



[Office of Advocacy](#)

---

Report of the Small Business  
Advocacy Review Panel

on

EPA's Planned Proposal of the Reinforced Plastics Composites MACT Standard

June 2, 2000

**TABLE OF CONTENTS**

[1. Introduction](#)

[2. Background](#)

[3 Overview of Proposal Under Consideration](#)

**3.1 Overview of Potential Proposal**

**3.2 Flexibility Alternatives Under Consideration**

**3.2.1 MACT Floors -- Generic Options**

**3.2.2 Options Applicable to Specific MACT Floors**

**3.2.3 Above-the-Floor Options**

**3.2.4 Options for New and Reconstructed Sources**

[4. Applicable Small Entity Definition](#)

[5. Small Entities That May Be Subject to this Regulation](#)

[6. Summary of Small Entity Outreach](#)

**6.1 EPA Small Entity Outreach**

**6.2 Panel Outreach**

[7. List of Small Entity Representatives](#)

[8. Summary of Input from Small Entity Representatives](#)

**8.1 Costs and Technical Feasibility of Add-On Controls**

**8.2 MACT Standards (Floors) for New Sources**

**8.3 Reconstruction**

**8.4 Above-the-Floor Standards**

**8.5 Compliance with OSHA and Other Regulatory Requirements**

**8.6 Economic Impacts of the Standard**

**8.7 MACT Standards (Floors) for Existing Sources**

**8.8 Recordkeeping and Reporting**

[9. Panel Findings and Discussion](#)

- 9.1 The number of small entities to which the proposed rule will apply
- 9.2 Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed Rule
- 9.3 Other Relevant Federal Rules Which May Duplicate, Overlap, or Conflict with the Proposed Rule
- 9.4 Regulatory Alternatives
  - 9.4.1 Propose a "Specialty" subcategory for products that require a Class One Fire and Smoke Rating
  - 9.4.2 Explore pollution prevention alternatives to add-on controls
  - 9.4.3 Allow facilities that have multiple resin application processes (mechanical, manual, and filament winding) to use the same resin for all processes
  - 9.4.4 Reconsider the resin HAP content requirement for tooling resins
  - 9.4.5 Reconsider the resin HAP content requirement for high strength products, and consider including high strength products in the corrosion-resistant operational subcategory
  - 9.4.6 Propose separate classes for "white" and "non-white" gel coats within the Pigmented Gel Coat subcategory
  - 9.4.7 Propose an above-the-floor option with different thresholds for large and small businesses
  - 9.4.8 Propose to set the new source floor standards at the existing source floors for sources that emit less than 100 TPY
  - 9.4.9 Reconsider Estimates of Cost of Add-on Controls
  - 9.4.10 Evaluate ways to minimize the reporting and recordkeeping burdens under the rule

**Report of the Small Business Advocacy Review Panel  
on EPA's Planned Proposal of the Reinforced Plastics Composites MACT Standard**

## **1. Introduction**

This report is presented by the Small Business Advocacy Review Panel convened for the proposed rulemaking on the Reinforced Plastics Composites MACT Standard that the Environmental Protection Agency (EPA) is currently developing. On April 6, 2000, EPA's Small Business Advocacy Chairperson convened this Panel under section 609(b) of the Regulatory Flexibility Act (RFA) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA). In addition to its chairperson, the Panel consists of the Director of the Emission Standards Division (ESD) within EPA's Office of Air Quality Planning and Standards, the Deputy Administrator of the Office of Information and Regulatory Affairs within the Office of Management and Budget, and the Chief Counsel for Advocacy of the Small Business Administration.

This report provides background information on the proposed Reinforced Plastics Composites MACT standard being developed and the types of small entities that would be subject to the proposed rule; a summary of the Panel's outreach activities; and the comments and recommendations of the small entity representatives (SERs). In addition, Section 609(b) of the RFA directs the review panel to report on the comments of SERs and make findings as to issues related to identified elements of an initial regulatory flexibility analysis (IRFA) under section 603 of the RFA. Those elements of an IRFA are:

- o A description of, and where feasible, an estimate of the number of small entities to which the proposed rule will apply;
- o A description of projected reporting, record keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirements and the type of professional skills necessary for preparation of the report or record;

- An identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule; and
- A description of any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities.

Once completed, the Panel report is provided to the agency issuing the proposed rule and included in the rulemaking record. In light of the Panel report, the agency is to make changes, where appropriate, to the draft proposed rule, the IRFA for the proposed rule, or the decision on whether an IRFA is required.

The Panel's findings and discussion are based on the information available at the time this report was drafted. EPA is continuing to conduct analyses relevant to the proposed rule. The Agency expects additional information will be developed or obtained during the remainder of the rule development process. It is important to note that the Panel makes its report at an early stage in the rule development process and should be considered in that light. At the same time, however, the report provides both the Panel and the Agency with an opportunity to identify and explore potential ways of shaping the proposed rule to minimize the burden of the rule on small entities while achieving the rule's statutory purposes.

Any options the Panel identifies for reducing the rule's regulatory impact on small entities may require further analyses and/or data collection to ensure that the options are practicable, enforceable, environmentally sound, protective of public health, and consistent with the Clean Air Act.

