

TITLE V - OPERATING PERMITS UNDER THE CLEAN AIR ACT AMENDMENTS OF 1990

These regulations were issued in 1990 to regulate stationary sources, among other things. Unfortunately, Title V is one of the most confusing pieces of legislation to be issued by the EPA. Its purpose was to level the playing field in the United States ensuring that each polluting source was identified, regulated and eventually controlled. But with 50 states in the United States, there are at least 50 interpretations of how this permitting program is to be run. To make things even more difficult, the USEPA is still issuing interpretations, modifications and is in the process of further defining the existing rules!

Operating permit applications for air emissions sources were to be submitted no later than November 15, 1995. Just because your facility may have never needed a permit previously, **DO NOT** sit there thinking this rule doesn't affect you. If you have a pre-Title V air permit in hand, beware -- you will have to obtain a Title V air permit if certain conditions are met.

Major Sources: All major sources must obtain new operating permits. A major source is defined very broadly by the EPA: Any stationary source...that emits or has the potential to emit...ten tons per year of any hazardous air pollutant. Major sources can also be defined by total VOCs emitted, but HAPs usually trigger the classification levels first for polyester resin users. Styrene is a Hazardous Air Pollutant (HAP). To calculate "potential to emit," one can take the hourly emissions rate and multiply it by 8760 (hours in a year).

Sample Calculation: Assume a drum of resin weighs 500 lbs. and has a 42% Styrene content. It is used in spray-up (emissions rate of 240 lbs. of styrene per ton or resin according to the CFA's Unified Emission Factors). The one drum is used in an 8-hour day.

$500/2000 \times 240 = 60$ lbs. emissions
 $60 \text{ lbs.}/8 \text{ hours} = 7.5$ lbs. hourly emissions
 $7.5 \times 8760 = 65,700$ lbs. potential to emit

Therefore, using only *one* drum of resin a day can make your facility a major source in need of a permit!!!

Federally Enforceable State Operating Permits: The USEPA realized that this potential to emit calculation threw a lot of facilities into this rather difficult program when, in reality, they are actually minor sources. Most states then came up with Federally Enforceable State Operating Permits (FESOP) or Synthetic Minor Permits or Opt-Out Permits, etc. so that these sources can get out of the Title V program.

To fit into this program, a facility will impose measurable, controllable restrictions on itself so that it cannot possibly become a major source. These conditions must be negotiated with your local air quality department, but they may be such things as:

- restricting operating hours
- restricting materials usage
- proving there are bottlenecks in the production area

Minor Sources: A true minor source is a facility that can perform the above potential to emit calculation and still remain under 10 tons per year. Unfortunately, very few sources fit that profile.

Emission Factors: The EPA uses HAP emissions factor equations that are identical with the Unified Emission Factors for Open Molding in the Final Rule for the Reinforced Plastics MACT. That table of factors can be found at the end of this section. Refer to www.acmanet.org/ga/reg-emissions.cfm for more detailed information on these factors, as well as a UEF calculator which can be downloaded.

Pultrusion, marble casting and closed molding operations should use the following emission factors:

VOC Emission Factors for Polyester Resin Product Fabrication Process¹

Process	NVS Resin	VS Resin
Pultrusion	0.04 - 0.07	0.01 - 0.05
Marble Cast.	0.01 - 0.03	0.01 - 0.02
Closed Mold.	0.01 - 0.03	0.01 - 0.02

NVS = NonVapor- Suppressed VS = Vapor- Suppressed

What does this mean for your facility: If, with the stated emission factors, your facility is a borderline case of being a major source or a synthetic minor, go for the Title V program. You don't want to restrict your operations. Once you apply for a certain amount of emissions, your facility will have to live with that limitation. It may take up to 18 months to reopen and modify your permit once it has been issued. Permits will be issued for five-year terms.

¹From USEPA's Compilation of Air Pollutant Emission Factors (AP-42), September, 1988

Operating without a permit or in violation of operating conditions will be illegal. There are strong enforcement provisions with civil penalties as well as criminal prosecution!!

Ensure you write your permit as broadly as possible and make sure you can live with all the conditions which you have stated:

- avoid emissions limits for each emission point
- avoid limits for each individual substance
- provide some leeway for actual emissions
- write as many different operating scenarios into the permit as possible

Once you have your permit: You will have to ensure the EPA that:

- you operate within emission limitations
- operations and maintenance requirements are being performed
- monitoring provisions are being adhered to
- record keeping and reporting requirements are being met

Emission reports will probably have to be submitted to your State on a semi-annual basis.

MACT: Maximum Achievable Control Technologies (MACT) will have to be implemented by major sources once the EPA issues them. Once a facility is in the Title V permitting program, it must ensure that it is in compliance with all applicable MACT standards. Likely relevant standards follow:

- the Boat Manufacturing MACT was issued in August, 2001. It covers resin and gel coat operations at fiberglass boat manufacturers as well as carpet and fabric operations. Material meeting certain air toxics content limits must be used. Resin will need to be applied using nonspray (nonatomizing) technology. Rule and implementation information can be located at www.epa.gov/ttn/atw/boat/boatpg.html#IMP. For more information on this standard, you can also contact the National Marine Manufacturer's Association at 202/721-1604.
- the Reinforced Plastics/Composites Manufacturing MACT was issued in April, 2003. The standards for existing plants and most new plants require use of low-emitting resins and work practices to reduce emissions. Some new plants with emissions over 100 tons per year will have to use add-on control systems. Refer to the CFA's web-site at www.acmanet.org/ga/mact.cfm for the Final Rule and other guidance information.
- the Plastics Parts and Coating MACT Final Rule was issued in September, 2003. This MACT applies to Title V sources that use coatings for surface application to molded plastic products. The standard basically limits organic HAPs being emitted to 0.16 lbs. per lb. of coating solid applied, as well as presenting various work

practice standards. “Coatings” include paints and adhesives, as well as any solvents used to clean products and equipment or to prepare surfaces in association with coating operations. Refer to the EPA’s web-site at www.epa.gov/ttn/atw/plastic/plasticpg.html.

Compliance deadlines for conforming to the MACT standards once issued are as follows:

- Existing Major sources: 3 years
- New Sources: upon start-up
- Existing and new area sources that become major after issuance of a MACT standard: 1 year after becoming Major or the Existing Major Source deadline, whichever is later.

Synthetic minors will not have to comply with MACT standards at this time. Area source MACT for minor sources may be issued in the future.

Since there are so many variables and unknowns about the Title V Air Permitting Program, it is impossible to provide a concise picture of what each facility needs. However, the resource links provided above should be able to keep you up-to-date.

Please contact Composites One’s Department of Health, Safety & Environment for state-specific air permitting information or help in calculating emissions at 800/621-8003.