National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Category: Printing, Coating, and Dyeing of Fabrics and Other Textiles

Summary of Public Comments and Responses on Proposed Rule

EPA-453/R-03-006
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National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Category: Printing, Coating, and Dyeing of Fabrics and Other Textiles

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Emission Standards Division
Research Triangle Park, North Carolina

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Table of Contents

Page

Table of Contents (continued)

Table of Contents (continued)

Table of Contents (continued)

Tables

1.0 INTRODUCTION

On July 16, 1992 (57 FR 31576), we published a list of source categories slated for regulation under section 112(c). The source category list included the Printing, Coating, and Dyeing of Fabrics source category. We proposed standards for and revised the title of this source category to Printing, Coating, and Dyeing of Fabrics and Other Textiles on July 11, 2002 (67 FR 45054). The title was revised to clarify the applicability of the proposed standards to HAP-emitting operations performed on textile substrates including, but not limited to, fabric.

The preamble for the proposed standards described the rationale for the proposed standards. Public comments were solicited at the time of the proposal. The public comment period lasted from July 11, 2002 to September 9, 2002. Industry representatives, regulatory agencies, environmental groups, and the general public were given the opportunity to comment on the proposed rule and to provide additional information during the public comment period. Although we offered at proposal the opportunity for oral presentation of data, views, or arguments concerning the proposed rule, no one requested a public hearing. A public hearing was not held.

We received a total of 35 letters with comments on the proposed rule. Commenters included individual companies with fabric coating, printing, slashing, dyeing, and finishing operations, industry trade associations, State regulatory agencies, other Federal Agencies such as the Department of Defense, and a trade association of air pollution control vendors. Copies of the comment letters are available for public inspection in docket number OAR -2003-0014 (formerly A-97-51).

The purpose of this document is to present the EPA's responses to the comments on the proposed rulemaking. An index of commenters is presented in Table 1-1. Many of the comment letters contain multiple comments regarding various aspects of the rulemaking. For the purpose of orderly presentation, the comments are categorized by the following topics:

- Chapter 2.0 Impacts Analysis
- Chapter 3.0 Rule Requirements

TABLE 1-1. INDEX TO COMMENTERS ON THE PROPOSED NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS: PRINTING, COATING, AND DYEING OF FABRICS AND OTHER TEXTILES

Document Number	Commenter Name, Title, Affiliation
IV-D-01	J. Bardi Administrative Assistant Office of the President ASTM International West Conshohocken, PA
IV-D-2	R.M. Ridgeway, Ph.D, P.E. Environmental Regulatory Consultant Purdue University REM/Utilities West Lafayette, IN
IV-D-3	D.R. Schregardus Deputy Assistant Secretary Installations and Environment Office of the Assistant Secretary Department of the Navy Washington, D.C.
IV-D-4	J. O'Neill, P.E. Project Supervisor Trinity Consultants Atlanta, GA
IV-D-5	M. Frank The Boeing Company Arlington, VA

Document Number	Commenter Name, Title, Affiliation
IV-D-6	H.L. Goodrich Vice President, Secretary and General Counsel Dan River, Incorporated Danville, VA
IV-D-7	D.L. Chapman, Manager, Global Environmental Services The Goodyear Tire & Rubber Company Akron, OH
IV-D-8	J. O'Hearn Environmental Engineer Panolam Industries International, Incorporated Shelton, CT
IV-D-9	L. Boyd Environmental Engineer Rodel, Incorporated Newark, DE
IV-D-10	D.C. Foerter Deputy Director Institute of Clean Air Companies (ICAC) Washington, D.C.
IV-D-11	A. Chieves Corporate Manager, Environmental Avondale Mills, Incorporated Sylacauga, AL
IV-D-12	M.Y. Kinter Vice President - Government Affairs Screenprinting and Graphic Imaging Association International (SGIA) Fairfax, VA
IV-D-13	R.H. Barker Vice President American Fiber Manufacturers Association, Incorporated Arlington, VA

Document Number	Commenter Name, Title, Affiliation
IV-D-14	M.W. Huggins Director of Environmental Affairs Wellman, Incorporated Johnsonville, SC
IV-D-15	M.S. Hubbard Executive Vice President The American Yarn Spinners Association (AYSA) Gastonia, NC
IV-D-16	P.S. Vincent President & Chief Executive Officer Southern Mills, Incorporated Union City, GA
IV-D-17	J. Eapen Vice President, Environmental, Health and Safety Department American & Efird, Incorporated Mount Holly, NC
IV-D-18	J. Summers Chairman, Textile and Carpet Industry MACT Coalition Atlanta, GA
IV-D-19	W. Braun President, The Carpet and Rug Institute Dalton, GA
IV-D-20	V.D. Bell Executive Vice President, Operations Shaw Industries, Incorporated Dalton, GA
IV-D-21	B.A. Vassey President and Chief Executive Officer Virginia Manufacturers Association Richmond, VA

Document Number	Commenter Name, Title, Affiliation
IV-D-22	E.C. Roberts, Ph.D., Director and J.E. Taylor, P.E., M.S.C.E., Senior Environmental Engineer Environmental Department WestPoint Stevens West Point, GA
IV-D-23	S.V. Capone Manager, Air Regulatory Programs, Environmental Health and Safety GE Plastics General Electric Company (GE) Pittsfield, MA
IV-D-24	D.J. Krueger Senior Environmental Engineer 3M Environmental Technology and Safety Services 3M Company St. Paul, MN
IV-D-25	G.M. Garlick, P.E. Senior Environmental Affairs Manager Burlington Industries, Incorporated Greensboro, NC
IV-D-26	T.C. Edwards, II, Counsel and A.H. McConnell, Counsel Kilpatrick Stockton, L.L.P. Raleigh, NC On behalf of Arteva Specialties, S.a.r.l. d/b/a KoSa (KoSa)
IV-D-27	R.A. Odom, Jr. Vice President, Environment, Health and Safety Springs Industries, Incorporated Fort Mill, SC
IV-D-28	D.A. Wood, CHMM Environmental Coordinator Mohawk Industries, Incorporated Dalton, GA
IV-D-29	R.B. Tabakin Director Regulatory Services Cytec Industries, Incorporated West Paterson, NJ

Document Number	Commenter Name, Title, Affiliation
IV-D-30	T.J. Norberg Vice President, Environment and Resource Recovery Rubber Manufacturers Association (RMA) Washington, D.C.
IV-D-31	R.C. Methier Chief, Air Protection Branch Environmental Protection Division Department of Natural Resources State of Georgia Atlanta, GA
IV-D-32	L. Mashburn Plant Manager Universal Textile Technologies Dalton, GA
IV-D-33	James P. Tees President Nevamar Company, LLC Hanover, MD
IV-D-34	R. Tabakin Director, Regulatory Services Cytec
IV-D-35	Maria del C. Bayon Program Manager Environmental Management Division National Aeronautics and Space Administration Washington, DC

2.0 IMPACTS ANALYSIS

2.1 CHARACTERIZATION OF HAP EMITTED

Comment: Four commenters (IV-D-16, IV-D-18, IV-D-22, and IV-D-27) submit that EPA's characterization of HAP emitted from affected sources grossly misrepresents the traditional textile industry and does not reflect data submitted by industry. Three commenters (IV-D-19, IV-D-20, and I-D-32) submit that the organic HAP noted are not typical of the *carpet* manufacturing process. The commenters assert that EPA's discussion of the health effects associated with HAP emissions from textile operations in the proposal preamble, offers a misleading view of the HAP emissions from textile and carpet manufacturing companies and their processes. Commenters IV-D-16, IV-D-18, IV-D-22, and IV-D-27 note that the emission data submitted to EPA by the American Textile Manufacturers Institute (ATMI) at the time represented over 70 percent of the U.S. textile industry and showed that methanol, ethylene glycol, and glycol ethers accounted for nearly two-thirds of total HAP emissions. All seven commenters request that this section of the preamble be revised to be more specific as to which industry sectors are responsible for the largest bulk of HAP emissions, either on a percentage or mass emissions basis. The commenters also believe it would be more appropriate to state that no adverse health effects from textile or carpet industry HAP emissions have ever been recorded or proven.

Response: The health effects discussion in the proposal preamble reflects the organic HAP emissions for the entire source category. Almost 82 percent of baseline organic HAP emissions are from the web coating and printing subcategory. Therefore, most of the health effects associated with organic HAP emissions from the source category are attributable to emissions from the web coating and printing subcategory. This is clarified in the promulgation preamble.

2.2 COSTS IMPOSED BY PROPOSED SUBPART

2.2.1 Failure to Consider Key Costs

Comment: Five commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) claim that EPA incorrectly performed the economic analysis by failing to consider key cost ramifications of the proposed subpart. The commenters believe that EPA's estimate of cost impacts is extremely low since the majority of the 135 major sources considered by EPA will have to install costly controls to meet the proposed MACT floor compliance levels. The commenters note that for the coating facilities to add capture and control systems, the capital cost investment will be in the range of $500,000 to $1 million per facility, which is significantly more than the capital cost per facility applied by EPA. The commenters also assert that EPA did not consider the cost of shutting down certain facilities, such as

facilities producing specialty Kevlar/Nomex products that cannot comply with the proposed finishing compliance options. In addition, the commenters point out that EPA didn't account for the costs to new major sources resulting from the assumption that HAP usage equals HAP emissions.

Response: Contrary to the commenters' implication that we applied a capital cost per facility to estimate the capital investment required to comply with the proposed rule, a rigorous approach was followed to estimate the compliance costs. First it should be noted that of the 135 facilities considered to be potential major sources of HAP emissions, 61 facilities are in the web coating and printing subcategory. These were the facilities that were considered to potentially incur the costs of emission capture and control systems.

Of the 61 facilities with web coating and printing operations, the database used to determine MACT for this source category contained sufficient non-CBI information from 16 facilities that are major sources to calculate a facility organic HAP overall control efficiency (OCE). Two of these facilities reported OCE greater than 97 percent as determined using EPA test methods, and therefore are in compliance with the proposed OCE limit. The remaining 14 facilities will be required to take measures to reduce organic HAP emissions either through coatings reformulation or through adding or upgrading emission control systems.

Information needed to estimate the compliance costs that would be incurred by web coating facilities subject to the printing, coating, and dyeing of fabrics and other textiles NESHAP that are owned by small businesses (hereafter referred to as the small business database) was also collected (see memorandum at page 9-1 of the Technical Support Document: Printing, Coating, and Dyeing of Fabrics and Other Textiles Proposed NESHAP [Docket No. OAR-2003-0014, formerly A-97-51, Document No. II-A-11]). The small business database includes information on 20 facilities (3 of which are also in the database used to determine MACT for this source category). Of the 17 facilities in the small business database that are not in the database used to determine MACT for this source category, 5 were determined to be meet one of the proposed emission limit options. The remaining 12 facilities owned by small businesses will be required to take measures to reduce HAP emissions.

Because 73 percent of the facilities in both the database used to determine MACT for this source category and in the small business database (24 of the 33 facilities) already have controls in place, and because of the likelihood that organic HAP are required in certain coatings to achieve desired performance characteristics, we assumed facilities needing to reduce HAP emissions to comply with one of the compliance options will do so either by upgrading existing controls or installing controls if emissions are currently uncontrolled.

We examined the capture and control efficiencies reported by each facility with existing add-on control systems that do not achieve the emission limits required under the rule to determine the most cost-effective measure needed to reach compliance, e.g., a facility with a 97 percent efficient control device but less than 100 percent capture efficiency will need to install enclosures on application stations to meet a facility OCE of 97 percent. Similarly, for the 9 facilities that are currently uncontrolled, we evaluated applicable controls to determine the most cost-effective type of add-on control device that could be installed to attain compliance. It was found that facilities in the database used to determine MACT for this source category which apply different types of coatings to industrial fabrics report using

thermal oxidizers; facilities in this database applying coatings with only one or two solvents report using catalytic oxidizers or carbon adsorbers.

A model plant approach was used to estimate the compliance costs associated with installing and upgrading engineering controls (see memorandum at page 7-1 of the Technical Support Document: Printing, Coating, and Dyeing of Fabrics and Other Textiles Proposed NESHAP [Docket No. OAR-2003-0014, formerly A-97-51, Document No. II-A-11] for a description of the estimation of compliance costs for coating model plants). The nationwide costs were calculated using the model plants to estimate the costs of bringing each of 14 facilities in the database used to determine MACT for this source category and 12 facilities in the small business database into compliance with the proposed emission limits. These costs were then used to extrapolate this to a nationwide cost based on organic HAP emissions from major sources for the subcategory, and adding costs for controlling methylene chloride emissions from the 2 major facilities reporting methylene chloride emissions in the TRI database (neither of which is in database used to determine MACT for this source category or is owned by a small business). For each of the 26 facilities in the database used to determine MACT for this source category and small business database, the most cost-effective add-on control measure (e.g., upgrading capture efficiency by adding PTE to application stations, or if no add-on controls are in place, the installation of a complete system including PTE and add-on control device) was applied to bring the facility into compliance with one of the proposed emission limits. The model plant costs included costs of installing, upgrading, operating and maintaining add-on control systems. The nationwide total capital investment required for web coating and printing facilities to add and upgrade add-on control systems was estimated as $17.6 million (in 1997 dollars) and the nationwide annualized cost was estimated as $5.6 million.