## 2. Background

Under the Clean Air Act (CAA), as amended in 1990, EPA is required to regulate major sources of hazardous air pollutants (HAPs). These pollutants are listed in the statute. On July 16, 1992, EPA published a list of industry groups (known as source categories) that emit one or more of these HAPs. Reinforced plastic composites production was on this list as a category of major sources. "Major sources" are those that emit or have the potential to emit 10 tons per year (TPY) or more of a single HAP or 25 TPY or more of a combination of HAPs. For listed categories of "major" sources the Clean Air Act (Section 112) directs EPA to develop National Emission Standards for Hazardous Air Pollutants (NESHAP) that are based on the application of air pollution reduction measures known as maximum achievable control technology (MACT). The CAA requires EPA to complete all MACT standards by November 15, 2000. Therefore, there is a statutory deadline for the reinforced plastic composites (RPC) MACT standard. Proposal is expected in June 2000. The law requires that MACT not be less stringent than:

- the emission control that is achieved in practice by the best controlled similar source for new sources; and
- the average emission limitation achieved by the best performing 12 percent of the sources in the source category for existing sources.

This minimum level of control is referred to as "the MACT floor." Once the minimum level of control is determined, the CAA directs EPA to determine the maximum degree of emissions reductions achievable by evaluating options that achieve greater HAP emissions reductions than the floor, subject to certain constraints including cost. These options are referred to as above-the-floor options.

A "new source" is a stationary source, the construction or reconstruction of which is commenced after the Administrator first proposes an emission standard under Section 112 of the Act applicable to such source. New sources include existing sources that undergo "reconstruction." An "existing source" is a stationary source other than a new

source.

Prior to this rulemaking, there were no Federal air emissions regulations that covered this industry except for new source review (NSR) under the prevention of significant deterioration program. However, NSR generally only applies to sources with emissions of volatile organic compounds (VOC) of 250 TPY or more. Some facilities have been regulated by State air emission regulations.

There are 440 facilities identified in this source category that are believed to be major sources. These facilities emit over 21,000 TPY of HAP. The majority of the HAP emissions are styrene (20,000 TPY). The remainder is methylene chloride and methyl methacrylate.

### **3 Overview of Proposal Under Consideration**

#### **3.1 Overview of Potential Proposal**

EPA is developing MACT floors for new and existing RPC facilities. For small existing facilities the MACT floor requirements mainly include pollution-prevention measures. For new facilities the MACT floor may require add-on controls. EPA has identified three methods that reduce HAP emissions through pollution prevention. These are:

- reducing the HAP contents of the resins and gel coats,
- switching from atomized application methods to non-atomized methods, and
- enclosing open resin baths and containers to reduce HAP evaporation.

EPA is also evaluating an above-the-floor option for both new and existing sources. This option requires 95 percent overall control of HAP emissions using an add-on control device. Emissions from reinforced plastic composites manufacture typically are generated in an open laminating area, or in a spray booth. EPA believes that these areas can be enclosed and the emissions captured and routed to a control device. The control devices used in this industry are typically thermal or catalytic oxidizers, or an adsorption system to concentrate the HAP in the air stream followed by thermal or catalytic oxidation. The 95 percent control option assumes 100 percent capture of emissions and routing the emissions to a 95 percent efficient control device.

The EPA is considering a requirement that facilities with 100 TPY or more of HAP emissions meet the above-the-floor option. Some facilities that emit over 100 TPY of HAP are also small businesses.

#### **3.2 Flexibility Alternatives Under Consideration**

The following is the list of regulatory flexibility alternatives that the Panel considered. These alternatives are designed to meet the objectives of the applicable statute (the Clean Air Act) while also minimizing burden on small businesses. An earlier list was included in the package of information sent to Small Entity Representatives (SERs) on April 18, 2000 for purposes of discussion at a May 2, 2000 SBREFA panel meeting the SERs. (The complete set of materials can be found in Appendix [YY] of this Report.) The following revised list reflects input from SERs received during and following that May 2 meeting. The Panel's recommendations incorporate many of these options in some form. The Panel's recommendations with respect to these options can be found in Section 9 of today's Report.

##### **3.2.1 MACT Floors -- Generic Options**

###### **3.2.1.1 Create separate standards for unique products**

Such separate standards, which would be intended to address special, and extreme

circumstances, would be available where it can be demonstrated that one or more product qualities or performance characteristics require resins with HAP content greater than the MACT floor and the standard cannot be met even with the use of alternative, low emission application technologies. Applicable emission-reducing resin application technologies would still apply to all other products.

#### **3.2.1.2 Establish additional flexibility in resin HAP contents specified by the floors**

This could include specifying a range of acceptable resin HAP contents based on the variability and uncertainty of resin contents used over time in the top 12 percent of facilities, allowing a margin of flexibility to reflect the variability and uncertainty of resin contents used over time in the top 12 percent of facilities, or allowing extra percentage points in HAP content over some time period.

#### **3.2.1.3 Create new subcategories to reflect groupings that may not be typical of the grouping as a whole (e.g., based on type and/or performance qualities of product, and/or production operations)**

This approach would enable certain groupings to be better tailored to circumstances unique to small businesses.

#### **3.2.1.4 Explore pollution prevention alternatives to add-on controls**

This alternative would enable small businesses to implement cost-effective pollution prevention alternatives.

