

MELCHER MANUFACTURING VOLUNTARY EMISSIONS LIMIT REQUEST

REQUIREMENTS FOR ISSUANCE OF VOLUNTARY EMISSIONS LIMITS

Requirements for the issuance of voluntary emission limits are found in WAC 173-400-091. A summary of the requirements of this section is given below.

VOLUNTARY LIMITS ON EMISSIONS (WAC 173-400-091)

This section establishes the process to be followed when issuing a regulatory order, limiting a facility's allowable emissions, i.e., its potential to emit. The criteria which must be fulfilled include:

1. Upon request by a facility, SRCAA must issue a regulatory order that limits a facility's potential to emit any air contaminant(s) to a level agreeable to the facility and SRCAA;
2. The limits in the order must be lower than existing allowable emissions, taking into consideration all applicable requirements;
3. The regulatory order must include monitoring, recordkeeping, and reporting requirements sufficient to ensure that the facility complies with the limits established in the order;
4. The order must go through public comment procedures established in WAC 173-400-171;
5. The regulatory order will be considered federally enforceable, upon EPA approval of WAC 173-400-091 into the State Implementation Plan; and
6. Any proposed deviation from the regulatory order will require revision or revocation of the order.

SRCAA FINDINGS

A discussion regarding the status for each requirement listed in regards to the Melcher Manufacturing facility (Melcher) voluntary emission limit request follows the Background and Description of the Facility section.

Background and Description of the Facility

Melcher manufactures fiberglass reinforced plastic (FRP) loading ramps at 6017 E Mission Ave, Spokane, WA. The facility has been in operation since 1968. The facility is currently classified as a major source, as defined in Chapter 173-401 WAC, due to potential to emit styrene emissions of more than 10 tons per year. Styrene is considered a federal Hazardous Air Pollutant (HAP).

Melcher's facility produces fiberglass reinforced plastic loading ramps out of plywood, aluminum, and fiberglass. To make the ramps, off-white gelcoat is sprayed on a fiberglass ramp mold, using an airless spray gun (atomized) and allowed to cure. Resin, mixed with fiberglass strands, also called fiberglass "chop" is then sprayed on the mold using a flow chop "gun" (non-atomized). Then, fiberglass strands are manually dipped into a resin bath and manually applied with squeegees to the mold. These fiberglass strands act as reinforcement in the ramp. A second application of fiberglass "chop" is then applied in specific areas of the mold, and a plywood surface is clamped to the mold and allowed to dry. The fiberglass-plywood ramp is then trimmed and sanded in a booth that has a dust control system that exhausts inside. After

drying, a third application of fiberglass “chop” is applied to the ramp and crushed walnut shell is applied to the surface of the ramp and then allowed to cure. The ramp is then removed from the mold. Melcher sprays the gelcoat and resin material in a filtered resin and gelcoat application booth. The fiberglass strands are dipped in the resin bath in a filtered curing / directional dip booth.

The fiberglass molds are repaired in the testing or “tooling” area. Nicks and gouges in the molds are filled using mold wax, mold spray, tooling gelcoat (different from the gelcoat used in ramp production), and resin (same as used in ramp production). Melcher uses acetone for cleaning the spray equipment at the facility. For all other cleaning, Melcher uses a water based emulsifier.

Plywood siding is made in the wood shop. The plywood is sized, using woodworking equipment, the particulate emissions from which are controlled using a cyclone. The cyclone exhausts back inside the building, so it is not considered an emission unit.

Melcher does not have any Notices of Construction on file with SCAPCA. Since Melcher was considered a major source, SRCAA issued an Air Operating Permit (AOP-15) for the facility on May 7, 1999. The first renewal AOP-15 was issued to Melcher on May 18, 2004. The AOP was revised on January 5, 2007 to incorporate several requirements (work practice standards) contained in 40 CFR 63, Subpart WWWW, “National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production”, published in the Federal Register on April 21, 2003 were added that were inadvertently left out of the 2004 permit. The second AOP-15 renewal was issued to Melcher on May 11, 2009. The third AOP-15 renewal was issued to Melcher on January 29, 2018.

