP content of the material (pounds/gal); |
| X | = | Subscript X represents a specific material. |

7.6. Other Materials Compliance Monitoring

Compliance with the PM and HAP PSELs for blasting, machining, grinding, polishing, and welding is determined for each 12-consecutive calendar month period based on material throughput or calculated with emission factors in Condition 14 and 15.

- a. The permittee must demonstrate compliance with the yearly HAP PSELs on a monthly basis as follows:

$$E_{\text{HAP}} = [\sum(C_X * K_X)] \times 1 \text{ ton}/2000 \text{ pounds}$$

where,

| | | |
|------------------|---|--|
| E_{HAP} | = | HAP emissions (tons/yr); |
| Σ | = | symbol representing "summation of" |
| C | = | Material usage for the period in pounds (lbs); |
| K | = | HAP content of the material (lbs/ton); |
| X | = | Subscript X represents a specific material. |

- b. The permittee must demonstrate compliance with the yearly PM PSELs on a monthly (or daily) basis, as applicable, as follows:

$$E_{PM/PM10/PM2.5} = [\Sigma(C * K)] \times 1 \text{ ton}/2000 \text{ pounds}$$

where,

- $E_{PM/PM10/PM2.5}$ = PM emissions (tons/yr);
 Σ = symbol representing “summation of”
 C = Material usage for the period in 1,000 pounds (lbs);
 K = Emission factor from Condition 14 or 15.

8.0 RECORDKEEPING REQUIREMENTS

8.1. General Compliance and Applicability Records

Maintain records of the following information:

- a. **Notifications:** Each notification and report that is submitted to comply with this permit, and the documentation supporting each notification and report.
- b. **Determinations:** All applicability determinations listing equipment included in the affected source, as well as any changes and on what date the changes occurred, must be maintained.
- c. **Manufacturer Documentation:** All manufacturer’s specifications, instructions, and recommended maintenance procedures for all control devices and equipment required by Conditions 4.2 through 4.9, as applicable. For all instances in which manufacturer documentation is not available, the permittee must develop, maintain, and comply with site-specific Standard Operating Procedures that are based upon available manufacturer documentation for similar equipment, to the extent possible.
- d. **Material Usage:** The permittee must maintain records of yearly emissions and monthly material usage, as applicable under Condition 7.5 and 7.6 and as follows:
 - i. **Spray Coatings and Solvents:** The permittee must maintain records of each coating and solvent used on a monthly basis and the VOC and HAP content of each.
 - ii. **Fuels:** The permittee must maintain records of fuel usage on a monthly basis for each fuel type used and identify how each fuel was used (e.g., engine, boiler, heater, etc.).
 - iii. **Abrasive Blast Materials:** The permittee must maintain records of abrasive material usage in pounds on a monthly basis for each type of abrasive used. Records must also include whether Condition 4.3, 4.4, or 4.5 were complied with for each material (e.g., X pounds of Y blast material was used complying with Condition 4.3).
 - iv. **Abrasive Blasting Substrate:** The permittee must maintain monthly records of the hours of operation during which abrasive blasting was performed on each substrate that contains differing MFHAP or amounts of MFHAP (i.e., total hours for various substrates may be added together if the MFHAP contents of the substrates are identical). The permittee must also retain the MFHAP content of each substrate blasted.
 - v. **Welding Wire and Rod:** The permittee must maintain records of welding wire and rod usage in pounds on a monthly basis for each welding wire or rod used. The permittee must maintain records of the welding type or process that each wire or rod is used in. If the permittee uses manganese-containing welding wire or rod, the same usage data for this wire and rod must be retained on a daily basis.

- e. **Standard Operating Procedures:** The permittee must maintain a copy of Standard Operating Procedures (or equivalent) that addresses each emissions unit or activity as applicable.

8.2. Visual Determinations of Fugitives and Opacity

Maintain a record of the following information for each visual determination of fugitive and opacity emissions in accordance with Condition 7.1 through 7.4:

- a. The date and results of every visual determination. For opacity determinations this must include the average of the six-minute opacity as measured by the observation;
- b. A description of any corrective actions taken after the observations and the date corrective actions were completed; and
- c. The date and results of any follow-up visual determinations performed after corrective actions were completed.