### **3.2.2 Options Applicable to Specific MACT Floors**

#### **3.2.2.1 Allow facilities that have multiple resin application processes (mechanical, manual, and filament winding) to use the same resin for all processes**

This option would enable facilities to use the same resin for all components of the same end product, in both the corrosion and non-corrosion groups, regardless if the components were produced by manual, filament winding, or mechanical.

#### **3.2.2.2 Broaden the corrosion-resistant subcategory to include other "specialty" products**

This approach would enable facilities that manufacture products with unique or specialty performance characteristics (e.g., high strength, high durability, weather-resistance, high heat stability or resistance, flame and smoke resistance, corrosion resistance) to use resins with higher HAP contents to ensure that they can satisfy their unique or specialty performance characteristics.

#### **3.2.2.3 Adjust (increase) the HAP content of pigmented gel-coats for non-white colors**

Under this option, the HAP content by weight of pigmented gel-coats for non-white colors would be increased to reflect the HAP content of such gel-coats.

### **3.2.3 Above-the-Floor Options**

#### **3.2.3.1 Include no above-the-floor requirement in the MACT standard**

Under this approach, no above-the-floor requirement would be included in the MACT standard.

### **3.2.3.2 Raise the threshold for an above-the-floor requirement to 250 TPY**

This alternative would provide that an above-the-floor standard would apply to any facility with actual emissions of 250 tons per year ("TPY") or more per year.

### **3.2.3.3 Raise the threshold for an above-the-floor requirement to 250 TPY for small businesses**

This would provide for an above-the-floor option for larger sources, but the threshold would be 250 TPY for small businesses while the threshold would be 100 TPY for large businesses.

### **3.2.4 Options for New and Reconstructed Sources**

#### **3.2.4.1 Explore if there are technologies that would better represent "best" control technology other than oxidation for small businesses**

This would entail taking a fresh look at the selection of "best" control technologies for new and reconstructed facilities, particularly small business facilities.

#### **3.2.4.2 Set the MACT floor for new and reconstructed sources at the same level as for existing sources where it is difficult to identify the best controlled source**

This approach would help to address any difference between larger and small new sources.

#### **3.2.4.3 Define "reconstruction" as 50-percent of the costs of rebuilding the entire existing facility or source**

This would ensure that only businesses that undergo major reconstruction activities would become subject to the new source MACT floor. Expenditures on pollution prevention measures would not be included in this calculation.

## **4. Applicable Small Entity Definition**

There are 356 different companies identified in this source category. These companies operate 440 separate facilities. Of these companies, 278 (78%) are classified as small businesses according to the SBA definition. SBA's definition is based on number of employees and ranges from 500 to 1000, depending on the standard industrial classification (SIC) code. These small businesses operate 302 (69%) of the 440 facilities.

## **5. Small Entities That May Be Subject to this Regulation**

The Reinforced Plastic Composites source category includes a wide variety of processes that use thermosetting resins containing styrene and/or methyl methacrylate to make plastics with either glass reinforcement or no reinforcement. Processes include gel coating, resin spray up, resin hand lay up, polymer casting, filament winding, centrifugal casting, pultrusion, compression molding, injection molding, resin transfer molding, continuous lamination/casting, manufacture of sheet molding compound, and manufacture of bulk molding compound.

The 302 facilities we identified as owned by small businesses represent 78 percent of the total industry. Some of these small-business-owned facilities have as few as 10 employees. Some facilities also paint the plastics after the molding process. (Painting operations will not be covered by this rule, but may be subject to a different NESHAP currently under development.) EPA's small business screening analysis indicates that 79 of the small companies could have compliance costs at a level of 1 percent of sales or

more, if facilities with 100 TPY or more are required to achieve 95-percent control while all others must meet the floor. Of this group, 21 could have compliance costs at 3 percent or more of sales.

EPA is considering a requirement that all new sources, regardless of size (*i.e.*, potential tons emitted) meet the level of control that is achieved in practice by the best performing similar source. As a result, EPA anticipates that for several types of operations, all new sources would be required to use add-on controls. Such a requirement could significantly increase the capital cost required to start a new business of this type or undergo a major reconstruction to expand an existing business. Again, for most processes, this level of stringency represents the minimum level of stringency allowed under the law.

## **6. Summary of Small Entity Outreach**

### **6.1 EPA Small Entity Outreach**

To facilitate regulation development, EPA has actively involved industry stakeholders in the development of this rule. An outreach meeting with small business representatives for facilities with open molding operations was held on September 11, 1998 in Research Triangle Park, North Carolina. Open molding operations make up the largest group of operations (in terms of both emissions and number of facilities) in the Reinforced Plastic Composites source category. Meeting materials such as a detailed agenda and briefing package as well as background information on the development of the regulation for reinforced plastic composites production are available at the following website address:

*[www.epa.gov/ttn/uatw/coat/rein/rein\\_plas.html](http://www.epa.gov/ttn/uatw/coat/rein/rein_plas.html)*

The Office of Air Quality Planning and Standards (OAQPS) has been providing information to the Composite Fabricators Association (CFA) and the Society of Plastics Industry/Composites Institute on the development of the regulation since 1993. These are the two main trade associations for the reinforced plastic composites industry. These associations helped to identify small business participants for the 1998 outreach meeting. Currently, the CFA has taken the lead role in representing businesses directly affected by this rulemaking. In addition, EPA presented information on the planned rulemaking at the 1998 annual meeting of CFA and presented an update on the rulemaking at the October 1999 meeting. In addition, prior to convening this Panel, EPA met again with small business owners/operators on December 14, 1999. During this meeting, the planned requirements of the proposed rule were presented.