The dyeing and finishing subcategory compliance options were based on the use of low-HAP materials. During the data collection effort to support the MACT floor determination, we held numerous stakeholder meetings and made eight site visits to facilities with dyeing and finishing operations. Qualitative information concerning pollution prevention measures gathered from the stakeholder meetings and site visits indicated that there would be substantial costs incurred in reducing the formaldehyde content of permanent press resins. No concerns were expressed about the cost of reformulating other dyes and finishes. Therefore, we collected information from Cotton Incorporated, a research and marketing company, and two textile chemical suppliers regarding the incremental cost of non-formaldehyde permanent press finish versus permanent press finish with formaldehyde (see memorandum at page 8-1 of the Technical Support Document: Printing, Coating, and Dyeing of Fabrics and Other Textiles Proposed NESHAP [Docket No. OAR-2003-0014, formerly A-97-51, Document No. II-A-11] for a description of the estimation of the incremental cost of non-formaldehyde permanent press versus permanent press finish with formaldehyde). We estimated an incremental cost of approximately 4 cents per pound of finished fabric more than the cost of finishing with a formaldehyde resin, resulting in nationwide annual reformulation costs of approximately $7.5 million.

In addition, monitoring, reporting, and recordkeeping (MRR) costs were estimated. Respondents (i.e., owners and operators of the 135 printing, coating and dyeing major facilities subject to the requirements of the final rule) are required by law (40 CFR 63, Subpart A) to submit one-time notifications and one-time reports on compliance status and performance test results. Respondents also

must develop and implement a Startup, Shutdown, and Malfunction Plan and submit semiannual reports if an event is inconsistent with the plan. Semiannual reports are required for periods of operation during which measured emissions deviate from an applicable limit or control device operating parameters are outside of the established ranges. General recordkeeping requirements applicable to all NESHAP require records of applicability determinations; test results; startup, shutdown, or malfunction events; deviations; performance test reports, monitoring records, and all other information needed to determine compliance with the applicable standard.

We estimated that the public MRR burden associated with the proposed rule would average 213 hours per year per facility for each year after the date of promulgation of the rule. The total annualized costs associated with MRR were estimated at $1,403,670; the total capital costs were estimated at $1,156,442.

In response to the commenters' assertions that we did not consider the cost of shutting down certain facilities that cannot comply with the proposed finishing options, the final rule has been revised to allow the use of add-on control devices at facilities with specialty dyeing and finishing operations to demonstrate compliance (see Response 1 of Section 3.4.12 in this document). In addition, the final rule has been written to allow facilities to determine the fraction of organic HAP in dyeing and finishing materials that will be discharged to wastewater and not emitted to the atmosphere (see Response 1 of Section 3.8.1 in this document), and the fraction of organic HAP in reactive materials that is bound in the coating or finishing materials or to the substrate and not emitted to the atmosphere (see Response 1 of Section 3.4.8 in this document). These revisions will allow for better estimates of HAP emissions from these processes at a source, which in turn will make it easier to determine major source or area source status.

2.2.2 Recordkeeping and Reporting Costs

Comment: Commenter IV-D-11 notes that the proposed rule allows a textile facility operator in most of the subcategories to choose from a variety of options to demonstrate compliance. The commenter believes that the accounting, recordkeeping, and reporting required when an operator switches between compliance options will be much more than just a clerical task and that the cost estimates EPA has allocated for these efforts probably are much too low. The commenter explains that an operator who is to make the choice of an option must be cognizant of the rules, how the elected process fits into the definitions, what records must be maintained and subsequently reported, and how the process compares to the compliance test demonstration (where applicable). The commenter asserts that these determinations will require more than just clerical-type recordkeeping and could have a chilling effect on future product development.

Commenter IV-D-11 also believes that the average expected burden for recordkeeping and reporting of 213 labor hours per source seems to be painfully low. The commenter submits that depending on the scope of operations at the facility many more (emphasis added by commenter) than four hours per week will be required to maintain all of the prescribed records. The commenter notes that some sources will have to nearly duplicate (in another format perhaps) records and reporting for compliance with VOC rules and asks if it is possible to streamline the proposed requirements to

coordinate the multiple recordkeeping requirements into "one" for those so affected.

Response: Multiple compliance options are written in the final rule to allow flexibility. We anticipate that a facility will choose the most cost effective compliance option that best fits the range of operations and organic HAP emissions typical for the facility, thereby, limiting the amount of switching between compliance options required to comply with the final rule. It should also be noted that the monitoring, reporting, and recordkeeping (MRR) estimates referred to by the commenter are averages used to produce nationwide cost estimates, a particular facility could incur higher or lower costs depending on the number of process operations subject to standards, the compliance options chosen, and the sophistication of the process monitoring/recordkeeping system used by the facility. For example, a facility using a Supervisory Control and Data Acquisition (SCADA) system to monitor production and/or add-on control equipment operation will have a centralized database of the product run, materials used, and process and control device operating parameters to support the compliance determination. A facility using a SCADA system to monitor production should incur less than the estimated average MRR costs, whereas a facility with a less sophisticated system might incur more than the estimated average MRR costs. Therefore, the monitoring, reporting and recordkeeping estimated costs in the final rule have not been revised.

2.2.3 Indirect Costs of Compliance

Comment 1: Commenter IV-D-29 notes that existing thermal oxidizers will likely need to increase the combustion temperature to assure that the required 97-98 percent destruction efficiency is routinely achieved. The commenter submits that this will increase fuel use and result in increased PM, CO, NO_x, and CO_2 emissions. For plants located in significant ozone non-attainment areas, this will trigger RECLAIM-type NO_x control requirements resulting in still further capital investment and increased operating costs. EPA has failed to account for such indirect costs of compliance in its economic or environmental impact analysis of the rule proposal.

Response 1: We acknowledge that some existing affected sources will need to increase the combustion temperature of existing thermal oxidizers to comply with one of the compliance options in the final rule and that if an affected source is located in a significant ozone non-attainment area, RECLAIM-type NO_x control requirements could be triggered. However, the final rule allows for multiple compliance options, including emission rate compliance options that can be met through reformulation of coatings rather than control system upgrades.

As described in the Technical Support Document for the proposed standards (see Docket No. OAR-2003-0014, formerly A-97-51, Document No. II-A-11), in order to estimate web coating and printing subcategory compliance costs, we assumed facilities would reduce organic HAP emissions by upgrading existing controls or by installing controls if emissions are currently uncontrolled. Even with this conservative assumption, our analysis of the most cost effective measures to comply with either the OCE limit or the emission rate with add-on controls for facilities with oxidizers, reflects that this will be done through the addition of permanent total enclosures, rather than thermal oxidizer upgrades. For the

26 facilities in our coatings database for which we could estimate emission control system requirements (9 facilities were uncontrolled and were assumed to install new emission control systems with either oxidizers or carbon adsorbers), we determined that 3 new oxidizers, 5 oxidizer upgrades, and 56 permanent total enclosures would be needed. The 26 facilities for which control costs were estimated, accounted for almost half of the estimated nationwide organic HAP emissions from the web coating and printing subcategory (2,326 tons of the estimated 4,797 tons of organic HAP emissions nationwide).

To account for the indirect costs of compliance associated with RECLAIM-type NO_x control requirements, would require site specific information regarding the compliance option chosen, measures taken to achieve compliance, and ozone attainment status of the county in which the facility is located, for each web coating facility subject to the final standards. In the absence of this information, and considering the small number of facilities likely to incur such costs, we have not accounted for the indirect costs of compliance cited by the commenter in the final rule economic and environmental impact analyses.

Comment 2: Commenter IV-D-29 is concerned that the proposed minimum capture velocity, or any change in process operating conditions or product formulation may require re-qualification of the many aerospace products manufactured by companies within the source category. The commenter asserts that as pre-preg/advanced composite material products are used in aerospace and commercial aircraft and numerous other applications that have very restrictive process modification limitations, this may have very significant implications and cost ramifications. The commenter submits that re-qualification is a very costly, time consuming and problematic process and believes that EPA has failed to adequately account for such indirect costs in its economic analysis.

Response 2: Upon review and evaluation of the data submitted by the commenters, the final rule has been written to allow a 12-month rolling average compliance period for sources using the emission rate compliance option. This would allow for the month-to-month variability in organic HAP content of coating, dyeing, and finishing materials. This eliminates or reduces the need for process modifications that would trigger re-qualification of products.

2.2.4 Ability to Pass Compliance Costs to Customers

Comment: Four commenters (IV-D-11, IV-D-18, IV-D-21, and IV-D-25) challenge EPA's assumption that the textile industry can pass on the additional costs of compliance to its customers. Commenters IV-D-18, IV-D-21 and IV-D-25 assert that the industry will not be able to pass on *any* (emphasis by commenters) significant part of the costs associated with meeting the MACT standard and, therefore, domestic textile companies will be hard-pressed to compete with low-priced imports from facilities in foreign countries that will not have to meet these strict and costly standards. These three commenters submit that according to U.S. Department of Labor data, plant closings and other mass layoffs in the textile industry have resulted in a decline of nearly 200,000 workers or almost one third of the total textile industry workforce. Commenters IV-D-11 and IV-D-18 also note that foreign textile producers will not incur these extra costs and Commenter IV-D-11 postulates that it is likely the

compliance costs will result in more plant closings and job losses in the domestic textile industry.

Response: We agree that foreign competition could influence the ability of domestic producers to raise prices. Therefore, we modified our economic model to reflect strong international competition that may prevent domestic producers in the fabric finishing market from increasing prices. The model assumes that any change in domestic production in this market will be passed to foreign producers. The fabric coatings market is assumed to be able to increase prices to a minimal extent. Based on the estimated compliance costs of the rule and the predicted changes in the coating and finishing markets, the estimated annualized social cost of the final rule is projected to be $14.5 million (2000 dollars).

It is projected that domestic producers in the fabric and textile industries will absorb $12.9 million out of the total social cost, while only $1.6 million will be passed through to consumers (in the fabric coatings market only). Domestic production in the fabric finishing market are predicting to decrease by 0.02 percent and thus transfer production to foreign producers, which represents an increase of 6.48 percent of total foreign production. With a minimal price increase in the fabric coatings market, domestic production is estimated to decrease by 0.08 percent, while foreign production is estimated to increase by 0.04 percent.

3.0 RULE REQUIREMENTS

3.1 APPLICABILITY

3.1.1 Applicability to Major Sources Only

Comment 1: Commenter IV-D-9 notes that the preamble fails to recognize that a source could become minor and may be exempt from the MACT standards even after promulgation of the rule if the facility reaches area source status prior to any substantive compliance date.

Response 1: A facility may limit it's potential HAP emissions to below major source thresholds. However, in order to be considered a synthetic minor source for HAP emissions for the purposes of the final rule, the permit limitation must be federally enforceable, and it must be in place before the compliance date of the final rule.

Comment 2: Commenter IV-D-25 submits that applicability to the proposed MACT is being interpreted as follows: Area sources that are *not* major sources for HAPs (less than the 10/25 tons per year threshold) that are subject to a MACT that covers both area sources and Major Sources for HAPs are not covered by the rule. Thus, a facility that is covered by the Dry Cleaning MACT because of the presence of a lab dry cleaning machine used for fabric testing that is an "Area Source" by maximum potential emissions or by permit limitations is not subject to the rule. The commenter notes that facilities that take permit limitations to avoid being subject to the Textile MACT or other MACTs (i.e., Boiler MACT) will be reducing their HAP emissions which is consistent with the purpose of NESHAP.

Response 2: The final rule applies to fabric or other textile coating, printing, slashing, dyeing, or finishing operations or group of such operations that is a major source, or is located at a major source, or is part of a major source of HAP emissions, whether or not you manufacture the substrate. The coating, printing, slashing, dyeing, or finishing operations themselves are not required to be major sources of HAP emissions in order for them to be covered by the final rule. As long as some part of the facility where the operations are located (e.g., a process boiler or manufacturing operation associated with production of the final product) causes it to be a major source, the coating, printing, slashing, dyeing, and finishing operations are subject to the final rule.

3.1.2 Research and Development Facilities

Comment: Commenter IV-D-23 supports EPA's inclusion of an R&D exemption in the proposed rule. The commenter notes that in Section 112(c)(7) of the Clean Air Act Amendments of 1990,

Congress recognized the uniqueness of R&D facilities and that EPA has acknowledged that such a separate category is necessary "to assure equitable treatment of such facilities." (57 FR 31576).

Commenter IV-D-23 submits that the intent of proposed paragraphs §63.4281(c)(2) and (3) is unclear. The commenter believes the word facility and the definition of research or laboratory facility in §63.4381 could be read to mean that the research or laboratory facility must be a facility separate from any facility that is doing commercial coating, dyeing, etc. in order to be exempt from subpart OOOO applicability. At the commenter's site, research and laboratory operations are in the same building as commercial fabric coating operations, albeit a few hundred yards apart. The commenter notes that while paragraph (3) provides an exclusion for "not for commerce" operations, it does not include a "de minimus" provision. The commenter offers that their research facility will occasionally produce and sell coated fabric in small quantities for a customer's developing need, which would prevent them from excluding their research coating operation under paragraph (3) as written. The commenter submits that the research and laboratory operations are operated infrequently and do not have emissions approaching the HAP major source definition. The commenter does not believe that EPA intends to regulate their, or anyone's, research and laboratory operations. The commenter recommends that EPA slightly change the term being defined and then change the text of §63.4281(c)(2) to match the definition as follows:

> "Research or laboratory activities means activities whose primary purpose is for research and development of new processes and products..."