Since Melcher is a major source of styrene, which is a Hazardous Air Pollutant (HAP), the facility is subject to the requirements of 40 CFR Part 63, Subpart WWWW, “National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production” (also known as a Maximum Achievable Control Technology or “MACT” standard). Subpart WWWW applies to the open molding process, mixing, cleaning of equipment used in the reinforced plastic composites manufacture, HAP-containing materials storage, and repair operations on parts manufactured at Melcher. The majority of the applicable regulations under 40 CFR 63, Subpart WWWW apply to the open molding process, which includes resin and gelcoat application and curing. Subpart WWWW was originally promulgated on April 21, 2003 and was amended on August 25, 2005. Melcher was considered an existing source under Subpart WWWW and was required to comply with the requirements of the rule no later than April 21, 2006.

Since Melcher was classified as a major source for styrene, which is a hazardous air pollutant, on the compliance date of Subpart WWWW (i.e., April 21, 2006), the facility became subject to EPA’s “once in / always in” (OIAI) policy. The OIAI policy was established by a 1995 U.S. EPA policy interpretation that once a facility was classified as a major source for hazardous air pollutants based upon its potential to emit those pollutants, it could not revert to an area source by reducing its emissions. Under the policy, if a facility qualified as a major source of HAPs as of the “first substantive compliance date” of the applicable MACT standard (e.g., Subpart

WWWW), that facility was permanently subject to that standard, even if the source was later able to reduce its emissions below major source applicability thresholds. As a result, Melcher could not get out of being subject to the federal MACT standard given in 40 CFR Part 63, Subpart WWWW or the federal Air Operating Permit program, no matter what the actual or potential emissions of styrene were from the facility.

On November 19, 2020, the U.S. Environmental Protection Agency (EPA) published a final rule in the Federal Register revising Subpart A of 40 CFR Part 63 (General Provisions), to allow a source classified as a “major source” of hazardous air pollutants (“HAP”) under section 112(a) of the Clean Air Act to reclassify as an “area source.” Under the new rule, called the “Major MACT to Area” (“MM2A”), EPA codified the withdrawal of the “once-in-always” policy and provided the requirements that apply to major sources choosing to reclassify, including reclassification that occurs after the first substantive compliance date of an applicable MACT standard. The MM2A rule became effective on January 19, 2021.

With the promulgation of the MM2A rule, Melcher has requested to reclassify as an area source, which will effectively make them no longer subject to Subpart WWWW or the Air Operating Permit program. As part of the request, Melcher submitted an updated potential-to-emit estimate for the facility which showed that the potential styrene emissions are near or above the major source threshold of 10 tons per year under their physical and operational design. As such, Melcher does not qualify as a “true” area source and needs enforceable PTE limits to be reclassified to area source status.

In a letter dated March 29, 2022, Melcher requested that SRCAA issue a voluntary emission limit order under WAC 173-400-091 limiting potential emissions at Melcher to 9.5 tons per year in order to be reclassified as an area source.

Methods Used to Calculate Emissions

Melcher submitted updated facility-wide PTE calculations as part of their MM2A reclassification request. To calculate their PTE, Melcher used their current resin and gel coat formulation / styrene contents and the Unified Emission Factors (UEF) for Open Molding and Other Composite Processes, Table 1: Unified Emission Factors for Open Modeling of Composites, Mechanical Non-Atomized and Gel Coat Application. Melcher used the emission factor, along with their actual 2021 resin and gelcoat usage and number of ramps produced in 2021 to calculate the amount of styrene emitted per ramp (3.37 lb/ramp). Melcher then calculated the number of ramps that they could physically produce at their facility, given the 10-hour production time per ramp and the facility’s physical floor space limitations. Based on Melcher’s calculations, the PTE of their facility is 9.83 tpy styrene, based on the ability to make 8 ramps at a time and two 10-hour shifts = 20 hours per day of operation. However, if you scale their production up to 24 hours per day, the styrene PTE would be over 10 tpy. In addition, the PTE calculations are based on the current product styrene contents in use at Melcher, which could be subject to change in the future.