### **6.2 Panel Outreach**

On April 6, 2000, the Small Business Advocacy Review (SBAR) Panel was convened to collect the advice and recommendations of small entity representatives (SERs) that may be subject to a proposed rule. Consistent with SBREFA, and to ensure reasonably balanced representation, seventeen SERs were selected to participate in the SBREFA Panel process, including many that participated in the December 14, 1999 meeting. The complete SER list can be found in Section 7, below.

On April 18, 2000 the Panel distributed an outreach package to the SERs. The SERs were asked to review the information package and provide verbal comments to the Panel during a May 2, 2000 meeting with the Panel. Fifteen SERs participated at that meeting and provided their verbal comments to the SBAR Panel. During this meeting, SERs were also encouraged to submit written comments. Following the May 2 meeting, the Panel received thirteen sets of written comments from twelve SERs. The complete set of written comments can be found in Appendix [ZZ]. Section 8 includes a summary of SER comments.

## 7. List of Small Entity Representatives

Table 1 presents the list of SERs selected to advise the Small Business Advocacy Review Panel convened for this rule. This list was developed in consultation with SBA and was based on recommendations from the CFA and a list of persons who attended the small business open molding outreach meeting held in October 1998.

The companies on this list sell their products to a range of industries including automotive, other transportation, building supplies, chemical and pharmaceutical, and government agencies. They are located in all regions of the country. The companies represented range in size from 15 to 175 employees. All of these facilities have open molding processes, which are the processes that could be significantly affected by the rule.

**Table 1. Small Entity Representatives**

### Small Entity Representative

Region	Number of Employees	Industry Sector(s) They Serve	
Alaglas Pools Mr. Paul M. Felix	South (South Carolina)	<50	Residential construction
Altec Engineering, Inc. Mr. Jon Lhommedieu	Midwest (Indiana)	50-100	Automotive
Appalachian Plastics, Inc. Mr. Allen DeBusk	Mid-Atlantic (Virginia)	<50	Building materials, mining industry
Aqua Bath, Inc. Mr. George McAllister	Southeast (Tennessee)	<50	Commercial and residential construction
Arrowhead Plastic Engineering, Inc. Richard Moore	Midwest (Indiana)	100-500	Automotive, agriculture
Composite Fabricators Assoc. John Schweitzer	Not applicable	Not applicable	Trade Association
Eckler Industries, Inc. Artie Schricker	Southeast (Florida)	<50	Automotive
Empire Fiberglass	Northeast	<50	Multiple

Products. Inc. Neil Baum	(New York)		industry sectors
Fiber-Pro, Inc. Mr. Jack Griffiths	Midwest (Michigan)	<50	Automotive, military
Fiberbasin, Inc. Mr. Bradley R. Philo	Midwest (Illinois)	<50	Chemical industry, automotive, NASA
GPI Inc. Mr. George Zinser	Midwest (Wisconsin)	<50	Multiple industry sectors
Justin Tanks, Inc. Ed Short	Mid Atlantic (Delaware)	<50	Food, pharmaceutical, water treatment, chemical
Miles Fiberglass & Plastics, Inc. Lowell Miles	Northwest (Oregon)	50-100	Automotive, other transportation
Palmer of Texas Mr. Jim Lee	Southwest (Texas)	50-100	Oil industry
Peterson Products Ken Anderson	West (California)	<50	Medical
The Phil Carter System Frank Ranson	Mid-Atlantic (Virginia)	<50	Portable toilets
Trail Wagons-Chinook Jeff Gaskell	Northwest (Washington)	100-500	Automotive

## 8. Summary of Input from Small Entity Representatives

As previously discussed, the Panel conducted SER outreach. This included a package sent to the SERs on April 18, 2000 and a meeting held with the SERs on May 2, 2000. The panel received thirteen sets of comments for twelve different SERs. A complete set of written comments can be found in Appendix [YY]. A summary of these comments follows.

### 8.1 Costs and Technical Feasibility of Add-On Controls

*The above-the-floor control option and most of the new source floors require the use of a permanent total enclosure (PTE) and an add-on control device. In general, the SERs opposed requirements for add-on controls. Some commented that the 100 percent*

*capture requirement is not technically feasible. They stated that at many facilities the shape and size of products would make building a PTE impossible. Some SERs commented that the facilities used by EPA to develop the 95 percent control option are not representative of the products and operational processes of many facilities in the industry, and are skewed towards facilities, that manufacture smaller products utilizing production line manufacturing processes that can more easily accommodate a capture and control technology.*

SERs also commented that they cannot afford current available technologies for capture, control, and destruction, and that most of these technologies have not been proven for the small size of their facilities. They believed that the cost data used by EPA to evaluate this technology significantly understated costs. They cited a study by the Composites Fabricators Association (CFA), which estimates that the costs are three to ten times higher than EPA estimates. The SERs believe that the industry study better reflects likely costs of add-on controls, and stated that EPA should reconcile the differences between the Agency's data and the data in the SER's study prior to proposal.