8.3. Spray Painting Activities

Maintain the following records associated with spray-applied coating activities:

- a. **Booth Filter** records must include:
 - i. Documentation of the filter efficiency determinations or vendor filter efficiency documentation.
 - ii. The filter manufacturer's or vendor's written instructions for operation and maintenance or replacement.
 - iii. Spray paint booth and filter-related maintenance activities, including the dates filter maintenance or replacements are conducted.
- b. **Waterspray or Water Curtain** records must include documentation of compliance with the 98% control requirement. The permittee must also retain manufacturer's written operation and maintenance instructions and records of operations and maintenance in accordance with the manufacturer's documentation.
- c. **HVLP (or other) Documentation and Cleaning** records must include:
 - i. Documentation of HVLP, or other high transfer efficiency spray paint delivery systems, according to Condition 4.8. This documentation must include the manufacturer's specifications for the equipment and any manufacturer's operation instructions.
 - ii. If the permittee has obtained written approval for an alternative spray application system in accordance with Condition 4.8.b, the permittee must comply with and maintain a record of that approval. The permittee must retain documentation of the demonstration of equivalency for as long as the alternate application method is used on site.
 - iii. An SOP that describes how spray gun cleaning is performed on site in compliance with Condition 4.8.c.
- d. **Employee Training** records must include documentation of the certification for each worker that demonstrates compliance with the training requirements of Condition 4.8.e, including the date the initial training and the most recent refresher training were completed.

8.4. Welding Activities

The permittee must maintain the following records associated with welding activities:

- a. **Site-Specific Welding Management Plan** records must include a record of the most recent site-specific welding emissions management plan and all past versions of the plan, as applicable.

- b. **Visual Determinations During Plan Development:** The permittee must maintain a record of each visual determination of emissions opacity performed during the preparation (or revision) of a Site-Specific Welding Emissions Management Plan, in accordance with Condition 4.10.c, as applicable.
- c. If the permittee is required to install and operate a fume capture and control system in accordance with Condition 5.0, the permittee must retain manufacturer documentation describing operation and maintenance procedures. The permittee must retain documentation demonstrating that these operation and maintenance procedures are followed.

8.5. Retention of Records

Unless otherwise specified, the permittee must retain all records for a period of at least five (5) years from the date of each report or record and make them available to DEQ upon request. The permittee must maintain at least the two (2) most recent years of records onsite or otherwise readily available electronically for expeditious review.

9.0 REPORTING REQUIREMENTS

9.1. Initial Notification

The permittee must submit an Initial Notification in accordance with 40 C.F.R. §63.11519(a)(1) within 120 days after initial startup. A form for this purpose is available from DEQ. The notification must be submitted to DEQ and EPA's Region X office as follows:

| | |
|--------------------------------|------------------------------|
| Oregon DEQ | U.S. EPA, Region 10 |
| 700 NE Multnomah St. Suite 600 | 1200 Sixth Avenue, Suite 155 |
| Portland, OR 97232 | Seattle, WA 98101 |
| ATTN: Air Operations NESHAP | |

9.2. Notification of Compliance Status

The permittee must submit a Notification of Compliance Status in accordance with 40 C.F.R. §63.11519(a)(2). A form for this purpose is available from DEQ. The notification must be submitted to DEQ and EPA's Region X office as follows:

- a. For existing sources, this notification was required to be submitted on or before November 22, 2011; and
- b. For new sources, this notification must be submitted within 120 days after initial startup.

| | |
|--------------------------------|------------------------------|
| Oregon DEQ | U.S. EPA, Region 10 |
| 700 NE Multnomah St. Suite 600 | 1200 Sixth Avenue, Suite 155 |
| Portland, OR 97232 | Seattle, WA 98101 |
| ATTN: Air Operations NESHAP | |

9.3. Annual Report

The permittee must prepare and submit two (2) copies of an annual report for the previous calendar year according to the following requirements:

- a. Dates. The permittee must prepare the annual report no later than January 31 of each year. The permittee must submit the annual report by February 15 of each year this permit is in effect.
- b. General requirements. The annual report must contain the following information:

- i. Company name and address;
 - ii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report; and
 - iii. Date of report and beginning and ending dates of the reporting period. The reporting period is the 12-month period ending on December 31.
- c. Visual determination of fugitive and opacity requirements. The annual report must contain the following information for each permittee that performs visual determination of fugitive emissions or opacity emissions in accordance with Condition 7.2 or 7.4:
 - i. The date of every visual determination for fugitives that resulted in detection of visible emissions;
 - ii. The date of every visual determination of emissions opacity and the average of each six-minute opacity determined by the observation;
 - iii. A description of all corrective actions taken subsequent to a visual observation;
 - iv. The date and results of all follow-up visual determinations performed after the corrective actions;
 - v. As required by Condition 4.10.c.iv, the permittee must include an exceedance report for each instance in which the average opacity during a visual determination exceeded 20 percent. The report must include the date on which the exceedance(s) occurred and what the average opacity was during the visual determination.
- d. Welding wire and rod usage. The total welding wire and rod usage, in pounds, for the previous calendar year. This must include an identification of the specific wire or rod electrode and the specific welding process type in which the material was used. The permittee must state whether any of the thresholds in Condition 5.0 were exceeded.
- e. Fuel usage. The amount of each fuel used, in applicable units, in the previous calendar year. This must include how the fuel was used (e.g., in a backup generator, boiler, heater, etc.).
- f. Abrasive material usage. The total amount of abrasive material usage, in pounds, for the previous calendar year. This must include whether each type of blast material was used in a totally enclosed chamber, vented enclosure, or, for objects larger than 8 feet in any one dimension, a certification that the permittee complied with Condition 4.4 or 4.5.
 - i. The permittee must include the total hours of operation during which abrasive blasting was performed on each substrate that contains MFHAP for each substrate with different MFHAP or amounts of MFHAP, according to Condition 8.1.d.iv. The permittee must include the MFHAP content of each substrate blasted.
- g. Site-specific Welding Emissions Management Plan reporting. The permittee must submit a copy of the records of daily visual determinations of emissions recorded in accordance with Condition 4.10.c.iii. The permittee must submit a copy of the updated Site-Specific Welding Emissions Management Plan as required by Condition 4.10.d.ii.
- h. Emissions or coating and solvent usage. Annual VOC and HAP containing coating and solvent usage or annual emissions, as applicable (see Condition 7.5 or 7.6).

9.4. Construction or Modification Notices

The permittee must notify DEQ in writing using a DEQ "Notice of Intent to Construct Form," or other permit application form, and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

- a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
- b. Making any physical change or change in operation of an existing stationary source that

will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or

- c. Constructing or modifying any air pollution control equipment.

9.5. Where to Send Reports and Notices

Reports and notices, with the permit number prominently displayed, must be sent to the Permit Coordinator for the region where the source is located as identified in Condition 10.3 unless otherwise specified.

10.0 ADMINISTRATIVE REQUIREMENTS

10.1. Employee Commute Options Program

Sources located inside the Portland Air Quality Maintenance Area (AQMA) with more than 100 employees at a work site must comply with the Employee Commute Options Program requirements located in OAR 340-242-0020 through 340-242-0390.

For forms (Fact Sheet, Registration, or Survey Guidance documents) or questions regarding ECO, please contact the ECO program directly at 503-229-6154 or ECO@deq.state.or.us.

Additional information is available from DEQ’s website for the ECO program located here: <https://www.oregon.gov/deq/air/programs/Pages/ECO.aspx>

10.2. Reassignment to the General ACDP Attachment

A permittee that wishes to continue assignment to this General ACDP attachment must submit to DEQ an application for reassignment as follows:

- a. The application must be received by DEQ within 30 days prior to the expiration date listed on this permit attachment;
- b. The application must be sent to the appropriate regional office identified in Condition 10.3; and
- c. The permittee may submit an application for either a Simple or Standard ACDP at any time, but the permittee must continue to comply with the General ACDP attachment until DEQ takes final action on the Simple or Standard ACDP application.