Then the text of §63.4281(c)(2) can be revised for clarity of EPA intent as follows:

> "(2) Coating, printing, slashing, dyeing, or finishing that are research and laboratory activities or that is part of janitorial..."

Response: Typically in this source category, research and development activities are conducted on web coating and printing lines or dyeing and finishing operations located within a manufacturing plant. These research and development operations are co-located with manufacturing lines in order to test the product at the same manufacturing variables (e.g., temperature and humidity) as those of the products currently being used. Therefore, the final rule language has been written to reflect this. The use of the terms research or laboratory operations, rather than facilities, will also make this language consistent with the affected source description in the final rule. The definition of research or laboratory facility has been written to reflect this change.

3.1.3 Eliminate Slashing as a Regulated Subcategory

Comment: Five commenters (IV-D-6, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) support EPA's decision to largely exclude slashing operations from applicability under the proposed rule. The commenters note however, that the non-applicability standard for slashing operations - no organic HAP - is the same as the compliance option for slashing found in proposed §63.4291(b). The commenters

request that, to remove this significant inconsistency and to apply the non-applicability criteria uniformly, EPA should eliminate slashing as a regulated affected source subcategory.

Commenter IV-D- 11 requests that if slashing is not exempted altogether, then the recordkeeping and reporting requirements should be minimal, e.g., a simple annual letter stating that the sizing materials consumed had less than 1.0 /0.1 percent HAP.

Response: Slashing operations are subject to the final rule requirements because they were determined to be an organic HAP emission point (i.e., methanol) for this source category. The MACT level of control for slashing operations was determined to be no organic HAP emissions. If slashing operations were not regulated by the final rule this would allow sources to use HAP-containing materials in their slashing operations, as a result, the determined MACT level of control would not have been met. We agree that the recordkeeping and reporting requirements should be minimal for this subcategory. The semiannual compliance reporting requirements have been revised to clarify that only the general facility and report date information and the no deviation statement need to be included in the report if no organic HAP-containing materials are used in the slashing operation.

3.1.4 Carpet Backcoating Operations

Comment 1: Four commenters (IV-D-18, IV-D-20, IV-D-27, and IV-D-32) support EPA's decision not to list polyurethane foam backcoating operations as a process subject to the proposed rule, since backcoating operations are a lamination process. To avoid any future uncertainties at regulated sources, commenters IV-D-18, IV-D-20, and IV-D-27 request EPA to clarify that diisocyanates used in polyurethane foam production are also not regulated by the proposed subpart.

Commenters IV-D-18, IV-D-20, and IV-D-27 assert that although the principle diisocyanate used in polyurethane foam backing operations is MDI (vs. TDI in other polyurethane manufacturing industries), the same logic that was applied in other MACT standards that addressed isocyanate processes (specifically Subpart III - Flexible Polyurethane Foam Manufacturing, and to a lesser extent Subpart MMMMM - Flexible Polyurethane Foam Fabrication) should apply in this case. The commenters note that in these other subparts, EPA recognized that although the diisocyanates were by definition *organic HAPs* (commenters' emphasis), the levels of HAP emissions were very low and were present in the exhaust streams at less than 1 ppm (FR 63 194, October 7, 1998 - Pages 53989-53990). As such, for compliance determination the sources regulated by the polyurethane Subparts only needed to consider and track HAP emissions from the auxiliary blowing agents (ABA) and HAP-based cleaners (except where diisocyanates were used to flush-clean the equipment in a closed-loop system and met certain work practice standards).

Commenters IV-D-18, IV-D-20, and IV-D-27 are concerned that, as currently written, the printing/coating subcategory could be interpreted to apply to polyurethane backing operations. The commenters request that EPA clarify this issue by either 1) defining that diisocyanates are not considered to be "regulated material" or "organic HAPs" as defined in §63.4381; or 2) excluding polyurethane backing from the definition of "coating operations" in §63.4381 when there are no HAP ABA or HAP-based cleaners used in the process (except where diisocyanates were used to flush-

clean the equipment in a closed-loop system and met certain work practice limitations).

Response 1: The lamination of paper and fabric is subject the requirements of the paper and other web coating NESHAP (40 CFR 63, subpart JJJJ). The final rule has been written to clarify this, and to clarify the applicability of this final rule to web coating lines where both fabric and other webs are coated on the same coating line. This exemption, as explained in Response 1 of section 3.1.5 in this document, states that web coating lines where both fabric and other webs are coated on the same coating line for use in flexible packaging, pressure sensitive tapes or abrasive materials, or where fabric is being laminated to a paper and other web substrate are subject to 40 CFR 63, subpart JJJJ.

Regarding the commenters' concern with the applicability of the rule to polyurethane foam backcoating operations, a review of the Production of Flexible Polyurethane Foam NESHAP Basis and Purpose Document for Proposed Standards (EPA-453/D-96-008a) confirms that there are minimal diisocyanate emissions from polyurethane backcoating. In the polyurethane foam production process, diisocyanate is used as a reactant in the foam process. The diisocyanate is added at the foam mix head and is bound in the foam and not released to the atmosphere. Similarly, in the carpet polyurethane backcoating process, the diisocyanate is added at the coating head and not released from the carpet backcoating. Therefore, the coating operation definition in the final rule has been written to exclude polyurethane foam backcoating operations.

Comment 2: Commenter IV-D-19 points out that a common process of carpet manufacturing is referred to as backcoating. The commenter submits that EPA has failed to recognize backcoating as a laminating process that is markedly different in procedure and purpose from the solvent based coating of traditional textiles. Similarly, commenter IV-D-32 requests that EPA review solvent coating (as a process) vs. carpet backcoating/lamination processes, since there are some differences that have a bearing on HAP production. Commenter IV-D-19 requests that the backcoating of carpet be clarified by definition in §63.4381 as a process unlike the regulated coating processes of other textiles.

Response 2: We do not agree that the carpet backcoating process is different in procedure and purpose from the solvent based web coating of traditional textiles. In the carpet backcoating process, the carpet is usually coated using a roller followed by a doctor blade to spread the coating and force it into the base of the tufts in the primary backing. Knife over roll coating is an application method used in traditional textile web coating ranges. The coating applied in the carpet backcoating process acts as an adhesive for the pile yarns as well as the secondary backing. After the secondary backing is positioned onto the carpet, the materials are pressed together by a marriage roller. The laminate then passes through a drying oven, again, as is the case in the solvent based coating of traditional textiles. The carpet backcoating process is amenable to the emission capture and control techniques that are the basis of the coating MACT floor.

However, carpet backcoating is different from solvent coating in terms of the organic HAP emissions potential. Data submitted by the carpet industry to EPA (Docket No. OAR-2003-0014, formerly A-97-51, Document Nos. II-D-8, II-D-14, II-D-17, and II-D-22) indicate that most the organic HAP contained in backcoating materials are below the reportable quantities of 0.1 percent by

mass or more of OSHA-defined carcinogens and 1 percent or more for other organic HAP compounds. One carpet facility did report being classified a major source of organic HAP emissions because of vinyl acetate emissions from the PVC backcoating of commercial carpet (Docket No. OAR-2003-0014, formerly A-97-51, Document No. II-D-17). Consequently, carpet backcoating is a regulated web coating process in the final rule.

The final rule exempts web coating operations conducted at a source that uses only regulated materials that contain no organic HAP. Based on information submitted by the carpet and rug manufacturing industry, we expect most carpet backcoating operations to be able to qualify for this exemption.

3.1.5 Overlap with Other Regulations

Comment 1: Commenter IV-D-31 observes that the preamble (page 46031) describes exemptions to the proposed rule for certain tape and tire manufacturing activities covered by the Paper and Other Web Coating MACT and the Tire Manufacturing MACT. The commenter claims the proposed rule text fails to mention any of these exemptions.

Response 1: These explicit exemptions were inadvertently omitted from the proposed rule language. The final rule has been written to exempt web coating lines subject to 40 CFR 63, subpart JJJJ applying coatings to both paper and other web and fabric substrates for use in flexible packaging, pressure sensitive tapes or abrasive materials or where fabric is being laminated to a paper and other web substrate. The final rule has also been written to exempt web coating lines that apply coatings to textile cord used in both the production of belts and hoses and in tire manufacturing subject to 40 CFR 63, subpart XXXX .

Comment 2: Commenter IV-D-23 points out that the preamble text of this proposed rule has created duplicate applicability for some sources, i.e., coating lines that coat both paper and other web and fabric and other textile substrates. The commenter refers to the preamble of this proposed rule (67 FR 46031) which states that if you operate a coating line that applies coatings to both paper and other web and to fabric and other textile substrates, then the coating line is subject to this rule. The commenter also notes, however, that the preamble of the proposed Paper and Other Web Coating NESHAP (65 FR 55334), that preceded this proposed NESHAP by almost two years, states that if coatings are applied to both paper and other web and to fabric and other textile substrates, then the coating line is part of the paper and other web source category and not subject to the future fabric coating NESHAP. Commenter IV-D-23 requests clear direction in both promulgated rules preambles and rule text to allow affected sources to determine which of these NESHAPs applies to coating lines that coat both fabric and paper or other webs.

Commenter IV-D-9 operates a coating line that coats a plastic roll good substrate (potentially subject to proposed 40 CFR 63, subpart JJJJ [POWC]) and a non-woven fabric roll good substrate (potentially subject to proposed 40 CFR 63, subpart OOOO [Fabric and Other Textiles Printing, Coating, and Dyeing]). As with commenter IV-D-23 above, commenter IV-D-9 points out the

duplicate applicability indicated by the preambles to the two proposed rules. The commenter seeks clarification of EPA's intent in cases of dual applicability and requests that such dual coating lines be allowed to meet either respective coating standard or pick a MACT of its choice.

Commenter IV-D-8 submits that less than 1 percent of the coating at their facility is fabric (the rest is paper) and asserts that since their coating operation would be subject to more stringent fabric standards it would be placed at a disadvantage within their industry. The commenter requests a primary product determination and applicability determination for process units producing multiple products, similar to other MACTs (i.e., Amino/Phenolic Production MACT) and notes that a similar exemption was provided in the NSPS subpart VVV. Under the exemption provided in subpart VVV, the commenter's facility is below the de minimus values of VOC used to trigger control requirements and is only subject to the recordkeeping requirements. The commenter notes that providing a similar primary product determination will allow the facility to remain subject to a single MACT standard (POWC) but also address EPA's concern if the facility were to increase production of coated fabric.

Similarly, commenter IV-D-29 requests exemption for any drying tower system that produces predominately paper and other web based substrate products and lesser quantities of fabric coated products from the Fabric/Textile Coating MACT and instead be solely regulated under the POWC MACT.

Commenter IV-D-9 believes a facility should be deemed to be in compliance with all overlapping regulations upon compliance with one of the MACT standards. Specifically, the commenter operates a coating line that coats a plastic roll good substrate (potentially subject to POWC) and a non-woven fabric roll good substrate and request that such dual coating lines be allowed to pick a MACT of its choice

Response 2: The Paper and Other Web Coating NESHAP applies to web coating lines engaged in the coating of fabric for use in flexible packaging, pressure sensitive tapes and abrasive materials. The final rule has been written to clarify that web coating lines where both fabric and other webs are coated for use in flexible packaging, pressure sensitive tapes or abrasive materials or where fabric is being laminated to a paper and other web substrate are subject to 40 CFR 63, subpart JJJJ.

For other web coating lines engaged in the coating of fabric and other webs on the same web coating line, we have written the final rule whereby a source can determine which MACT standard they must comply with based on the predominant surface coating activity conducted on the web coating line. Predominant activity has been determined to be 90 percent or more of the mass of substrate coated. For example, a web coating line that coats 90 percent paper and 10 percent fabric substrates would have to comply with the Paper and Other Web NESHAP (40 CFR 63, subpart JJJJ).

Comment 3: Commenter IV-D-23 believes that the proposed rule does not adequately address overlap with at least two other regulations (40 CFR 60, subpart VVV and 40 CFR 63 subpart JJJJ). The commenter's facility operates a coating process wherein fiberglass is coated with a resinous material and then dried/cured. There are currently two process lines at the commenter's site. The first process line has coated, and may in the future coat, paper or other non-metallic web substrates. The second of the two process lines is an affected facility under, and in compliance with, 40 CFR 60,

subpart VVV. This process line has not coated paper, but could. The first process line predates the effective date of the NSPS and has not been reconstructed or modified since the NSPS was proposed.

Commenter IV-D-23 believes that the proposed rule is fairly clear that these two process lines and other equipment, combined, will be the affected source at the facility under the proposed subpart OOOO. However, the commenter claims preamble language instructing that an individual coating line that coats paper and fabric is subject to the fabric NESHAP and not the POWC NESHAP, creates confusion for a site with multiple coating lines trying to define the affected source under both subparts OOOO and JJJJ. For example, the commenter submits that if a third coating line were installed at the commenter's facility for the purpose of coating only paper or other webs there would be a question of whether this new line would be a separate affected facility under subpart JJJJ or would become a part of the subpart OOOO affected facility. The commenter believes the line would be a separate affected facility under subpart JJJJ. The commenter further questions that if a site had one or more coating lines comprising an affected facility under subpart JJJJ and needed to add a new coating line or modify an existing coating line to coat fabric, would the new or modified coating line be a separate affected facility at the site under subpart OOOO or would it make all coating lines at the site part of an affected facility under subpart OOOO. The commenter believes it would become a separate affected facility under subpart OOOO and recommends that to avoid post-promulgation confusion, EPA must clearly explain how coating lines will be assigned to affected facilities under both subparts and include examples in the preamble such as the two provided above by the commenter to explain how the two rules will operate.