The SERs also noted that the CFA study indicated that there were increases in criteria pollutants as a result of requiring add-on controls. The CFA study also estimated that 30 tons of greenhouse gases were created for every ton of styrene controlled. A few SERs were concerned regarding the consideration of add-on controls for resin mixing operations because they believe emissions are small and covers would adequately control emissions. The majority of the SERs believe the continued development and use of pollution prevention technologies is better than requiring add-on controls.

## **8.2 MACT Standards (Floors) for New Sources**

Most of the SERs commented about the standards for new sources contemplated by EPA, which would require add-on controls that achieve at least a 95 percent control efficiency in almost all cases. The SERs believe the draft new source floor standards are based on facilities and operations that are not similar to or representative of most likely new and reconstructed sources of small businesses. They believe that any proposal of add-on controls as the new source MACT standard should be limited to similar types of sources.

SERs expressed concern about the affordability of the new source floor for small businesses due to the costs of add-on controls. They stated that small businesses would not be able to start-up a new facility.

Some SERs recommended that new source floors be set at the existing source floor and that pollution prevention be favored over thermal oxidization. Other SERs favored a threshold, below which the new source standards would be the same as the existing source standards. Some SERs supported a size threshold for add-on controls for new sources of at least 250 tons per year (TPY). One SER recommended this threshold be set at 300 TPY of HAP emissions.

## **8.3 Reconstruction**

SERs stated that an existing facility would effectively be unable to grow, modernize, or relocate without becoming a new source under the reconstruction provisions. They favored alternatives that would allow them to expand without becoming subject to the new source floor. One SER recommended that EPA allow for a minor source to relocate without becoming subject to new source floor. Another SER proposed a definition of reconstruction where a facility would become subject to the new source floor (instead of the existing source floor) only if the facility expenditures on reconstruction exceed 50 percent of the cost to replace the current facility.

## **8.4 Above-the-Floor Standards**

Most SERs commented about the above-the-floor standards that EPA is contemplating for all sources with emissions of 100 TPY or more. Such standards would require add-on controls that achieve at least a 95 percent control efficiency.

SERs commented that the retrofit of existing facilities for efficient capture and oxidation systems to meet the above-the-floor standards would be very difficult. They also cited the cost issues previously discussed. The SERs were very concerned that the above-the-floor option would place big businesses at a further cost advantage relative to small businesses because small businesses cannot take advantage of economies of scale to implement thermal oxidization technology. Thus, they will be unable to grow and compete with larger businesses.

One SER stated that large businesses tend to produce smaller parts and rely on assembly-line processes, which lends itself to the capture and control of HAP emissions. Also, unlike large businesses, small businesses must seek the financing for pollution control equipment from banks, who, according to some SERs, are reluctant to lend small businesses money for such purposes.

A few SERs suggested that no above-the-floor option should be included in the MACT standard. Other SERs favored increasing the threshold of applicability for the above-the-floor option. One SER proposed a threshold of 200 TPY for small businesses versus 100 TPY for large businesses. One SER pointed out that such a limit will restrict a requirement for expensive add-on controls to those sources that are technically similar to those that already employ capture and oxidation, and will avoid requiring small businesses, who do not have the revenues and can not obtain the needed capital, from having to install these controls.

#### **8.5 Compliance with OSHA and Other Regulatory Requirements**

Several SERs commented that facilities are required to use significant amounts of dilution air to comply with OSHA regulations for worker exposure. This produces a very dilute exhaust stream. The capture requirements for add-on controls make meeting OSHA requirements more difficult. One SER asked that EPA consider the cumulative impact of other requirements on small businesses, including hazardous waste, fire, and local building codes regulations.

#### **8.6 Economic Impacts of the Standard**

Most of the SERs expressed concern about the economic impact of the MACT standards, particularly the requirement of add-on controls. Many stated that these impacts will stifle, and are already stifling, expansion by small businesses.

The SERs believe EPA's cost and affordability estimates are inaccurate, which could undermine the credibility of the Agency's economic impact analysis. The SERs suggested that EPA has relied heavily on "models" of industry performance, without sufficient factual background on either the technical capability of the industry to install the contemplated controls, or on the industry's financial ability to afford them. They noted that small businesses, in particular, are unlikely to realize cost savings from adoption of stringent pollution prevention controls. The higher unit cost of these materials, plus the cost of training and equipment modifications, will offset any cost savings from use of less material

SERs commented that the markets for many products made from reinforced composite plastics are very price sensitive, allowing for little (if any) flexibility to pass on compliance costs to customers.

#### **8.7 MACT Standards (Floors) for Existing Sources**

All of the SERs commented about the MACT floor standards for existing sources contemplated by EPA. Many of the SERs were concerned that the limited number of operational groupings, each subject to a common MACT limit, in many respects do not adequately reflect the diversity of the industry. Some commented that the data used to set MACT floors, in many instances, were based on facilities that are significantly different than their own facilities, or that the data may be incorrect. For instance, one SER is a custom fabricator that uses 33 different resin formulations for different product applications, whereas one of the standard-setting facilities uses only 1 or 2 resin systems. Numerous SERs said the standards need to be based on facilities and product types and resin usage patterns that are similar to and representative of the facilities in the grouping, particularly those facilities that are small businesses.