10.3. Permit Coordinator Addresses

All reports, notices, and applications must be directed to the Permit Coordinator for the area where the source is located. The Permit Coordinator addresses are as follows:

| Counties | Permit Coordinator Address and Telephone |
|-----------|---|
| Statewide | Once DEQ’s online portal Environmental Data Management System, ‘Your DEQ Online’ is available for this permit, the permittee will be directed to submit any reports, notices, applications, or fees required by this permit within the online system or through the addresses and information provided at that time. Until the online portal is available for this permit, the permittee must use the addresses and information identified below. |

| | |
|---|--|
| Clackamas, Clatsop, Columbia, Multnomah, Tillamook, and Washington | Department of Environmental Quality Northwest Region 700 NE Multnomah St., Suite 600 Portland, OR 97232-4100 Telephone: (503) 229-5582 NWRaqPermits@deq.state.or.us |
| Benton, Coos, Curry, Douglas, Jackson, Josephine, Lincoln, Linn, Marion, Polk, and Yamhill | Department of Environmental Quality Western Region 4026 Fairview Industrial Drive Salem, OR 97302 Telephone: (503) 378-8240 ext. 225 WRaqPermits@deq.state.or.us |
| Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, Wheeler | Department of Environmental Quality Eastern Region 475 NE Bellevue, Suite 110 Bend, OR 97701 Telephone: (541) 388-6146 ext. 223 ERaqPermits@deq.state.or.us |

11.0 FEES

11.1. Annual Compliance Fee

The annual fees specified in OAR 340-216-8020, Table 2, are due on or by **December 1** of each year this permit attachment is in effect. Invoices indicating the amount, as determined by DEQ regulations, will be mailed prior to the above date. **Late fees in accordance with Part 5 of the table will be assessed as appropriate.**

11.2. Where to Submit Fees

Fees, with a permit number prominently displayed, must be submitted to:

Department of Environmental Quality
Financial Services – Revenue Section
700 NE Multnomah St. Suite 600
Portland, Oregon 97232-4100.

12.0 GENERAL CONDITIONS AND DISCLAIMERS

12.1. Other Regulations

In addition to the specific requirements listed in this permit attachment, the permittee must comply with all other applicable legal requirements enforceable by DEQ.

12.2. Conflicting Conditions

In any instance in which there is an apparent conflict relative to conditions in this permit attachment, the most stringent conditions apply.

12.3. Permit Availability

The permittee must have a copy of the permit attachment available at the facility at all times.

12.4. Termination, Revocation, Rescission, or Modification

DEQ may modify or revoke this permit attachment as authorized under OAR chapter 340 division 216.

13.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

| | |
|-----------------|--|
| ACDP | Air Contaminant Discharge Permit |
| AQMA | Air Quality Maintenance Area |
| calendar year | The 12-month period beginning January 1st and ending December 31 st |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| DEQ | Oregon Department of Environmental Quality |
| EPA | US Environmental Protection Agency |
| FCAW | Flux cored arc welding |
| ft ³ | cubic feet |
| Gal | gallon(s) |
| GMAW | Gas metal arc welding |
| HAP | Hazardous Air Pollutant as defined by OAR 340-244-0040 |

| | |
|------------------|---|
| HVLP | High Volume Low Pressure |
| lb | pound(s) |
| NESHAP | National Emissions Standards for Hazardous Air Pollutants |
| NO _x | nitrogen oxides |
| OAR | Oregon Administrative Rules |
| ORS | Oregon Revised Statutes |
| PM | particulate matter |
| PM ₁₀ | particulate matter less than 10 microns in size |
| PSEL | Plant Site Emission Limit |
| SAW | Submerged arc welding |
| SCC | Source Classification Code |
| SIC | Standard Industrial Code |
| SMAW | Shielded metal arc welding |
| SO ₂ | sulfur dioxide |
| VOC | volatile organic compound |
| year | A period consisting of any 12-consecutive calendar months |

14.0 PM EMISSION FACTORS FOR WELDING

All emission factors are applicable to PM, PM₁₀, and PM_{2.5}. For permittees that use fume capture and control device(s), manufacturer documentation regarding capture and control efficiency may be cited to report a lower emission factor as applicable.