Response 3: To clarify that the affected source in the final rule are only web coating and printing operations that coat fabric and other web substrates, the affected source in the final rule is defined as the collection of all items listed in paragraphs (b)(1) through (5) of §63.4281 that are used in fabric and other textiles web coating and printing operations. Therefore, in the case of the commenter's example of a third coating line being installed at the commenter's facility for the purpose of coating only paper or other webs, the web coating line would be a separate affected facility under subpart JJJJ. Similarly, in the commenter's second example involving the addition of a new coating line or modification of an existing coating line to coat fabric, the new or modified web coating line would be a separate affected facility at the site under subpart OOOO.

Also, as is explained in Response 2 above, the final rule has been written to include provisions for affected sources potentially subject to the requirements of multiple NESHAP to clearly and readily determine which subpart the operations are subject to.

Comment 4: Commenter IV-D-05, as part of their manufacturing operations, engages in two small-scale surface coating operations which could be subject to the proposed rule, *but which are already addressed by the Aerospace NESHAP* (emphasis added by commenter). These operations involve the coating of woven reinforcements on aircraft fuel lines and marking of certain aircraft textile parts. The commenter notes that both of these operations involve the surface coating of aerospace vehicles or components (*aerospace vehicle or component* means any fabricated part, processed part, assembly of parts or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles) with specialty coatings (*specialty*

coating means a coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection. Individual specialty coatings are defined in appendix A to this subpart and in the CTG for Aerospace Manufacturing and Rework Operations.) [The definitions of aerospace vehicle or component and specialty coating are from §63.742 of the Aerospace NESHAP and were provided by the commenter.] The commenter submits that these operations entail surface coating of parts and products that are addressed by the Aerospace NESHAP, and as such, are already regulated by the Aerospace NESHAP and should not be further regulated under the proposed Fabric Coating rule.

Commenter IV-D-5 seeks clarification in the preamble to the Fabric Coating rule that activities which are addressed by a NESHAP for another source category but for which no control requirements are imposed are nonetheless "covered by" that other NESHAP for purposes of determining the applicability of other future coating rules such as the Fabric Coating NESHAP. The commenter also submits language for inclusion in Section 63.4281(c) of the final rule as follows: "This subpart shall not apply to the surface coating of any parts or products covered by any other NESHAP in this part as of [DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. The commenter notes that this is important to aerospace companies because the Aerospace NESHAP does not impose additional control requirements on a small universe of specialty coatings, for which EPA determined that additional controls are not warranted. The commenter adds that the specialty coatings are critical to the performance of aerospace vehicles and no acceptable low VOC/HAP replacements exist that will impart essential performance criteria, including but not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary reflection or marking, sealing, adhesively joining substrates, rain erosion resistance, electric or radiation effect, and/or enhanced corrosion protection. According to the commenter, EPA worked closely with the Federal Aviation Administration (FAA) and the Department of Defense (DOD) during the development of the Aerospace NESHAP since determining what coatings to use is often influenced by strict FAA performance requirements or DOD specifications. The commenter notes that the fact that a coating operation has been excluded or exempted from a NESHAP or is otherwise not required to implement additional controls thereunder does not mean it is not "covered by that NESHAP", but rather, reflects EPA's affirmative determination that MACT for those operations is no controls.

Similarly to commenter IV-D-5 as summarized above, commenter IV-D-4 recommends that EPA specifically exempt aerospace components that are subject to the Aerospace and/or CTG from the proposed Printing, Coating, and Dyeing of Fabrics and Other Textiles MACT. The commenter cites the collaboration of EPA and FAA to revise potentially conflicting requirements between EPA and FAA regulations and to resolve those issues by developing HAP and VOC limits for compliant topcoats, primers, and specialty coatings as an alternative compliance method under the Aerospace NESHAP and CTG. The commenter specifically expresses concern with specialty coatings, which must meet individual performance standards particular to a specific design.

Commenter IV-D-4 points out that specialty coatings are sometimes applied to reinforced fabrics, then heat cured to produce aerospace products that are critical to flight integrity. One such application presented by the commenter involves the manufacturing of elastomeric fuel tanks used in both commercial and military aircraft. The manufacturing process involves the use of reinforced fabric which is coated and bonded with various aerospace specialty coatings, adhesives and sealants designed to meet specific performance criteria, e.g., military specifications define the design requirements that must be utilized in the testing and qualification of all elastomeric fuel tanks used in military aircraft. Some of the service conditions that must be met include flexing during vibration experienced during flight, impact loads during takeoff and landing (i.e., catapult landing during carrier operations), positive and negative pressures associated with hydraulic surges of fuel during flight, pressure loads during flight maneuvers, and hydraulic surges from gunfire and temperature (minus 65°F to 165°F). The commenter also cites the crashworthy and bulletproof tanks designed to withstand gunfire and to survive a downed aircraft that are manufactured using several of the aerospace coatings regulated under the Aerospace NESHAP and associated CTG. The commenter points out that in developing the Aerospace CTG (adopted by many states in their VOC and HAP regulations and state implementation plan [SIP]), EPA considered these performance criteria in developing VOC and HAP limits for fuel tank coatings, fuel tank sealants, fuel tank adhesives, rubber based adhesives, and other specialty coatings used in the manufacture of aerospace fuel tanks for both military and commercial applications. The commenter adds that aerospace major sources have spent significant time and money reformulating coatings to meet these aerospace air emission regulations as well as FAA and DOD performance requirements.

Commenter IV-D-4 closes by asserting that the proposed NESHAP contains control requirements and VOC/HAP limits that are inconsistent with the Aerospace MACT and CTG, and clearly do not consider the specialty function or performance criteria required by the application of aerospace specialty coatings to reinforced fabrics used to make aerospace components that are critical to flight integrity and safety. For this reason and the information provided above, the commenter requests that along with the exemptions planned for the Tire Cord Production NESHAP and the POWC NESHAP, EPA also exempt Aerospace major sources that are subject to the Aerospace NESHAP or to enacted state RACT regulations based on the Aerospace CTG.

Response 4: The Aerospace NESHAP applies to affected sources located at facilities that are engaged, either in part or in whole, in the manufacture or rework of commercial, civil, or military aerospace vehicles or components. The applicability section of the Aerospace NESHAP states that the subpart does not contain control requirements for the use of specialty coatings, adhesives, adhesive bonding primers, or sealants at aerospace facilities. The web coating of a fabric or other textile material that is performed by a supplier of the coated fabric or other textile material at a facility separate from the aerospace facility is not affected by the aerospace rule and, therefore, is subject to the final rule. The final rule allows for several compliance options other than reformulation. The web coating operations described by the commenter could comply with the final rule by using either the OCE, the emission rate limit with controls, or the oxidizer outlet concentration limit compliance option.

Comment 5: Commenter IV-D-35 submits that the commenter's facilities and programs are not major

sources for HAP emissions from activities engaging in coating, printing, slashing, dyeing, or finishing of textile materials. However, the commenter is concerned that this rule may adversely impact continued availability of textiles used in the "space suits" that make Extra-Vehicular Activity (EVA) possible in space. The commenter notes that astronauts depend upon the space suits and other EVA equipment for protection from the extreme environment of space and asserts that the performance of the suits is critical to the success of NASA's missions.

Commenter IV-D-35 points out that this NESHAP may cause vendors to introduce formulation changes or cease manufacture of such materials as the Space Shuttle Solid Rocket Booster thermal coating curtains and coatings on slings and tarps used in Ground Support applications. The commenter submits that whether vendors choose to make changes in coating formulation or simply phase out their products, either approach will require the commenter to conduct time-consuming and costly materials requalification testing efforts.

Commenter IV-D-35 points out that during the development of the Aerospace Industrial NESHAP (Part 63, Subpart GG), EPA carefully considered the rigorous technical requirements of space vehicles. According to the commenter, at that time, EPA decided to cover space vehicles under the Aerospace NESHAP, but exempt such vehicles from all requirements other than those for depainting. The commenter collaborated with EPA on that regulation, and believes that EPA intended to cover all space-related activities under this exemption in recognition of the extreme and unusual environments encountered in space, the carefully crafted vehicles, the special materials used to ensure the safety of astronauts and their critical equipment, and the insignificant HAP emissions resulting from the production of space vehicles and related equipment.

Commenter IV-D-35 therefore requests that all materials used in space-related operations, and in particular space suits for extra-vehicular activities, be considered space vehicles, and thus, be considered outside the scope of the proposed NESHAP for Printing, Coating, and Dyeing of Fabrics and Other Textiles.

Response 5: See Response 4 in this section of this document. The Aerospace NESHAP only applies to major sources. The Aerospace NESHAP does not provide an exemption for space vehicles except for depainting operations. Area sources are note covered by the final rule. The Aerospace NESHAP does not exempt all space-related activities because those activities are not related to aerospace vehicle's structural integrity.

Comment 6: Commenter IV-D-23 asserts that the third sentence of §63.4281(a)(1) is both confusing and unwieldy and as a practical matter would require anyone that coats fabric and any other substrate to review all other 40 CFR 63 subparts to determine if they are affected by some other subparts and not subpart OOOO. The commenter believes this is impractical and requests EPA to list in subpart OOOO coating operations that EPA wants to exempt from subpart OOOO and regulate under another part 63 subpart.

Response 6: As is explained in Response 1 of this section of this document, these explicit exemptions

were inadvertently omitted from the proposed rule language. The final rule has been written to include the appropriate exemptions. Nonetheless, we have not attempted to list and resolve all potential overlaps with existing and future rules.

Comment 7: Seven commenters (IV-D-9, IV-D-11, IV-D-16, IV-D-17, IV-D-18, IV-D-23, and IV-D-27) reported having coating lines that are already subject to the New Source Performance Standards of 40 CFR 60, subpart VVV that will also be subject to the proposed Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP. These seven commenters, as well as commenter IV-D-30, express concern with the statement in the preamble (67 FR 46031) that overlapping reporting, recordkeeping, and monitoring requirements may be resolved through the Title V permit. The commenters believe that this will cause confusion and unnecessary burden on facilities when interpretation is left to different permitting authorities. Commenter IV-D-30 notes that Title V does not give permitting authorities any new authority to issue permits outside the requirements of the NSPS and the NESHAP and believes that the language in the proposed rule is insufficient to assist in the resolution of overlap between the two rules. Commenters IV-D-11, IV-D-16, IV-D-17, IV-D-18, and IV-D-27 assert that sources that installed controls to be in compliance with the NSPS should not be penalized with extra monitoring, recordkeeping, and reporting. These five commenters offer as an example a facility that will be required to install expensive software to record operating limits every 15 minutes (averaged over 3 hours) when they are already performing continuous monitoring for compliance with the NSPS.

Commenters IV-D-11, IV-D-16, IV-D-17, IV-F-18, and IV-D-27 request that facilities subject to NSPS subpart VVV be allowed to continue with NSPS methodology for reporting, recordkeeping, and monitoring and to use such for compliance with the MACT as well. These commenters also request that compliance overlaps with other applicable federal and state regulations be considered in developing more flexible MACT monitoring requirements. Commenter IV-D-30 recommends that EPA make the reporting, recordkeeping, and monitoring requirements in the NESHAP consistent with those in the NSPS, to the extent possible. Commenter IV-D-9, who reports having some storage or blending units that may also be subject to the MON, requests that EPA modify the proposed regulation to state that the facility is deemed to be in compliance with all overlapping regulations upon compliance with one of the NESHAP.

Commenter IV-D-23 suggests that EPA should add another section to the rule to deal specifically with the overlap with 40 CFR 60, subpart VVV. The commenter believes EPA should craft the NESHAP to allow sources subject to both rules the option to comply only with the NESHAP. The commenter believes that allowing sites to consider all pollutants regulated under the NSPS to be pollutants regulated under the NESHAP and importing some language from the NSPS to the NESHAP so that the NESHAP is as stringent as the NSPS for certain affected NSPS affected facilities can do this. Commenter IV-D-23 submits the following specific rule text language to accomplish this:

> **"§63.4382 What compliance options do I have if I have sources that are affected sources under both this subpart and another subpart?**
>
> (a) Compliance with 40 CFR part 60, subpart VVV. After the compliance dates

specified in §63.4283, if you have a new or existing source that is part of an affected source subject to the provisions of this subpart that contains equipment that is part of an affected facility that is also subject to the provisions of 40 CFR part 60, subpart VVV, you may elect to apply this subpart to all such equipment. If you elect this method of compliance, you must meet the requirements of (a)(1) and (a)(2) of this section that apply to your equipment. Compliance with the provisions of this subpart, in the manner described in this paragraph (a), will constitute compliance with 40 CFR subpart VVV.

(1) You must consider all volatile organic compounds in such equipment for the purposes of applicability and compliance with this subpart, as if they were organic HAP.

(2) If the provisions of §60.742(c)(1) apply to equipment that is part of the affected facility in 40 CFR, part 60, subpart VVV, and that equipment is also part of your affected source under this subpart, you shall comply with the requirements of §60.742(c)(1), except as provided in paragraphs (a)(2)(i) through (a)(2)(ii) of this section.

(i) For an affected source that is a new source in this subpart, the 95 percent efficient control device requirement in §60.742(c)(1) shall not apply. Instead, the requirements of item 1 in Table 1 of this subpart shall apply.