Many of the SERs also expressed concern that the floor standards in several instances require use of resins and gel coats of such low HAP content that they will no longer be able to use certain resins and laminations in applications where they have been proven reliable and durable over long periods of time. They are concerned that eliminating these resins and gel coats will make them unable to satisfy customer demands for particular specifications in their products. For example, "specialty" products require high levels of heat stability, high strength, corrosion resistance, and/or smoke or flame resistance, and so allowing the MACT standard instead of the market to drive resin chemistry and HAP content would result in product failures and/or loss of business. Some SERs were concerned that non-atomized application devices (e.g., flow coaters) do not work for some applications. A few SERs indicated they have tried low HAP resins and/or gel coats, but have had little or no success in getting them to work for their products.

Several of the SERs also commented on specific aspects of the floor standards. One SER was concerned that his facilities are not similar to the facility setting the floor for the pultrusion subcategory, and thus the high variability in product quality and mix, which often occurs daily, is not adequately reflected in the standard. A few others were concerned that EPA would vary the HAP content requirement for manual application and filament winding of resins from mechanical applications and recommended against this. Component parts manufactured using differing techniques are often bonded together, they noted, and all such parts need to have the same physical properties and be made from the same resin. Some SERs said using the same resin for all components of the same end product will provide flexibility for small businesses and will also mean a simpler rule for SERs and thus a greater likelihood of compliance and less compliance costs.

Many SERs commented on the floors for gel coats. One SER remarked that EPA should establish a separate process/product group for clear gel coat used for products that meet the ANSI requirements for sanitary ware, because such products need gel coat with a HAP content of at least 48 percent. Another said the standards should allow the use of corrosion resistant gel coat with 48 percent HAP, for products such as swimming pools. This could be accomplished either by establishing a separate process/product group for these materials, or by including gel coats with resins in the current corrosion resistant groups.

Several SERs were concerned that they would be unable to meet the floor standards for gel coats and still meet the transportation industry or other product durability requirements. Others said sufficiently low HAP gel coats are not available, or commented that, for some colors, the new standards governing gel coats may cause poor weathering and surface failure, particularly for outdoor applications, and any application technique, invented for the new gel coat, may not allow facilities to apply it as thin, which could lead to problems such as cracking. A number of the SERs recommended higher HAP point limits for gel coats, to ensure quality tooling, weathering and UV resistance, and contents spillage resistance necessary for tanks.

Most SERs expressed considerable concern that the pigmented gel coat HAP limits do not

accommodate the use of nonwhite pigments. Some SERs pointed out that the HAP limit for pigmented gel coat is based on gel coats using heavy weight metallic pigments, and is too low for non-white colors that are made using lighter organic pigments. Most SERs recommended either increasing the HAP limit for pigmented gel coats, or else creating a separate process/product group for non-white pigmented gel coat, with higher HAP limits (of at least 37 percent).

Many SERs commented that any effort by EPA to restrict HAP content of resin and gel coat used for tooling would result in tools that must be repaired and replaced more frequently, produce more defective products, and result in higher emissions due to the need for rework of tools and defective product. Tooling resins require high heat, solvent, and distortion resistance along with strength characteristics. Some SERs remarked that they store molds outside which they claimed requires gel coats with a 48 percent HAP content. Most SERs said that tooling should be included in a 'specialty' group for special products. Some also recommended that the MACT requirements for tooling should include non-atomized mechanical application of resin and controlled spray application of gel coat, and should set a HAP limit of 48 percent for these materials.

SERs recommended that EPA establish a MACT exclusion, or a separate subcategory allowing use of higher HAP content materials, for specialty products. One SER stated that doing so would not give manufacturers of non-specialty products an invitation to misclassify their products, because specialty resins and gel coats are more expensive than the low-HAP resins and gel coats used for non-specialty products, and composites manufacturers will not pay the extra cost for these specialty resins and gel coats unless the higher levels of performance are really needed. Some SERs proposed definitions for certain specialty performance characteristics, and one recommended that the MACT standards for specialty products should require 100 percent non-atomized for mechanical resin application and controlled spray for gel coat application, and limit HAP content to 48 percent for resin and gel coat.

## 8.8 Recordkeeping and Reporting

Lastly, several SERs expressed concern about the significant burden of recordkeeping and reporting requirements. They recommended that, to determine the amount of materials containing HAPs, EPA should use purchasing records rather than daily consumption records, which could be less expensive and could provide more accurate data for EPA. At least one SER uses 33 different resin formulations for different product applications which, the SER noted, would significantly increase the burden (and cost) of keeping daily records of each resin usage.

## 9. Panel Findings and Discussion

The Panel considered a wide range of options that would enable EPA to mitigate impacts on small businesses. A complete set of those options is discussed in Section 4, above. The Panel arrived at these options through consideration of the comments of the SERs and its findings based on the assembled record. The Panel believes that the following options would minimize the burden on small entities without compromising the environmental benefits of the regulation.

### 9.1 The number of small entities to which the proposed rule will apply

A MACT standard for the Reinforced Plastic Composites source category would directly affect a wide variety of processes that use thermosetting resins containing styrene and/or methyl methacrylate to make plastics with either glass reinforcement or no reinforcement. Processes include gel coating, resin spray up, resin hand lay up, polymer casting, filament winding, centrifugal casting, pultrusion, compression molding, injection molding, resin transfer molding, continuous lamination/casting, manufacture of sheet

molding compound, and manufacture of bulk molding compound. EPA identified 302 facilities as owned by small businesses according to SBA's definition, which represents 78 percent of the total industry. Some facilities also paint the plastics after the molding process. (Painting operations will not be covered by this rule, but may be subject to a different NESHAP currently under development.) This standard would also affect any new source (any new facility or existing facility that undergoes significant reconstruction) using these processes.