| Welding Process | Electrode Type(s) | Last two digits of SCC | Emission Factor | Emission Factor Units |
|------------------------|----------------------------------|------------------------|-----------------|-------------------------------------|
| SMAW (SCC 3-09-051) | 14Mn-4Cr | (-04) | 81.6 | lbs/1,000 lbs of electrode consumed |
| | E11018, E11018-M | (-08) | 16.4 | |
| | E308, E308-16, E308L-15 | (-12) | 10.8 | |
| | E310, E310-16 | (-16) | 15.1 | |
| | E316, E316-15, E316-16, E316L-16 | (-20) | 10.0 | |
| | E410, E410-16 | (-24) | 13.2 | |
| | E6010 | (-28) | 25.6 | |
| | E6011 | (-32) | 38.4 | |
| | E6012 | (-36) | 8.0 | |
| | E6013 | (-40) | 19.7 | |
| | E7018 | (-44) | 18.4 | |
| | E7024 | (-48) | 9.2 | |
| | E7028 | (-52) | 18.0 | |
| | E8018, E8018C3 | (-56) | 17.1 | |
| | E9015, E9015B3 | (-60) | 17.0 | |
| | E9018, E9018B3, E9018G | (-64) | 16.9 | |
| | ECOCr, ECoCr-A | (-68) | 27.9 | |
| Eni-Cl | (-72) | 18.2 | | |
| ENiCrMo, | (-76) | 11.7 | | |

| | | | | |
|------------------------|--|-------|------|---|
| SMAW (continued) | ENiCrMo-4 | | | |
| | Eni-Cu, Eni-Cu-2 | (-80) | 10.1 | |
| GMAW (SCC-3-09-052) | E308L | (-12) | 5.4 | lbs/1,000 lbs of electrode consumed |
| | E70S | (-54) | 5.2 | |
| | ER1260 | (-10) | 20.5 | |
| | ER5154 | (-26) | 24.1 | |
| | ER316 | (-20) | 3.2 | |
| | ERNiCrMo | (-76) | 3.9 | |
| | ERNiCu | (-80) | 2.0 | |
| FCAW (SCC 3-09-053) | E110, E110TS-K3 | (-06) | 20.8 | lbs/1,000 lbs of electrode consumed |
| | E11018 | (-08) | 57.0 | |
| | E308LT, E308LT-3 | (-12) | 9.1 | |
| | E316LT, E316LT-3 | (-20) | 8.5 | |
| | E70T, E70T-1, E70T-2, E70T-4, E70T-5, E70T-7, E70T-G | (-54) | 15.1 | |
| | E71T, E71T-1, E71T-11 | (-55) | 12.2 | |
| SAW (SCC 3-09-054) | EM12K, EM12K1, F72-EM12K2 | (-10) | 0.05 | lbs/1,000 lbs of electrode consumed |

15.0 PM EMISSION FACTORS FOR ABRASIVE BLASTING

| Activity | Pollutant | Emission Factor | Emission Factor Units |
|---|--|-------------------|--------------------------------------|
| Sand Blasting | PM | 57.6 ¹ | lbs/1,000 pounds of abrasive used |
| | PM ₁₀ | 13 | |
| | PM _{2.5} | 1.3 | |
| Grit Blasting ² | PM | 13.8 | lbs/1,000 pounds of abrasive used |
| | PM ₁₀ | 3.1 | |
| | PM _{2.5} | 0.3 | |
| Shot Blasting ² | PM | 5.76 | lbs/1,000 pounds of abrasive used |
| | PM ₁₀ | 1.3 | |
| | PM _{2.5} | 0.13 | |
| Abrasive Blasting w/ Fabric Filter Control | PM/PM ₁₀ /PM _{2.5} | 0.69 | lbs/1,000 pounds of abrasive used |

1: Total PM emissions are variable based on windspeed, between 27 and 91 lb/1,000 lbs of abrasive, 57.6 is the mean of available emission factor data that accounts for varying windspeed throughout the year at the source.

2: AP-42 estimates that Grit Blasting emits 24% and Shot Blasting emits 10% of total Sand Blasting PM.