In reality, actual emissions at Melcher have been much lower than their PTE. Actual emissions of styrene over the past 5 years have been less than 5 tons per year.

Emissions are summarized in the section, **Is PTE Being Lowered for All Contaminants**, below.

Issuance of a regulatory order limiting Melcher PTE

Melcher currently has no limits on their facility-wide emissions or their production. They have no NOCs issued to their facility.

Since the styrene PTE is over 10 tpy, which is the major source threshold for a HAP, according to Chapter 173-401 WAC, Melcher is subject to operating permit requirements, based on these emissions. Chapter 173-401 WAC allows for sources to opt out of the program by accepting federally enforceable emission limits below the major source thresholds. This is called becoming a synthetic minor. One mechanism for establishing federally enforceable limits is to request voluntary emission limits pursuant to WAC 173-400-091.

Melcher has requested voluntary emission limits to become a synthetic minor, thereby dropping out of SRCAA's air operating permit program. This request was made in a letter dated March 29, 2022, with supporting information submitted to SRCAA on February 17, 2022 and March 18, 2022. The March 29th letter requests a 9.5 ton per year limit on styrene emissions. The purpose of this review memo is to review the requested emission limits and establish conditions which must be incorporated into the regulatory order to ensure compliance with the requested emission limit. A draft of the regulatory order will be provided to Melcher to ensure that it is also acceptable to them.

Is PTE being lowered for all contaminants?

All limits established in the order must be less than existing potential-to-emit (PTE) levels. As shown below, the only pollutant with existing PTE levels above major source thresholds is styrene. Melcher has requested a 9.5 ton per year limit on styrene emissions.

Since the requested styrene limit is lower than the existing PTE level, the requested emission limit is acceptable.

Criteria Pollutants

Pollutant	PTE as calculated by Melcher (based on 10 hour shifts per day= 5,840 ramps/yr)	PTE as calculated by SRCAA (based on 24 hour per day operation = 7,008 ramps/yr)	Major Source Threshold	Requested Limit
VOC	9.83 tons/yr	11.81 tons/yr	100 tons/yr	None

Hazardous Air Pollutants

Pollutant	PTE as calculated by Melcher (based on 10 hour shifts per day= 5,840 ramps/yr)	PTE as calculated by SRCAA (based on 24 hour per day operation = 7,008 ramps/yr)	Major Source Threshold	
Styrene	9.83 tons/yr	11.81 tons/yr	20,000 lb/yr (10 tons/yr)	9.5 tons/yr
Total HAPs	9.83 tons/yr	11.81 tons/yr	50,000 lb/yr (25 tons/yr)	None

Monitoring/recordkeeping/reporting necessary to ensure compliance

The regulatory order will limit emissions of styrene and will require monitoring, recordkeeping, and reporting sufficient to ensure compliance with the emissions limit. The limits will be based on rolling twelve-month totals to ensure enforceability, consistent with EPA guidance.

For the Melcher facility, tracking of styrene emissions will be accomplished by tracking the monthly usage of styrene containing products and calculating the monthly emissions of styrene using the UEF emission factors. Within 30 days after the end of each calendar month, Melcher will be required to calculate monthly styrene emissions for the previous 12 month period to verify that the emission limit is met and to keep emission calculation records for a minimum of five years.

Public comment procedures (WAC 173-400-171)

Prior to issuing the regulatory order, the draft order must go through a 30-day public comment period, required in WAC 173-400-171. The public comment period must consist of a minimum of thirty days and start at least thirty days prior to any hearing. The first day of the public comment period begins on the next calendar day after the permitting authority posts the public notice on their website. The public notice must be posted on the SRCAA agency website for the duration of the public comment period. The public notice is required to include the following:

- (i) The date the notice is posted;
- (ii) The name and address of the owner or operator and the facility;
- (iii) A brief description of the proposal and the type of facility, including a description of the facility's processes subject to the permit;
- (iv) A description of the air contaminant emissions including the type of pollutants and quantity of emissions that would increase under the proposal;
- (v) The location where those documents made available for public inspection may be reviewed;
- (vi) Start date and end date for a public comment period;
- (vii) A statement that a public hearing will be held if the permitting authority determines that there is significant public interest;
- (viii) The name, address, and telephone number and email address of a person at the permitting authority from whom interested persons may obtain additional information, including copies of the permit draft, the application, all relevant supporting materials, including any compliance plan, permit, and monitoring and compliance certification report, and all other materials available to the permitting authority that are relevant to the permit decision, unless the information is exempt from disclosure.