## **9.2 Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed Rule**

The Panel recommends that EPA evaluate ways to minimize the recordkeeping and reporting burdens under the rule. For example, a SER suggested that facilities should be allowed to use purchasing records rather than daily consumption records to determine compliance. The Panel recommends that EPA consider providing facilities a "compliant resins" option, where facilities have the opportunity to certify, in lieu of detailed recordkeeping and reporting, that all resins and gel coats used at their facility are at or below the HAP content required to meet the point value applicable to the facility. Moreover, the Panel recommends that EPA evaluate how a facility could streamline recordkeeping and reporting under this rule with that under the Toxics Release Inventory (TRI) program.

## **9.3 Other Relevant Federal Rules Which May Duplicate, Overlap, or Conflict with the Proposed Rule**

The Panel is unaware of any Federal rules that may duplicate, overlap, or conflict with the proposed rule. However, the Panel notes that EPA is in the process of developing another MACT standard for facilities in the plastics industry that paint their products (surface coating), which has the potential to overlap, duplicate, and conflict with the proposed rule, and thus the Panel encourages EPA to consider the interaction of these rules as they are developed.

## **9.4 Regulatory Alternatives**

### **9.4.1 Propose a "Specialty" subcategory for products that require a Class One Fire and Smoke Rating**

Several SERs expressed concern that they cannot produce, under the floor standards that EPA has calculated, products needing high levels of flame, smoke, and/or heat resistance. The Panel recommends that EPA develop a subcategory for products that require a class one fire and smoke rating. EPA would then develop a separate floor for this subcategory. The Panel believes that small businesses may be unable to lower the HAP content of resins used to make these products and still receive a class one fire and smoke rating. EPA is aware of two special products that this subcategorization would affect: 1) certain ducting and 2) the components of some mass transit vehicles that require a class one fire and smoke rating. The Panel also recommends that EPA seek comment, in the notice of proposed rulemaking, on developing subcategories for other potential specialty products, including products that may require resins or gel coats containing a certain HAP content in order to be resistant to weathering and/or corrosion and/or to meet a strength requirement. The Panel further recommends that EPA examine the possibility of basing the floors for such specialty subcategories on work practice controls such as non-atomized resin application.

### **9.4.2 Explore pollution prevention alternatives to add-on controls**

Many SERs expressed concern regarding the affordability and technical feasibility of add-on controls (thermal oxidation) and commented that they may be able to achieve similar

**HAP reductions using pollution prevention measures, which tend to be less expensive. For example, if a facility could reduce its emissions by 50 percent each year for three years using the pollution prevention alternative, it may be able to achieve reductions similar to thermal oxidation (nearly 90 percent versus 95 percent). The Panel recommends that EPA explore with industry the possibility of a more stringent pollution prevention option as an alternative to add-on controls. The Panel believes that this option should be more stringent than the pollution prevention technology present in the current existing source MACT floors.**

#### **9.4.3 Allow facilities that have multiple resin application processes (mechanical, manual, and filament winding) to use the same resin for all processes**

**In many instances, facilities may make parts of the same product using multiple resin application processes. They may also use manual resin application to join parts made by mechanical application or filament winding. With the current floors, it would be possible that a facility would have to use up to three separate resins to produce the different parts of the same product. This could potentially cause structural problems between the parts. The panel recommends that EPA include a provision in the proposal that would allow a facility to use the same resin in all resin application processes. For example, if an existing facility was performing corrosion resistant mechanical resin application, this facility would be allowed to use a 48.3 percent HAP resin and non-atomized spray. The facility would be allowed to use this same resin in their filament winding and manual resin application operations. For compliance purposes, all three operations would be treated as if they were non-atomized spray. This would address SER concerns by allowing a facility to use the same HAP content resin in all three operations.**

#### **9.4.4 Reconsider the resin HAP content requirement for tooling resins**

**Some SERs have commented that they require higher HAP contents in order to continue producing high quality tools. However, EPA is aware of newer non-atomized application techniques, including a technique known as Fluid Impingement Technology (FIT), which have the potential to enable facilities to meet the floor for mechanical applications, without having to reduce the HAP content of the tooling resins. The FIT technology is currently being tested and we do not expect that EPA will have the results before proposal. The Panel recommends that EPA review the FIT technology for tooling resins to ensure that facilities using tooling resins will be able to meet the existing source floor with the minimum HAP content necessary to produce high quality tools. If tooling resins cannot be acceptably applied using non-atomized application techniques, the Panel recommends that EPA consider including tooling resins in the corrosion-resistant resin subcategory.**

#### **9.4.5 Reconsider the resin HAP content requirement for high strength products, and consider including high strength products in the corrosion-resistant operational subcategory**

**Several SERs expressed concern that they cannot produce, under the floor standards that EPA has calculated, products in need of high levels of strength, since high strength materials require resins with relatively higher HAP contents than would be allowed under the floor standards. The Panel shares these concerns. EPA is evaluating whether newer non-atomized application techniques, such as the FIT technology, would enable facilities manufacturing products in need of high strength to meet the floor standards, without having to reduce the HAP content of the resins for such products. If resins for high strength products cannot be acceptably applied using non-atomized application techniques, the Panel recommends that EPA consider including high strength products in the corrosion-resistant operational subcategory, and adopting a definition of "high strength" that is based on the definition in the South Coast Air Quality Management District's Rule 1162.**

#### **9.4.6 Propose separate classes for "white" and "non-white" gel coats within the Pigmented Gel Coat subcategory**

Many SERs expressed concern that they would not be able to meet the floor for pigmented gel coats and still meet their customers' demand for non-white gel coats, which have relatively higher HAP contents. Some SERs have commented that they have been able to compete with large businesses, which enjoy significant economies of scale in this market, only because they have been willing and able to take advantage of niche markets for certain products with non-white gel coats.

