

Statement of Basis for Revision to AOP-15 for Melcher Manufacturing

Facility Description

Melcher Manufacturing (Melcher) produces fiberglass reinforced plastic loading ramps. The ramps are made out of plywood 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 plywood siding 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. SCAPCA does not consider the trimming / sanding booth as an emission unit because there are no outside emissions. A third application of fiberglass "chop" is applied to the ramp and crushed walnut shell is applied to the exterior 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).

Permit History

The Melcher facility does not have any Notices of Construction on file with SCAPCA. SCAPCA issued AOP-15 (Renewal #1) to Melcher on May 18, 2004.

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." Since Melcher is considered an existing source, the facility must be in compliance with this regulation by April 21, 2006. 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.

Permit Revision

Several requirements from 40 CFR 63, Subpart WWWW, "National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production" were inadvertently left out of the original permit, issued on May 18, 2004. In addition, since the permit was issued, new requirements became applicable to the facility in February 2006 when Melcher expanded their fiberglass loading ramp manufacturing operation to the Aquarius Spas facility, which is owned by Melcher and was formerly used to manufacture fiberglass tubs.

According to WAC 173-401-730, when additional requirements become applicable to a source with a remaining permit term of three or more years, the permit must be reopened and revised to include the additional requirements. Since AOP-15 does not expire until May 17, 2009, it

must be reopened to incorporate the new requirements. According to WAC 173-401-730, the permit revision must be completed no later than 18 months after promulgation of the applicable requirement.

The procedures for reopening a permit are established in WAC 173-401-730. Generally speaking, the procedure is the same as for issuing a permit (30-day public comment and 45-day EPA review) except that the portions of the permit being revised are the only ones open for comment and Melcher must be notified at least 30-days prior to the reopening. In this case, Melcher was notified of the intended reopening by letter, dated August 22, 2006.

This document is intended to provide the statement of basis for the revisions that are being made to AOP-15 (i.e., the requirements are listed, the regulatory basis for each new and revised requirement is provided, and associated monitoring, recordkeeping, and reporting is discussed).

As part of this reopening, the following new and/or revised requirements have been incorporated:

- 1) 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 original permit;

Discussion

Melcher is considered an existing source under Subpart WWWW because the facility has not commenced construction or reconstruction since Subpart WWWW was first proposed. As an existing source, Melcher was required to be in compliance with the applicable requirements from Subpart WWWW by April 21, 2006.

According to 40 CFR §63.5805, an existing facility that does not have any centrifugal casting or continuous lamination / casting operations must meet the annual average organic HAP emissions limits in Table 3 of Subpart WWWW, the work practice standards given in Table 4 of Subpart WWWW, and the associated monitoring, recordkeeping, and reporting requirements. Since Melcher is an existing facility and does not have any centrifugal casting or continuous lamination / casting operations, they are subject to the emission limits in Table 3, the work practice standards in Table 4, and the associated monitoring, recordkeeping, and reporting requirements on an after April 21, 2006. The emission limits in Table 3 and some of the work practice standards in Table 4 were included in the renewal AOP, issued by SCAPCA on May 19, 2004. However, there were three work practice standard requirements that were inadvertently left out of the permit. These requirements are as follows:

- The permittee must use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation. This requirement must be met at all times, including periods of startup, shutdown, or malfunction. [40 CFR § 63.5805(b), 2005] [40 CFR § 63.5805(g), 2005] [40 CFR § 63.5835(a), 2005] [40 CFR § 63.5900(c), 2005]
- The permittee must close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety. This requirement must be met at all times, including periods of

startup, shutdown, or malfunction. [40 CFR § 63.5805(b), 2005] [40 CFR § 63.5805(g), 2005] [40 CFR § 63.5835(a), 2005] [40 CFR § 63.5900(c), 2005]

- The permittee must keep the mixer covers closed while actual mixing is occurring except when adding materials or changing covers to the mixing vessels. This requirement must be met at all times, including periods of startup, shutdown, or malfunction. [40 CFR § 63.5805(b), 2005] [40 CFR § 63.5805(g), 2005] [40 CFR § 63.5835(a), 2005] [40 CFR § 63.5900(c), 2005]