A copy of the public notice will be sent to the EPA Region 10 Administrator as required in WAC 173-400-091(11).

A notice is also required to be published in the State Permit Register, per WAC 173-401-805 for "Authorization for a source to operate without an operating permit by limiting its potential to emit to levels below those that would require the source to obtain an operating permit." SRCAA will submit the required information for publication to the State Permit Register for the draft Melcher order.

At the end of the comment period, all comments received will be considered before a final order is issued.

The public notice will also state that upon issuance of the order, the facility's air operating permit will be revoked because it will no longer be required. The 30-day comment period will serve as notice of the revocation to Melcher, as required in WAC 173-401-710(4).

Federal Enforceability

EPA approved WAC 173-400-091 into the SIP on June 2, 1995. As a result, any order written pursuant to this section will be federally enforceable. Therefore, the regulatory order issued to Melcher will be federally enforceable.

Deviation from the final regulatory order

As stated in WAC 173-400-091, any deviation from any condition of the final regulatory order requires revision or revocation of the order. A statement to this effect will be written into the final order to ensure that the facility is aware of the requirement.

MM2A Rule

As stated earlier, EPA published a final rule in the Federal Register revising Subpart A of 40 CFR Part 63 (General Provisions), to allow a source classified as a "major source" of hazardous air pollutants ("HAP") under section 112(a) of the Clean Air Act to reclassify as an "area source" (called the MM2A rule). Under 40 CFR 63.1(c)(6) of the revised rule, "A major source may become an area source at any time upon reducing its emissions of and potential to emit hazardous air pollutants, as defined in this subpart, to below the major source thresholds established in §63.2, subject to the provisions in paragraphs (c)(6)(i) and (ii) of this section."

The only section that is applicable to Melcher is §63.1(c)(6)(i):

(i) A major source reclassifying to area source status is subject to the applicability of standards, compliance dates and notification requirements specified in (c)(6)(i)(A) of this section.

(A) A major source reclassifying to area source status under this part remains subject to any applicable major source requirements established under this part until the reclassification becomes effective. After the reclassification becomes effective, the source is subject to any applicable area source requirements established under this part immediately, provided the compliance date for the area source requirements has passed. The owner or operator of a major source that becomes an area source subject to newly applicable area source requirements under this part must comply with the initial notification requirements pursuant to §63.9(b). The owner or operator of a major source that becomes an area source must also provide to the Administrator any change in the information already provided under §63.9(b) per §63.9(j)

According to §63.1(c)(6)(i), Melcher will remain subject to the requirements for a major source under 40 CFR 63, Subpart WWWW until the reclassification is effective, which will be when on the date when the regulatory order is final. Once the order is final and Melcher is considered an

area source, Melcher will no longer be subject to the requirements of Subpart WWWW because Subpart WWWW is only applicable to major sources and contains no requirements for area sources.

Melcher will be required to notify EPA of the reclassification to area status, as required in §63.9(j). According to §63.9(j), the owner or operator of a major source that reclassifies to area source status must submit the notification to EPA via CEDRI (which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>)), within 15 calendar days after the change. The notification of reclassification must contain the following information:

- (a) The name and address of the owner or operator;
- (b) The address (i.e., physical location) of the affected source;
- (c) An identification of the standard being reclassified from and to (if applicable); and
- (d) Date of effectiveness of the reclassification.

SRCAA will inform Melcher of the requirement to notify EPA of the reclassification within 15 calendar days after the order is final.

Draft regulatory order

The draft regulatory order is attached.

PREPARED BY: _____
April Westby, Environmental Engineer

DATE: May 16, 2022

REVIEWED BY: _____, P.E.
April Westby, P.E.

DATE: _____

REVIEWED BY: _____
Scott Windsor, Control Officer

DATE: _____