(ii) For an affected source that is an existing source in this subpart, the 95 percent efficient control device requirement in §60.742(c)(1) shall not apply. Instead, the requirements of item 2 in Table 1 of this subpart shall apply."

Commenters IV-D-11, IV-D-16, IV-D-17, IV-D-18, and IV-D-27 also urge EPA to resolve numerous differences between NSPS subpart VVV and the proposed NESHAP, including VOC content measured with Method 24 vs. Method 311, the 95 Mg/yr exemption, the 90/95 percent total destruction vs. 97/98 percent, and solids calculations. Commenters IV-D-18 and IV-D-27 also request that EPA include a 5 percent variance on operating limits as in NSPS subpart VVV and other MACTs. Commenter IV-D-11 requests that the continued use of existing CPMS be allowed.

Response 7: We recognize that inconsistencies may occur between the NSPS and the final rule requirements. The NSPS were promulgated pursuant to Section 111 of the Clean Air Act and are based on the best demonstrated control of VOC emissions. The final rule is being promulgated pursuant to Section 112(d) of the Clean Air Act and are based on the maximum achievable control of HAP. Therefore, differences in test methods, exemptions, and emission limits are attributable to differences in the compounds subject to regulation and the basis of the emission limits. In addition, though both the NSPS and the NESHAP are technology-based standards, the NESHAP reflects improvements in technology that have been made in the decade between the proposal of the NSPS (April, 1987) and the collection of background information for the NESHAP.

Comment 8: Commenter IV-D-9 submits questions concerning an affected source that operates coating mix preparation equipment serving two coating lines with the following overlap concerns. The coating mix preparation equipment is subject to applicable requirements of 40 CFR 60 subpart VVV and is also subject to regulation under the POWC NESHAP and/or the Fabric and Other Textiles NESHAP. All or a part of the coating mix preparation equipment may also subject to requirements of

40 CFR 63 subpart FFFF and/or subpart HHHHH. The commenter asks, "Is it EPA's intent that the facility be subject to multiple NESHAP applicability? Does EPA specifically exclude any mix preparation equipment involving a chemical reaction (as may be implied by the statement at 40 CFR 63, subpart FFFF, 63.2435(c)(3)) from the affected equipment under 40 CFR 63, subpart OOOO?"

Response 8: The coating mix preparation equipment, as described by the commenter, would be part of the affected source for the web coating and printing subcategory under the final rule. As a part of the affected source of the final rule, the coating mix preparation equipment is not subject to the requirements of 40 CFR 63 subpart FFFF or HHHHH.

3.1.6 Exemptions

Comment 1: Commenter IV-D-5 submits that incidental to manufacturing operations, from time to time the commenter may repair interior surfaces of its aircraft, including the upholstery and carpeting. As part of this repair, some color touch-up may be required using brushes, daubers, and/or pens. In addition, the commenter occasionally cleans the upholstery or carpeting on its planes prior to delivery or redelivery to a customer, resulting in the reapplication of small amounts of protective coatings. The commenter notes that this surface coating activity is episodic in nature and limited in scope and emissions. Commenter IV-D-5 recommends that EPA include in the final rule an exemption for the use of low-volume coatings for which the annual total of each coating does not exceed 189 liters (50 gallons) and the combined annual total of all such coatings used at a facility does not exceed 756 liters (200 gallons). The commenter points out that this would be consistent with other NESHAPs, e.g., aerospace, benzene waste, cooling towers, asbestos, marine vessel loading, the HON, Wood Furniture Manufacturing, and proposed MMPP.

Commenter IV-D-3 also requests a low use exemption, consistent with other NESHAP (the commenter provides several examples of low usage exemptions ranging from a combined annual total of 200 gallons of primers, topcoats, and chemical milling maskants used at a facility [Aerospace] up to no more than 100 gallons per month of finishing material or adhesives [Wood Furniture Manufacturing Operations]) and many state rules upon which the NESHAP are based. The commenter supports the following exemptions contained in the proposed rule:

- Coating, printing, slashing, dyeing, finishing used by a facility and not for commerce is not subject to this subpart, unless organic HAP emissions from the surface coating itself exceeds major source thresholds.
- Facilities that use coating, printing, slashing, dyeing, finishing, thinning and cleaning materials that contain no organic HAP.
- Coating, printing, slashing, dyeing, or finishing that occurs at research or laboratory facilities or that is part of janitorial, building, and facility maintenance operations.
- Coating application with handheld, nonrefillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart.

The commenter feels that these exemptions will go a long way in preventing the regulation of

insignificant operations.

However, commenter IV-D-3 believes that all coating rules should contain a low use exemption to prevent the rule from applying to insignificant coating operations that do not qualify for one of the above exemptions. The commenter believes that this is especially true for military installations that are more like cities than industrial complexes. For example, a soldier, airman, marine, or sailor could conceivably repair a personal tent using a sealant, which could be performed in the on-base housing area or hobby shop using a nonexempt coating method. The commenter submits that merely exempting hobby shops or operations performed by individuals for personal benefit is inadequate. The commenter believes it would also be inappropriate to regulate any facility that is a major HAP source due to other operations, but performs an insignificant amount of coating, printing, slashing, dyeing, or finishing of fabric and other textiles.

Commenter IV-D-3 submits that the low use exemption should apply to facilities whose entire use of fabric and other textile coating, printing, slashing, dyeing, and finishing materials does not exceed a specified usage or HAP emission threshold. The commenter suggests that the exemption should clearly state that facilities that qualify for the exemption must maintain usage records but are not considered affected sources for the purposes of the rule. The commenter believes that an exemption expressed as both a usage limit and a HAP emission limit would provide an option that is easier from a recordkeeping standpoint (usage limit) and an option that encourages pollution prevention (HAP emission limit). The commenter recommends setting a HAP emission threshold of 1.25 tons per year, which is about 5 percent of the major HAP threshold. The commenter offers that using a high HAP containing adhesive or seam sealant this would equate to about 500 gallons per year. The commenter recommends revising §63.4281(c) as follows and stresses that it is important for EPA to recognize that both exemptions are necessary:

(c) This subpart does not apply to coating, printing, slashing, dyeing, or finishing operations that meet the criteria of paragraphs (c)(1) through (4) of this section.

* * * * *

(2) Coating, printing, slashing, dyeing, or finishing that occurs at research or laboratory facilities or that is part of janitorial, building, and facility maintenance operations or that is performed for personal purposes by individuals in hobby shops and facility housing areas.

* * * * *

(4) Coating, printing, slashing, dyeing, or finishing performed by a facility provided that the facility either uses less than 500 gallons per year of materials regulated in this subpart or emits less than 1.25 tons per year of organic HAP from the coating, printing, slashing, dyeing or finishing operations regulated in this subpart.

Commenter IV-D-11 also believes there should a provision for exempting deminimus amounts of regulated materials. The commenter cites as an example that some cleaning materials are used from aerosol cans for spot cleaning fabric as it passes through the inspection station. The commenter claims that, in total, this may add up to a few pounds of HAP (for certain cleaners) in a year's time but the burden of the recordkeeping and reporting is not justified for de minimus quantities. The commenter offers as another example of de minimus amount of regulated material a run using a sample of a new product (i.e., dyeing material or an auxiliary containing HAP) that does not become an item of further

use.

Response 1: The reapplication of protective coatings to upholstery and carpets on planes operation described by one of the commenters is not a web coating operation, and therefore, is not covered under the final rule. Similarly, the repair of a personal tent using a sealant operation described by another commenter is not covered under the final rule since it is also not a web coating operation.

As is noted by one of the commenters, the definition of coating operation excludes coating application with handheld, non-refillable aerosol containers, touch-up markers, or marking pens. Similar exclusions have been added to the definition of dyeing operation in the final rule to ensure the rule requirements do not apply to incidental dyeing operations such as the color touch-up operations. In addition, the definition of cleaning material has been revised in the final rule to exclude cleaning materials applied with non-refillable aerosol cans. We agree with the commenter that spot cleaning of fabric using aerosol cans is not a significant organic HAP emission source and does not warrant regulation under this final rule.

Commenters requesting a low use exemption did not provide any data to support the inclusion of this type of exemption in the final rule. Furthermore, a review of the database used to determine the MACT level of control for this rule did not reflect a consistent or common low usage level that could support such exemption in the final rule.

Comment 2: Based on the definition of coating included in the Fabric MACT, commenter IV-D-33 does not believe their high-pressure laminate facility would be subject to the proposed MACT. The commenter offers that high-pressure laminate production lines use resins to impregnate the web with resins. The web is saturated in a batch of resin and then dried. During the drying process the resin, which is impregnated throughout the web, reacts to become a part of the web. The process does not involve placing a distinct layer on top of the web, as described in the preamble (page 46040), "The coating industry treats coating as a surface applied coating in which a distinct layer of coating is applied to the textile surface." The commenter also feels that the proposed definition of coating in §63.4381 does not describe the high-pressure laminate process.

Commenter IV-D-33 cites other indications that their high-pressure laminate facilities were not intended to be covered by the Fabric MACT. The commenter (as International Paper, Decorative Products Division) participated in the development of the POWC MACT by submitting information to EPA on their high-pressure laminate industry (the information included both the commenter's fabric and paper lines), attending stakeholder's meetings, and submitting formal comments on the rule. The industrial laminates produced by the commenter's facility using both paper and fabric substrates are used in products such as transformers, circuit breakers and other power transmission and generating hardware, circuit panels, switch and socket bases, washers, spacers, and x-ray machines and other medical imaging equipment where long-term electrical insulation is critical. Other uses of the commenter's industrial laminates include tank liners, rollers, and gaskets in the chemical processing and pulp and paper industries; gears, pinions, bushings, and bearings in the machine tool industry; bullet-proof panels as dividers in banks and some convenience stores; electrical conduit; and in ejection seats of F-15 fighters. The commenter observes that the examples listed for the coating and printing

subcategory in §63.4281(a)(1) do not include anything manufactured at the commenter's facility. Also, the NAICS Code for the commenter's industry, 326130 (SIC Code 3083) is not listed in Table 1 of the preamble.

Commenter IV-D-33 requests that EPA include an exemption for lines that "coat high-pressure laminates, similar to the exemption planned for the POWC NESHAP for lines that coat medical tape or duct tape. The commenter also requests that if EPA determines their facility should comply with the Fabric MACT, EPA should clarify the Fabric MACT to account for reactive coatings (see Comment 1 in Section 3.4.7 of this document.)

Response 2: As explained in Response 1 of Section 3.1.4 in this document, the lamination of paper and fabric is subject the requirements of the Paper and Other Web Coating NESHAP (40 CFR 63, subpart JJJJ). The final rule has been written to clarify this. The high-pressure laminate process as described by the commenter appears to be a process similar to the web coating of fiberglass and Kevlar substrates for circuit boards. This process is covered by the final rule.

The final rule has been written to allow a source to account for reactive materials that are not emitted. For web coating lines engaged in the coating of fabric and other webs on the same web coating line, we have added a provision to the final rule in whereby a source can determine which MACT standard they must comply with based on the predominant surface coating activity conducted on the web coating line. Predominant activity has been determined to be 90 percent or more of the mass of substrate coated on the web coating line. For example, a web coating line that coats 90 percent paper and 10 percent fabric substrates would have to comply with the Paper and Other Web NESHAP (40 CFR 63, subpart JJJJ).

Comment 3: Commenter IV-D-3 requests that an exemption be provided for textile repair and maintenance operations. According to the commenter, the military repairs and maintains clothing and other textile items on a regular basis. Items such as tents, chemical protective ensembles, and rainwear are repaired when economically feasible rather than disposing of the item. The commenter points out that typical repair activities center on the use of adhesives and sealants to fix seams and patch tears performed at military facilities that are major for HAP because of activities that take place fence line to fence line. The commenter believes that the exemptions already provided in the rule (e.g., repair and maintenance occurring at ambient temperature, facility maintenance, and materials used by the facility and not for commerce) will exempt some of these activities, but that some would still be subject to the rule as proposed. For example, items such as tents, tarpaulins, seats covers, combat clothing, and parachutes are not part of the physical facility and are used on and off the facility for training and combat operations. A permitting authority may not acknowledge that repair and maintenance of these items qualify for the facility maintenance exemption. Some of the repair activities could be done at elevated temperatures, such as application of iron-on patches. Military items are commonly re-deployed to different facilities based on emerging needs and might not be exempt as a product used by a facility and not for commerce.

The commenter believes that EPA did not intend the proposed rule to apply to the repair and

maintenance of clothing and textile items on a military installation where this is not the principal activity nor an integral part of a production process that is the principal activity. In addition the commenter points out that some large and operationally diverse military facilities may have repair operations that are co-located at the same "major source" as a manufacturing operation, but which are completely unrelated from a functional standpoint. For example, an installation may have a shop that manufactures seat covers, while incidental tent or tarpaulin repair may occur at different locations on the installation. The commenter believes that repair operations performed on products that are manufactured by the facility should be covered while all other repair operations should not.

Commenter IV-D-3 recommends revising subparagraph (c)(3) of §63.4281 'Am I subject to this subpart?' to read as follows:

"Coating, printing, slashing, dyeing, or finishing used by a facility and not for commerce or for repair and maintenance of previously manufactured fabric and textile items that is unrelated to manufacture unless organic HAP emissions from the coating, printing, slashing, dyeing, or finishing operations are as high as the major source HAP emissions specified in paragraph (b) of this section."