The Panel recommends that EPA develop two separate groups for pigmented gel coat. The first grouping will be white and off-white gel coats. The Panel recommends that the data currently in the database will be used to set the floor for this grouping at the current level of 265. The Panel also recommends that the floor for other (non-white) colors will be based on 37 percent HAP (this is the minimum level that provided acceptable performance according to SERs) and atomized application. This would result in a point value of 377. The Panel further recommends that EPA solicit comment on these separate floors of pigmented gel coat including a request for additional data on the HAP contents of these two types gel coats.

#### **9.4.7 Propose an above-the-floor option with different thresholds for large and small businesses**

EPA is considering an above-the-floor option where any source that emits greater than or equal to 100 tons per year (TPY) is required to reduce emissions by 95 percent. (The threshold would be based on a source's actual emissions.) The Panel considered three alternatives to address SER concerns regarding the cost and feasibility of the above-the-floor option: a no above-the-floor alternative, an above-the-floor option where any source with 250 TPY (or more) is required to reduce emissions by 95 percent, and an above-the-floor option where the threshold would be 250 TPY for small businesses and 100 TPY for all other sources. The definition of small business would be SBA's definition, which is based on number of employees and ranges from 500 to 1000, depending on the Standard Industrial Classification (SIC) code. The Panel believes that thresholds of 250 TPY or greater may have merit from a cost-benefit perspective. At this time, based on the available information, the Panel recommends that, at minimum, EPA propose to set the above-the-floor threshold at 250 TPY for small businesses and seek comment on the alternatives.

#### **9.4.8 Propose to set the new source floor standards at the existing source floors for sources that emit less than 100 TPY**

For new sources that emit 100 TPY or more of HAP, EPA considers the best control to be add-on controls that reduce emissions from a source by 95 percent. The Panel recommends that EPA evaluate this control based on the entire affected source. For facilities that emit less than 100 TPY, the Panel recommends that EPA not consider add-on controls to be best control. Small facilities do not have the technical expertise to operate and maintain these controls and are likely to have more frequent start-ups and shutdowns that would degrade control effectiveness. As a result, it is difficult to say what level of performance small facilities can reliably achieve with such controls.

For these small new sources, the Panel recommends that EPA propose to set the new source floor equivalent to the existing source floor. In the reinforced plastics composites industry, there is great heterogeneity of products and product characteristics. The Panel does not believe that in this industry the one facility in a specific operational group that uses the lowest HAP resin should necessarily be regarded as the best controlled facility in that group.

SERs also expressed concern that they would be unable to grow, maintain, and modernize because they would become subject to the new source floor. Several SERs requested the opportunity to review the definition of reconstruction before EPA proposed the rule. One suggested that EPA define a reconstruction as any expenditure that exceeds 50 percent of the cost of rebuilding the entire facility. If a facility spends more than that at any time, that facility would become subject to the new source floor. Others suggested similar definitions, and also recommended that facilities be allowed to spend any amount on pollution prevention technologies without becoming subject to new source floor, since pollution prevention technologies are intended to be environmentally beneficial. Based on the input we received on this issue, the Panel believes that EPA should use this definition as its starting point and recommends that EPA explore this further as it develops the proposed rule.

#### **9.4.9 Reconsider Estimates of Cost of Add-on Controls**

One SER retained a consultant to study the affordability and technical feasibility of controlling HAP emissions using concentration and thermal oxidation (the add-on control most likely to be used) at 18 facilities. The study reported costs that differed significantly from EPA's estimates. Several SERs cited this report in comments and recommended that EPA reconcile the differences before proposing the rule. The Panel recommends that EPA reconsider its estimates in light of the findings of this study, and also include, in the preamble of the proposed rule, a discussion of the major findings, assumptions, and any limitations of this study. The Panel believes that there would be significant value in such a presentation for purposes of comparison and also to highlight the sensitivity of the estimates to varying assumptions.

#### **9.4.10 Evaluate ways to minimize the reporting and recordkeeping burdens under the rule**

SERs expressed concern that recordkeeping and reporting under the rule would be burdensome. The Panel recommends that EPA evaluate ways to minimize the recordkeeping and reporting burdens under the rule. For example, a SER suggested that facilities should be allowed to use purchasing records rather than daily consumption records to determine compliance. The Panel recommends that EPA consider providing facilities a "compliant resins" option, where facilities have the opportunity to certify, in lieu of detailed recordkeeping and reporting, that all resins and gel coats used at their facility are at or below the HAP content required to meet the point value applicable to the facility. Moreover, the Panel recommends that EPA evaluate how a facility could streamline recordkeeping and reporting under this rule with that under the Toxics Release Inventory.