Monitoring, Recordkeeping, and Reporting Requirements

The monitoring, recordkeeping, and reporting requirements for these work practice standards are contained in the MACT standard and already part of Melcher's AOP. The MACT requires that Melcher submit a semi-annual compliance report describing each deviation from the work practice standards during the reporting period, including the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

Therefore, no additional monitoring requirements are needed in the revised permit to ensure compliance with the work practice standards that were inadvertently left out of the AOP.

- 2) The fiberglass loading ramp manufacturing operation, located at 5318 E. Desmet, formerly used for manufacturing fiberglass tubs by Aquarius Spas, has been added to Melcher's AOP. Per Melcher, the company converted the Aquarius Spas facility to manufacture ramps instead of tubs on February 10, 2006. There are no NOCs on-file for the fiberglass operation at 5318 E. Desmet. Therefore, the operation at 5318 E. Desmet is subject to the same requirements (i.e., 40 CFR 63, Subpart WWWW requirements and facility-wide requirements from SCAPCA Regulations and Chapter 173-400 WAC) as the operation at Melcher's building located at 6017 E. Mission. A Notice of Construction is not required for the change at Aquarius to producing fiberglass ramps instead of tubs.

Discussion

New Source Review

According to SCAPCA Regulation I, Section 5.02, a Notice of Construction application is required prior to the establishment of any new source listed in Exhibit R of Article IV (Exhibit R includes "Plastics and fiberglass fabrication, including gelcoat, polyester resin, or vinylester coating operations using more than 55 gallons per year of all materials containing volatile organic compounds or toxic air pollutants") and prior to modification to an existing stationary source. Changing the product manufactured at Aquarius from fiberglass tubs to fiberglass loading ramps would not be considered the establishment of a new source, since both operations would fall under the same source classification in Exhibit R of Article IV.

According to SCAPCA Regulation I, Section 1.04, a "modification means any physical change in, or change in the method of operation of, a stationary source that increases the amount of any air contaminant emitted by such stationary source or that results in the emissions of any air contaminant not previously emitted." Per information from Melcher, in order to manufacture loading ramps instead of tubs at Aquarius, no physical change will be performed to the emission unit(s) and equipment, including the spray booths, spray guns, etc. Producing fiberglass ramps instead of tubs at Aquarius is considered to be a change in

the method of operation. However, per conversations with Melcher, this change in the method of operation is not expected to cause an increase in the emissions of any air contaminant. Therefore, a Notice of Construction is not required.

Air Operating Permit

According to Washington's air operating permit program regulation, WAC 173-401-200(19), "Major source" means any stationary source (or any group of stationary sources) that are located on one or more contiguous or adjacent properties, and are under common control of the same person (or persons under common control) belonging to a single major industrial grouping and that are described in (a), (b), or (c) of this subsection. For the purposes of defining "major source," a stationary source or group of stationary sources shall be considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same major group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual, 1987.

(a) A major source under section 112 of the FCAA, which is defined as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, in the aggregate, ten tons per year (tpy) or more of any hazardous air pollutant which has been listed pursuant to section 112(b) of the FCAA, or twenty-five tpy or more of any combination of such hazardous air pollutants."

Based on the above definition of major source, there are three criteria that the Melcher and Aquarius operations need to meet to be considered part of the same major source: located on contiguous or adjacent properties, under common control, and belonging to the same major industrial grouping. The Melcher and Aquarius facilities clearly are under common control, since they are both owned by Melcher. Also, the two facilities would belong to the same major industrial grouping, since they will both be manufacturing fiberglass loading ramps. The third criteria, located on contiguous or adjacent properties, requires some further discussion.