The commenter also requests the addition of the following definitions to §63.4381 'What definitions apply to this subpart?'

"Repair and maintenance means coating, printing, slashing, dyeing, or finishing operations on previously manufactured fabric and textile items that allow the item to function for its designed purpose. Repair includes non-routine production of individual components or parts intended to repair a larger item."

"Manufacture means the routine production of new fabric and other textile products. For the purpose of this rule, manufacture does not include research and development activities, prototype development, or repair operations."

Response 3: Textile repair and maintenance operations, as described by the commenter, are not web coating activities, and therefore the requirements of the final rule do not apply. To clarify that the final rule requirements only apply to web coating operations, the definition of coating operation in the final rules has been revised to specifically include "web substrate". The revised definition reads as follows: "Coating operation means equipment used to apply cleaning materials to a web substrate to prepare it for coating material application (surface preparation), to apply coating material to a web substrate (coating application)..." Web is defined as a continuous textile substrate which is flexible enough to be wound or unwound as rolls.

Comment 4: Commenter IV-D-3 points out that military equipment is often comprised of several different substrates including fabric and other textiles that are coated at the same time using the exact same coatings, typically paints. For example, tactical vehicles such as HMMWVs, 2 ½ and 5-ton trucks, and ambulances also contain fabric items such as covers, taurpaulins and seat covers. Painting of this military equipment could potentially be subject to the Large Appliance, Metal Furniture,

Miscellaneous Metal Parts and Products (MMPP), Wood Furniture Manufacturing, Plastic Parts and Products (PPP), and Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAPs. It is quite common that all of these substrates and commodities will be coated with Chemical Agent Resistant Coating (CARC) or other military-unique coatings in order to meet the unique demands of military operations. The components are often coated at the same time using the same application equipment containing the same battlefield coating. The coating used is not a typical fabric coating, but is more typically associated with the other substrates of the vehicle. The commenter believes that such coating operations should not be subject to this rule if the coating used is covered by another surface coating NESHAP and requests either a specific exemption in §63.4281(c) or the addition of the following language to the definitions for Coating Material, Dyeing Material, Finishing Material, and Printing Material contained in §63.4381:

"Coatings suitable for use on other substrates (i.e., metal, plastic, wood, etc.) and covered by another subpart are not considered coating materials for the purposes of this subpart."

"Coatings suitable for use on other substrates (i.e., metal, plastic, wood, etc.) and covered by another subpart are not considered dyeing materials for the purposes of this subpart."

"Coatings suitable for use on other substrates (i.e., metal, plastic, wood, etc.) and covered by another subpart are not considered finishing materials for the purposes of this subpart."

"Coatings suitable for use on other substrates (i.e., metal, plastic, wood, etc.) and covered by another subpart are not considered printing materials for the purposes of this subpart."

Response 4: The coating operations described by the commenter are not web coating surface coating operations, and therefore the final rule requirements do not apply.

Military specifications are typically based on the coating's performance characteristics (e.g., chemical agent resistance), and the coatings must often be compatible with multiple substrates. These materials are purchased using a stock number which could represent hundreds of different formulations that meet the performance specifications; however, the HAP content of such materials could fluctuate widely between formulations. Additionally, since the materials may be used at the maintenance depot, Department of Defense (DoD) installation, or in the field, the options available to achieve emissions reductions (e.g., add-on control technology) could be limited. Furthermore, much of DoD equipment is coated as an assembled product comprised of as many as five different substrates, in a wide range of shapes and sizes, which must be capable of serving in a multitude of challenging environments and situations. We are currently evaluating the need for a DoD source category, and requested comment on the appropriate approach for addressing unique DoD coating operations in the preamble to the proposed miscellaneous metal parts and products surface coating rule (67FR72276). Regarding the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP, this subpart has been revised in the final rule such that it does not apply to coating, printing, slashing, dyeing, and finishing operations performed on-site at installations owned or operated by the Armed Forces of the United States

(including the Coast Guard and the National Guard of any State).

Comment 5: Three commenters (IV-D-13, IV-D-14, and IV-D-26) express concern that the proposed NESHAP could be applied to synthetic fiber manufacturing. Commenters IV-D-13 and IV-D-14 note that the definition of textile in the proposed rule has been expanded from the original source category listing in 1992 as covering "printing, coating, and dyeing of fabrics" to include "staple fiber, fiber, and filaments". These two commenters also note that the term "finishing" is a generic term often used in other industries such as synthetic fiber manufacturing. All three commenters assert that the synthetic fiber manufacturing industry was not considered in the process of developing the proposed rule. Commenters IV-D-13 and IV-D-26 point out that much of the industry is currently covered by existing regulations (Commenter IV-D-26 has a facility that is subject to the HON and three facilities that are subject to the Group IV Polymers and Resins NESHAP). Commenter IV-D-26 requests that EPA specifically exclude upstream manufacturers of synthetic polymers from coverage under the textile MACT. Commenters IV-D-13 and IV-D-14 request a clarification of the applicability language in the proposed rule by deleting the words "fiber, staple and filament" from its definition of textile and a statement of clarification from EPA stating specifically that this regulation does not apply to synthetic fiber manufacturing.

Similarly, for carbon fiber sizing operations, commenter IV-D-34 requests an exemption from the proposed MACT for Printing, Coating, and Dyeing of Fabrics and Other Textiles and requests instead that this be considered as incidental to the Acrylic Fiber MACT. The commenter has two facilities that produce carbon fiber and apply a sizing/finish to it in order to impart specific properties to the fiber that are critical for fiber strength. The material applied to the carbon fibers contains a non-formaldehyde HAP, dimethyl formamide (DMF). The commenter submits that the applications where the sizing/finish must be applied to carbon fiber include aerospace and military applications for which re-qualification would take 12 to 24 months and be very costly, if the sizing/finish could be requalified. Commenter IV-D-34 requests that HAP-containing finishes used to meet aerospace, high temperature, or military specifications be classified as "specialty finish" and that these finishes be exempted from the regulation. The commenter cited precedence for classification of certain chemicals as "specialty" and exempt from control requirements in the Aerospace and MMP NESHAPs.

Response 5: We have written the final rule to clarify that coating, slashing, dyeing, and finishing operations that are part of a synthetic fiber manufacturing process, and are part of the affected source of another NESHAP, such as the Group IV Polymers and Resins NESHAP (40 CFR 63, subpart JJJ) are not subject to the requirements of the final rule. For example, finishes that are applied in an affected source to which subpart JJJ applies are not subject to the requirements of the final rule.

Since fiber, staple, and filament are sometimes coated, slashed, dyed, and finished in operations conducted at textile finishing facilities that are downstream of the manufacturing process, we do not agree that fiber, staple, and filament should be deleted from the definition of textile. The sizing/finish operations described by commenter appear to be thread bonding operations. This operations are covered by this final rule.

Comment 6: Commenter IV-D-29 is concerned about the impact of the proposed MACT for the Printing, Coating, and Dying of Fabrics and Other Textiles on pre-preg/advanced composite material products that must undergo extensive pre-qualification testing if any process changes are instituted. Five of the commenter's plants in the U.S. coat a fiber, tape or fabric substrate with resins which are then pre-cured, rolled and stored at low temperature as a pre-preg/advanced composite material for sale to the aerospace industry or other users. The commenter believes that the proposed minimum capture air flow velocity, or any change in process operating conditions or product formulation may require re-qualification of the many aerospace products manufactured by companies within the source category. As pre-preg/advanced composite material products are used in aerospace and commercial aircraft and numerous other applications that have very restrictive process modification limitations, this may have very significant implications and cost ramifications. The commenter asserts that re-qualification is a very costly, time consuming, and problematic process for which EPA has failed to account for such indirect costs in its economic analysis. The commenter requests that EPA consider an exemption for pre-preg/advanced composite manufacture.

Response 6: Multiple compliance options are provided in the final rule to provide flexibility in complying with the emission limits. The emission rate with add-on controls does not necessarily require a minimum capture air flow velocity, change in process operating conditions, or reformulation.

Upon review and evaluation of the data submitted by the commenters, the final rule has been written to allow a 12-month rolling average compliance period for sources using the emission rate compliance option. This would allow for the month-to-month variability in organic HAP content of coating, dyeing, and finishing materials.

Comment 7: According to commenter IV-D-23, the introductory language to §63.4281(c) is unclear. As written, it appears to the commenter to require that all three criteria in §63.4281(c)(1-3) must be met in order for an operation not to be subject to subpart OOOO. The commenter believes EPA's intent was that any operation that meets any of the three criteria is not subject to subpart OOOO and requests that this language be revised accordingly.

Response 7: Printing, coating and dyeing operations that meet any of the exemption criteria in the final rule, are not subject to it.

3.1.7 Subcategories

Comment 1: Commenter IV-D-30 feels that due to specialized manufacturing and product needs, cord treating operations should be regulated by a separate subcategory. The commenter believes that EPA does not have a sufficient understanding of the HAP emission sources from fabric treating operations in the rubber industry, which leads to incorrect assumptions about emission species, levels, and calculations. Similarly, commenter IV-D-7 believes that EPA has failed to properly consider the diverse fabric coating processes within the rubber industry and the unique nature of these processes.

Commenter IV-D-30 presents the following description of cord treating operations in the rubber industry.

> "Rubber manufacturers treat cord for use in transmission belts and other engineered products through several distinct manufacturing processes, in order to achieve specific physical and chemical characteristics. Dip formulations are proprietary, but do contain similar common ingredients. Manufacturers use a variety of cord types, including Kevlar and polyester, depending on the intended product application and characteristics desired.
>
> Commonly, cord is first subjected to a solvent-based dip. This solvent-based dip is crucial to obtain the necessary physical properties of the cord. The solvent-based dip stiffens the cord and makes it resistant to fraying, which are necessary for acceptable performance of the belts the cord is used to create. Without requisite stiffness, the cord would be susceptible to pulling out of a belt and wrapping around a drive shaft or other pulley and causing sudden and catastrophic equipment failure. This solvent-based dip contains HAP solvents and contains only dissolved solids with no dispersed solids in suspension.
>
> Then, the cord is treated with a resorcinol-formaldehyde-latex ("RFL") dip. The RFL dip is formulated especially for the particular cord type being treated and for the rubber compound to which the cord will be bonded. The purpose of the RFL dip is to give the cord adhesive qualities, to ensure a strong bond between the cord and the rubber in the finished product. The bond between the cord and rubber is critical to product integrity and performance. Bond failure would allow air to invade the product and cause the belt to come apart and cause equipment failure. The RFL dip will typically cause emissions of methanol stabilizer in the formaldehyde, residual monomers from the latex used, and small amounts of unreacted formaldehyde. The RFL dip will contain small amounts of solids, but can have little deviation to increase solids and still retain the necessary properties. Additionally, in applications where cord stiffness is not a desirable property, RFL dip may be applied directly to the cord or fabric without the use of a solvent-based dip.
>
> Additionally in the industry there are processes employed in which a formulated rubber compound is dissolved in an organic solvent and applied to a fabric sheet either by dipping or by a knife spreading operation. These coatings are critical for the intended applications because they provide proper bonding and a controlled coating thickness."

Commenter IV-D-30 submits that as stated in the February 1, 2001 letter to EPA stating the commenters concerns, cord treating in the rubber industry is conducted to achieve specific product-performance characteristics. Failure of the rubber-cord bond would lead to serious product failure, causing a vehicle or other machinery to suddenly stop working properly. Therefore, the commenter claims the cord treating process is crucial. Dip formulations must be carefully tailored to the type of cord treated and the type of rubber compound used in the finished product, in order to ensure quality product performance. The commenter asserts that dip formulations cannot (commenter emphasis) be modified to increase the solids content; overload of solids will cause cord to lose performance.

Commenter IV-D-30 emphasizes that acceptable dip formulations are limited, and there are no known substitutes for current dip formulations that yield significantly lower HAP emissions while

achieving comparable product performance. The commenter continues that water-based technologies do not present viable options, despite much industry research in this area. The use of control technology is an option, but without additional reduction achieved through dip reformulation, typical rubber industry cord treatment operations could not meet this standard, due to limitations in capture efficiency. Regarding emission control systems, according to commenter IV-D-7, EPA appears to have based the proposed fabric coating MACT standards on operations outside the rubber industry, and improperly assumed that these control systems can readily be adapted to rubber industry operations. Commenter IV-D-7 asserts that, at a minimum, EPA should consider factors critical to capture system design such as the overall size of the coating lines, complexity of the process (e.g., number of drying and/or curing ovens, vertical or horizontal design oven lines, number and type of coaters, presence or absence of festoon and/or tension control mechanisms, etc.) and nature of coatings used, before attempting to transfer capture and control technology from one coating industry segment to another.

Commenter IV-D-7 submits that if EPA is going to include capture system efficiency in the emission standard, the method used to determine capture efficiency for compliance demonstrations should be the same method as was used by the existing operations in EPA's database that form the basis for the standard. The commenter believes this is particularly important if the capture system efficiency data from outside the rubber industry segment is used to form the basis for the emission limitation applicable to the coating operations within the rubber industry.

Commenter IV-D-30 submits that performance requirements for cord treating in the rubber industry are significantly different than those for the fabric coating in other industries included in this rule. The commenter asserts that subjecting cord treating operations to the standard proposed would set an unachievable standard and that for this reason, EPA should regulate emissions from cord treating operations in the rubber industry under a separate subcategory.

Response 1: We agree that the performance requirements for cord treating for use in transmission belts and other engineered products are significantly different than those for the fabric coating in other industries included in this final rule. Each industry segment subject to this final rule has its own set of performance requirements. However, the equipment used in the cord treating process and the organic HAP emission sources are very similar to the other web coating processes subject to this rule and the applicable add-on emission controls are identical, e.g., the NSPS (40 CFR 60, subpart VVV) and the Tire Manufacturing NESHAP (40 CFR 63, subpart XXXX) that are also potentially applicable to cord treating operations require the same times of capture and add-on control systems. In addition, a MACT floor facility applying both not rubberized [SIC 2295] and rubberized coatings [SIC 3069] performs web coating in coating rooms determined as PTE by Method 204.

Contrary to the assertion of commenter IV-D-30 that there are no known substitutes for current dip formulations that yield significantly lower HAP emissions while achieving comparable product performance, a substitute material is available. A manufacturer of coating materials produces a resin that is a self-polymerizing liquid alkylated melamine-formaldehyde resin that forms a network without the need for a co-reactant such as resorcinol or other phenolic resins (see Docket No. OAR-2003-0014, formerly A-97-51, Document No. IV-J-2). The resin can be used in tire belt and bead

compounds for wire/rubber adhesion and side-wall for improved fiber/rubber adhesion. Studies have shown that this resin imparts satisfactory physical properties and rubber coverages over a wide range of aging conditions. Reformulation is also an available compliance option.

Also, the final rule provides several options for complying with the emission limits. For example, the emission rate with add-on controls option can be achieved without the use of a permanent total enclosure to capture emissions. As is described in response to Comment 3.4.9 in this document, the final rule has been written to allow a 12-month rolling average compliance period for sources using the emission rate compliance option In addition, as explained in response to Comment 1 of Section 3.4.8 in this document, a provision has been added to the final rule to account for reactive materials that are not emitted. This can be used to account for formaldehyde in RFL dip that is reacted and not emitted. These revisions should make the emission rate with add-on controls option a more viable compliance option for these sources.

Comment 2: Commenter IV-D-6 has both screen printing and coating facilities and submits that screen printing and coating chemistry is not comparable at all. The commenter requests that EPA address screen printing and coating as two separate subcategories, with emissions limitations appropriate for each.

Commenter IV-D-27 objects to EPA's characterization of printing in the Technical Support Document (page 1-3) where EPA incorrectly states that the "processes, application, and drying of printing are identical or nearly identical to coating". The commenter claims that EPA has correctly determined in previous regulations (such as NSPS, subpart VVV) that printing is not similar to, and definitely not identical to coating. The commenter submits that virtually all printing in the U.S. is performed with water-based print pastes and auxiliary chemicals using the same dye types that are used in the textile dyeing process. The commenter has no problem with the emissions limitations and other requirements placed on printing processes at major facilities, but believes it is important for EPA to know that above characterization is incorrect.

Response 2: We acknowledge that based information submitted by the textile industry on printing operations, almost all of these operations in the U.S. are performed using water-based materials. However, some web printing operations still use solvent-based materials in which the the HAP emission points and applicable control techniques are identical to those found in web coating operations. Therefore, we disagree with the commenter's suggestion, and printing remains in the same subcategory as it was proposed in.

Comment 3: Commenter IV-D-23 operates a coating process wherein fiberglass is coated with a resinous material then dried/cured. The commenter has historically referred to this process as "impregnating" because the process is designed to deposit the resinous material throughout the fiberglass fabric, not just on "one or both sides". The commenter believes they would not have recognized the definition of coating as describing the commenter's activity without the benefit of numerous conversations with EPA on both the Paper and Other Web and this NESHAP. The commenter notes that the inclusion of the phrase "continuous solid film" in the definition does help the

commenter to distinguish their operation from finishing operations, though it might be useful to delete the phrase "one or both sides of" for added clarity that operations like the commenter's are covered by the rule. The commenter knows there are a number of coating activities like theirs in the U.S. that may also be confused by the definition of coating and urges EPA to make an extra effort to confirm that it has identified all operations that are coating fiberglass that will be used to manufacture circuit-board substrate. The commenter suggests it may be possible that these sources represent a subcategory in the coating and printing subcategory.

Response 3: The final rule considers the web coating of glass fibers, such as fiberglass, a coating operation rather than a finishing operation because the coating materials do not impregnate the glass fibers. The definition of coating in the final rule makes this distinction as follows: "Coating does not include finishing where the fiber is impregnated with a chemical or resin to impart certain properties, but a solid film is not formed." The database used to determine the MACT level of control for this source category included 1 facility coating fiberglass used to manufacture circuit board. The facility uses an incinerator to control ethylene glycol emissions from one of the finish formulas.

3.1.8 Coating and Printing Operations Conducted at Ambient Temperatures

Comment: Commenter IV-D-30 is concerned that the proposed rule not unintentionally apply to other downstream operations in the rubber industry, including rubber calendaring. The commenter notes that rubber calendaring is the operation where rubber is applied to fabric cord that has been previously coated and that rubber calendaring has no significant HAP emissions. The commenter points out that rubber calendaring is conducted at ambient temperatures, and drying and curing are not associated with it. Commenter IV-D-30 notes that in the preamble to the proposed rule (67 FR 46040), EPA specifically states that coating and printing operations conducted at ambient temperatures, that do not involve drying or curing are not subject to the provisions of this subpart and requests that this language be included in the applicability section of the regulation, possibly in §63.4282.

Response: In order to clarify the applicability of the final rule to web coating and printing operations conducted at ambient temperatures, the final rule has been written to exclude web coating or printing operations that do not involve drying or curing equipment such as ovens, tenter frames, steam cans, or dryers from the requirements of the final rule. Web coating and printing operations that dry at ambient temperatures are not representative of the coating and printing operations in the database used to determine the MACT floor for the web coating and printing subcategory. These low-production rate operations make up only a small segment of the overall web coating and printing industry. It was also determined that the emission capture and control technologies applicable to these operations would be considerably different (because of temperature, concentration, and flow rate differences) than those operations involving drying and curing equipment which are the basis of the MACT floor determination.

3.1.9 Screen and Digital Printing

Comment: Commenter IV-D-12 asserts that applicability of this standard should be clarified as it applies to screen and digital textile printers. The commenter notes that there are approximately 20,000 facilities in the United States that finish textile garments and pieces via digital output devices and screen flatbed presses. According to the commenter, an average textile printing facility employs 15 people and has an average income of $500,000. The commenter also points out that the inks used in production of these finished garments do not contain HAP and the HAP emitted by other chemicals used in the process do not reach major source threshold for either a single or multiple category.

Commenter IV-D-12 believes, based on information presented in both the preamble and technical support document, the affected sources for this proposal are those facilities employing web coating and printing equipment. The commenter asserts it is imperative that the applicability of the proposal be clarified to clearly state which printing operations are covered by the requirements. The commenter offers the following clarifying language so that unaffected sources do not need to prove inapplicability on a case-by-case basis.

Under the definition of "printing" in §63.4381, the commenter recommends that the word inkjet should be removed. According to the commenter, inkjet printing is a "non-impact printing process in which an intermittent or continuous stream of electrostatically charged microscopic ink droplets are projected onto a substrate at high velocity from a pressurized system." The commenter notes that inkjet printing could be classified as a web operation, but because of the low production speeds (an average inkjet printer produces product at a rate of 1,000 square feet an hour versus production rates of 45 to 80 feet per minute for a rotary screen printer), it should be classified by the Agency in the same category as flatbed screen and heat transfers.

The commenter also notes that the ink systems used for production presses include UV curable, dye based systems, waterbased systems, and solvent systems, the choice of which depends on the end use of the product and the type of textile substrate. The commenter asserts that including inkjet in the definition of printing will impose an increased regulatory burden on an emerging small business sector not considered during development of the regulation. The commenter notes that the printing of textiles via inkjet operations falls within a NAICS code that was not considered during development of the rule, 323115, Digital printing and claims that the cost impacts and analysis used within the proposed rule are not applicable and do not consider the substantially higher compliance costs that may be incurred by these facilities. The commenter further claims that the compliance options developed did not take into account the technologies and systems used by this industry sector nor was this sector, which averages well below 500 employees per facility, considered in the small business impact analysis.

Under the definition of "printing operation" the commenter offers the following recommended word change:

> "...There may be multiple printing operations in an affected source. **Coating and printing operations refer to those processes that coat and/or print on one or both sides of a continuous web substrate.** ..."(Emphasis added by commenter).

The commenter believes that the recommended wording will further clarify the applicability of the standard. The commenter notes that throughout the Agency's discussion on this rulemaking, references

to printing and coating on a continuous substrate are offered and that inclusion of the recommended language will clarify the applicability of this standard to those facilities employing web operations in the production of textiles.

Response: We agree that clarifications are needed to the applicability of the final rule. The requirements of this final rule apply only to fabric and other textiles web coating operations . To clarify this, the definition of printing operation in the final rule has been written to read as follows: Printing operation means equipment used to apply cleaning materials to a web substrate to prepare it for printing material application (surface preparation), to apply printing material to one or both sides of a web substrate (printing application)... Web is defined in the final rule as a continuous textile substrate which is flexible enough to be wound or unwound as rolls.

The definition for printing in the final rule states that printing means the application of color and patterns to textiles...using a variety of techniques including, but not limited to, ink jet, roller, and rotary screen printing. Therefore, the applicability of the final rule is not limited to the listed printing techniques. Inkjet printing is a technique used to print textile substrates and if a solvent system is used, inkjet printing can be an organic HAP emission source. Therefore, we do not agree that inkjet should be removed from the definition of printing. However, it should be noted that the final rule does not apply to printing operations using only regulated materials that contain no organic HAP, as defined in the final rule, or to printing operations conducted at ambient temperatures that do not involve drying or curing equipment such as ovens, tenter frames, steam cans, or dryers. Because of these exclusions, we do not expect the final rule to apply to many inkjet printing operations. If an inkjet printing operation is using a solvent ink system and includes drying equipment, the operation can comply through one of the several compliance options offered in the final rule.

3.1.10 Inorganic HAP

Comment: Commenter IV-D-11 notes that EPA states in preamble section III.B that inorganic HAP would not be regulated by the proposed rule. The commenter submits that by not being more specific about which compounds are and which are not to be included in the various monitoring, recordkeeping, reporting, and computations there may be some differences in interpretation of the listings.

Response: The final rule only regulates organic HAP. The final rule language has been written to reflect this.

3.1.11 Adequate Level of Health Protection

Comment: Commenter IV-D-29 submits that plants should have the opportunity to "opt out" of the need for MACT emission controls if they can demonstrate an adequate level of health protection to the surrounding community and employees. The commenter believes the imposition of costly emission controls where there is no commensurate improvement in air quality or human health will be detrimental to impacted industries.

Response: We did include such a compliance option in the proposed rule preamble or proposed rule language. We have not evaluated the public health benefits of allowing a source to opt out of complying with the final rule requirements based risk reductions. Therefore, the final rule has not been revised to incorporate the commenter's suggestion.

3.1.12 Definition of Major Source

Comment: Commenter IV-D-23 notes that the second sentence of §63.4381(b) is similar to but different from the definition of "major source" in subpart A at §63.2. The commenter feels that having two definitions of a term in the same CFR part, when not necessary, leads to confusion among both regulators and the regulated community. The commenter believes the subject sentence in §63.4281(b) should be deleted, or if EPA believes it is necessary, it should be changed to read exactly (commenter's emphasis) like the subpart A definition, especially adding the phrase "considering controls" from the subpart A definition.

Response: The definition of major source has been deleted in the final rule. The definition in subpart A at §63.2 has been referenced in the final rule.

3.2 AFFECTED SOURCE

3.2.1 Scope of Cleaning and Preparation Activities Regulated by the Subpart

Comment 1: Seven commenters (IV-D-11, IV-D-16, IV-D-18, IV-D-20, IV-D-22, IV-D-27, and IV-D-31) submit that EPA created several inconsistencies with regard to the applicability of the rule to cleaning materials and preparation activities and request EPA to revise significant portions of the rule related to the applicability of cleaning materials and preparation activities.

The major concerns with the treatment of cleaning materials in the proposed subpart are significant inconsistencies in: 1) cleaning material and subcategory definitions [regulated material], 2) which subcategories must include cleaning materials in their compliance documentation, and 3) how requirements vary between subcategories in terms of addressing substrate and/or equipment cleaning.

The commenters note that, for example, in several sections EPA notes that for each of the three (3) separate subcategories of affected facilities "...all cases include the cleaning of process operation equipment..." and the cleaning material definition in section 63.4381 states "...includes any cleaning material used on substrates or equipment or both." The commenters add that, however, regulated material for the slashing subcategory as defined in section 63.4282 does not include cleaning materials, and in other sections, the subpart refers to cleaning materials used only for cleaning of equipment, not substrate, within the dyeing/finishing subcategory. The commenters submit that examples of some of the inconsistencies that EPA should resolve include the following:

1. Cleaning material means a solvent used to remove...from a textile before or after a coating/printing operation, slashing...or from equipment associated with coating/printing

operation...includes any cleaning material used on substrates or equipment or both.