EPA has issued extensive guidance memos related to the definition of "adjacent" with respect to source aggregation. According to the EPA guidance memos, the two operations do not have to be physically contiguous or adjacent for these criteria to be met. In general, the guidance memos have stated that the distance associated with "adjacent" must be considered on a case-by-case basis. EPA recommends that the following types of questions be posed to determine if the facilities are considered adjacent:

- Will materials be routinely transferred between the facilities?
Per discussions with Melcher, plywood will be routinely transferred from Melcher to Aquarius.
- Will managers or other workers frequently shuttle back and forth to be involved actively in both facilities?
Melcher has stated that personnel will shuttle back and forth between the two facilities.
- Will the production process itself be split in any way between the facilities?
Per Melcher, the plywood will be solely cut at the Melcher facility and fiberglassing will be performed at both Melcher and Aquarius facilities.

Based on the answers to these questions and the fact that these two operations are located 6 blocks from each other, SCAPCA considers Melcher and Aquarius to be part of the same major source.

For this reason, SCAPCA is incorporating the emissions units at Aquarius into Melcher's Title V Air Operating Permit.

40 CFR Part 63, Subpart WWWW, "National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production"

Melcher is considered an existing affected source under 40 CFR Part 63, Subpart WWWW, "National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production." Since the conversion of Aquarius from producing fiberglass tubs to loading ramps is not considered "construction" of an affected source under 40 CFR Part 63, it is not considered a new affected source, per §63.5795. Therefore, the fiberglass operation at Aquarius will be subject to the same existing source requirements from Subpart WWWW as Melcher. These requirements will be listed as applicable to the open molding process, mixing, cleaning of equipment used in the reinforced plastic composites manufacture, HAP-containing materials storage, and repair operations at Aquarius.

Monitoring, Recordkeeping, and Reporting Requirements

The former Aquarius facility is subject to the same requirements as the operation at Melcher, including the same monitoring, recordkeeping, and reporting requirements. Therefore, no additional monitoring, recordkeeping, and reporting requirements are required to be added to the revised permit.

PROPOSED REVISIONS TO AOP-15

The following revisions are included under this permit reopening:

1. The cover page and header of the permit were revised to include a revision date and reason for revision. The expiration date of the permit will remain the same.
2. The Aquarius facility (5318 E. Desmet) was added to the cover page as a location covered by AOP-15. In addition, the Desmet location was added to the Facility-Wide Emission Limitations section of AOP-15 and to the Reinforced Plastic Composites Production Emission Limitations section of AOP-15.
3. The following requirements were added to Table II.B-1 of the permit to incorporate the requirements from 40 CFR Part 63, Subpart WWWW, "National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production" that apply to Melcher and were inadvertently left out of the original permit. 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 by Melcher at 6017 E. Mission and 5318 E. Desmet.

TABLE II.B-1 - Gel Coat & Fiberglass Lamination Emission Limitations

Condition Number	Basis for Requirement	Requirement	Reference Test Method, If Applicable	Averaging Time, If Applicable	MRRR Reference
78	40 CFR § 63.5805(b), 2005 40 CFR § 63.5805(g), 2005 40 CFR § 63.5835(a), 2005 40 CFR § 63.5900(c), 2005	The permittee must use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation. This requirement must be met at all times, including periods of startup, shutdown, or malfunction.			7M, 8M
79	40 CFR § 63.5805(b), 2005 40 CFR § 63.5805(g), 2005 40 CFR § 63.5835(a), 2005 40 CFR § 63.5900(c), 2005	The permittee must close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety. This requirement must be met at all times, including periods of startup, shutdown, or malfunction.			7M, 8M
80	40 CFR § 63.5805(b), 2005 40 CFR § 63.5805(g), 2005 40 CFR § 63.5835(a), 2005 40 CFR § 63.5900(c), 2005	The permittee must keep the mixer covers closed while actual mixing is occurring except when adding materials or changing covers to the mixing vessels. This requirement must be met at all times, including periods of startup, shutdown, or malfunction.			7M, 8M

As stated earlier, the monitoring, recordkeeping, and reporting requirements for these work practice standards are contained in the MACT standard and already part of Melcher's AOP, given in Conditions 7M and 8M of AOP-15.

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