2. Coating operation means equipment used to apply cleaning materials...to prepare it for coating material application (surface preparation)...
3. Dyeing operation means the collection of equipment used...or to clean dyeing operation equipment...includes at least the point at which a dyeing or cleaning material is applied [Dyeing definition refers only to equipment cleaning, but cleaning material definition refers to substrate and equipment cleaning]
4. Definitions for finishing, finishing materials, and finishing operations have no reference at all to any cleaning materials or operations.
7. Printing operation means equipment used to apply cleaning materials to a substrate to prepare it for printing material application (surface preparation)...
8. Slashing definitions have no reference at all to any cleaning (equipment or substrate).
9. Surface preparation means chemical treatment of part or all of a substrate to prepare it for coating...

The commenters add that EPA did not provide sufficient data, if any, to justify inclusion of cleaning materials and cleaning operations within the regulated affected source of the dyeing and finishing subcategory. The commenters submit that since sufficient cleaning material usage data for the dyeing and finishing operations was apparently not included in the information utilized by EPA to set the subcategory MACT floor, then cleaning materials and associated activities should not be regulated as part of the subcategory affected source. The commenters further add that EPA has similarly concluded in other recently promulgated MACTs (e.g., 40 CFR § 63 Subpart SSSS Metal Coil MACT) that cleaning materials and operations are not required to be regulated.

The commenters recommend that EPA take an approach to the applicability of the proposed rule to cleaning materials that is supported by the data. The commenters submit that specifically, the rule should 1) continue to not regulate cleaning materials within the slashing subcategory, 2) not regulate cleaning materials within the dyeing and finishing subcategory, and 3) only regulate cleaning of equipment and/or substrate within the coating and printing subcategory that actually occurs on the coating/printing line.

Response 1: The final rule does not regulate cleaning materials and preparation materials in the slashing or the dyeing and finishing subcategories. Slashing and dyeing and finishing operations are aqueous processes, and therefore, the cleaning materials and preparation activities used in these operations do not contain HAP. The most common cleaning material used in these operations is water. The final rule has been written to clarify that cleaning materials and preparation activities in the slashing and the dyeing and finishing subcategories are not subject to the requirements of the final rule.

Comment 2: Commenter IV-D-22 states that it is difficult to determine what substrate preparation activities are regulated and for which subcategories. The commenter submits that EPA should add specific language to the preamble and subpart that clearly states 1) the "preparation" areas/departments that support but are separate from the actual dyeing/finishing operations and coating/printing operations

are not regulated under the MACT, 2) cleaning of substrate within dyeing and finishing operations (i.e., substrate cleaning as an integral part of a dyeing or finishing line) is not regulated under this subcategory, 3) for the coating/printing subcategory the only substrate cleaning (i.e., surface preparation) activities that are regulated by the MACT are those that actually occur on the coating or printing line, and 4) substrate spot cleaning that occurs off-line is not regulated by the MACT.

The commenter also states that confusion may also arise regarding how and if particular operations are affected by this NESHAP, in that, at some locations, equipment may at one time be used to prepare (e.g., scour, bleach, causticize, etc.) a textile substrate for coating/printing, dyeing/finishing, or slashing, and at another time the same equipment may be used for one of the regulated, named processes. At other locations, equipment for preparation processes may be completely dedicated. Clarification should be given as to how these operations and equipment would be affected, if at all, by this NESHAP.

Response 2: See Response 1 in this section of this document for revisions made to the final rule to clarify the applicability to cleaning and preparation activities. In response to the commenters concern with equipment used at some times for preparation activities such as scouring and bleaching and at other times for one of the regulated named processes, the definition of the web printing and coating affected source has been written to clarify that when equipment that is not being used on the web coating or printing line is used for preparation activities, then it is not part of the affected source.

3.2.2 Applicability of Process Fluid Stream

Comment: Commenter IV-D-9 notes that a subject coating line generates a continuous stream of fluids comprised of water and HAP. The fluids are contained within a system of closed piping and vessels, the HAP is recovered via distillation and returned to the coating mix preparation process for reuse. The water fraction of the fluid stream is discharged to POTW in accordance with applicable requirements. The commenter asks that, for the purposes of establishing applicability under 40 CFR 63.4282(b)(5), would EPA consider this fluid stream a residual or wastewater and at what point in the process would these definitions apply to the fluid stream.

Response: The affected source for the web coating and printing subcategory includes all manual and automated equipment, structures, and/or devices used to convey, treat, or dispose of wastewater streams and residuals. The regulated materials are the coating, printing, thinning, and cleaning materials used in the affected source. There are no requirements in the final rule for equipment, structures, and or devices used to convey, treat, or dispose of wastewater streams and residuals.

3.2.3 Applicability of HAP-containing Raw Material Storage Tank

Comment: Commenter IV-D-9 notes that a facility containing an affected source operates a raw material storage tank containing a HAP. The HAP is supplied from the storage tank to the reactor, where a polymeric coating intermediate is prepared. The coating intermediate is then conveyed to a

blend tank, where additional coating components, including additional HAP supplied from the storage tank, are mixed and blended prior to application to a web on the coating line. The commenter asks whether the HAP storage tank is considered part of the affected source under 40 CFR 63 subpart OOOO.

Response: The HAP storage tanks described by the commenter are part of the affected source under the final rule.

3.2.4 Regulated Materials for Each Subcategory

Comment: Commenter IV-D-22 notes that in 63.4282 the various types of products that are included in "regulated material" for each subcategory are set forth. The commenter believes it would be more clear if in sections (b), (c), and (d) the sentence that names the products included the qualifier "HAP-containing".

Response: As defined in the final rule, regulated materials means the organic containing materials that are used in the three printing, coating, and dyeing subcategories. These regulated materials could be HAP or non-HAP containing, therefore, the suggested change was not made.

3.2.5 New, Reconstructed, and Existing Affected Sources

Comment: Commenter IV-D-23 notes that §63.4282(a) in its entirety establishes the affected source for each of the three subcategories in §63.4281(a) and then establishes criteria for determining whether an affected source is a new source or an existing source. The commenter states that, by definition in and operation of Subpart A, reconstructed sources are new sources for the purpose of part 63 standards. The commenter submits revised language for §63.4282(a) to be consistent with the definitions of new and existing sources in subpart A as follows:

> "(a) This subpart applies to each new or existing source that is an affected source within each of the three subcategories listed in §63.4281(a)."

Response: The commenter is correct that in §63.2 of Subpart A, new source is defined to mean "any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part establishing and emission standard applicable to such source. However, even within Subpart A, the language new and reconstructed affected source is used to clarify that both newly constructed and reconstructed sources are new sources (see, e.g., §63.6(b) *Compliance dates for new and reconstructed sources*).

3.2.6 Equipment Used in Coating and Printing Operation Affected Sources

Comment: Commenter IV-D-23 asserts that the construction of the sentence in §63.4282(b)(1) is garbled and results in a nonsense statement. The commenter states that it is clear that all web coating and printing equipment used to apply cleaning materials or coating or printing materials to a substrate are included, as is equipment to dry or cure the coating or printing materials. The commenter claims that, however, the last phrase of this sentence, which must be read as follows, "(1) All web coating and printing equipment used...to clean coating/printing operation equipment;", makes no sense. The commenter cannot determine what items EPA is trying to include in the affected source by use of this phrase. The commenter recommends that EPA delete "to clean coating/printing operation equipment" from the paragraph.

Response: The final rule has been written to clarify what is included in the affected source in the web coating and printing subcategory.

3.2.7 Manual and Automated Equipment and Containers

Comment: Commenter IV-D-23 notes that in §63.4282(b)(3) and (4), EPA uses the phrase "all manual and automated equipment and containers". The commenter claims that this phrase is unclear. The commenter asks whether "containers" are intended to be something different than "storage containers" and adds that he cannot tell because neither term is defined.

The commenter adds that it appears from the sentence structure that "manual and automatic" is intended to modify both "equipment" and "containers". In paragraph (3) he states that he assumes that "...manual...containers used for conveying..." could be something like a drum on a two-wheeled truck or a pail in a person's hand. The commenter asks whether this is EPA's intended meaning.

The commenter states that in paragraph (4) he is confused as to the difference between "...storage containers...used for conveying..." and "...manual...containers used for conveying...". The commenter submits that EPA must clearly define terms it uses in this proposal subpart and then use those terms correctly in the text of the rule. The commenter claims that, as currently constructed, he cannot determine what items EPA intends to be part of the affected source.

Response: The final rule has been written to clarify what is included in the affected source in the slashing and dyeing and finishing subcategory.

3.2.8 New Affected Sources

Comment: Commenter IV-D-23 states that EPA must combine the provisions of §63.4282(e) and (f) in order to correctly use the defined terms in 40 CFR 63. The commenter asserts that EPA should make paragraph (f) a subparagraph of paragraph (e) to correctly achieve its intent at this part of the proposed rule. The commenter submits the following changes be made:

"(e) An affected source is a new source if (1) it meets the criteria in paragraph (e)(1) of this section and the criteria in either paragraph (e)(2) or (e)(3) of this section, or (2) it meets the criteria of paragraph (e)(4) of this section.

(1) You commenced...of the affected source after...by installing a new coating...finishing operation.

(2) The new coating...finishing operation will be used at a major source of organic HAP where no coating...finishing operation was previously performed.

(3) The new coating...finishing operation is used in a §63.4281(a) subcategory in which there was not previously an operation.

(4) You commenced reconstruction, as defined in §63.2, of the affected source after July 11, 2002.

(f) An affected source is an existing source if it is not new."

Response: A new affected source is a source that is constructed after July 11, 2002, and is a "completely new" coating facility where no facility had previously existed. A new affected source is also a fabric and other textile web coating operation within a subcategory constructed after July 11, 2002 where a fabric and other textile web coating operation in that subcategory did not previously exist. The emission limit for new affected sources is applicable to both new and reconstructed sources. This means that a source that is reconstructed, according to the definition of "reconstruction" in 40 CFR 63.2 of the General Provisions (40 CFR part 63, subpart A), is considered essentially "new" and thus must meet the emission limit for new affected sources. Based on the definition of "reconstruction," adding capacity to an existing source with a new web coating line would not trigger reconstruction, but it is possible to do so (especially for smaller sources) if a new line replaces an old line. In those cases where the "reconstruction" provisions are triggered, the more stringent new source limit would have to be met by the entire affected source.

3.3 COMPLIANCE DATES

3.3.1 Compliance Date for New or Reconstructed and Existing Affected Sources

Comment: Commenter IV-D-23 claims that in §63.4283(a) and (b), EPA incorrectly uses the phrase "...new or reconstructed affected source..." The commenter states that 40 CFR 63 subpart A was amended to add a definition of "new affected source" on April 5, 2002. The commenter then notes that that definition applies to rules whose initial proposal is signed by the Administrator after June 30, 2002 and that this proposed subpart OOOO was signed before that date. The commenter asserts that, consequently, the definition of "new affected source" in subpart A does not apply to this proposed subpart, but the definition of "new source" does apply. The commenter further asserts that the definition of "new source" includes the concept of reconstruction. The commenter claims that the phrase used in the proposed rule creates confusion and provides the following recommended revised

language using words and phrases that are defined in part 63:

"(a) For an affected source that is a new source, the compliance date is...
(1) If the initial startup of your new source occurs ...
(2) If the initial startup of your new source occurs...the date of initial startup of your new source.
(b) For an affected source that is an existing source, the compliance date is..."

Response: The statement is correct as worded, and it is the same language in the General Provisions. As explained in response to Comment 3.2.5 of this document, even within Subpart A, the language new and reconstructed affected source is used to clarify that both newly constructed and reconstructed sources are new sources.

3.3.2 Initial Compliance Date for Newly Affected Sources

Comment: One commenter (IV-D-23) submits that in §63.4283(c), EPA has arbitrarily established a 1-year period during which a newly affected source must comply with this rule. The commenter claims there is no difference in the level of effort needed by existing sources to comply with this rule when the rule is first promulgated versus when a source becomes newly affected. The commenter believes that as was the case in the proposed 40 CFR 63, subpart EEEE, three years should be allowed for achieving compliance. The commenter also notes that the definition of "new source" in part 63, subpart A applies to this rule, not the definition of "new affected source" in subpart A. The commenter further adds that the definition of new source in subpart A includes the concept of reconstructed source. The commenter states that including both terms in this text adds to confusion. The commenter provides the following revised language using language consistent with definitions in subpart A:

"(c) For an area source of HAP that increases its emissions or its potential to emit such that it becomes a major source of HAP , the compliance date is specified in paragraphs (c)(1) and (2) of this section.
(1) If the affected source at the major source is a new source subject to this subpart, the compliance date is...
(2) If the affected source at the major source is an existing source subject to this subpart, the compliance date is the date 3 years after the area source becomes a major source..."

Response: According the General Provisions, if an existing area source subsequently increases its emissions or potential to emit such that it is a major source of HAP, then the source will be subject to the relevant emission standard. The General Provisions specify that, such sources must comply by the date specified in the standards for existing area sources that become major sources. If no such compliance date is specified in the standards, the source shall have a period of time to comply with the relevant emission standard that is equivalent to the compliance period specified in the relevant standard

for existing sources in existence at the time the standard becomes effective. The final rule states that for any portion of the source that becomes an existing affected source, the compliance date is either 3 years after the promulgation date of the final rule or 1 year after the area source becomes a major source . Therefore, for an area source that becomes a major source before the promulgation date, 3 years are allowed to come into compliance. However, after the rule is promulgated, the source is aware of the requirements of the rule and has the ability to plan in advance for compliance. Consequently, the compliance period is gradually reduced to one year for an area source that becomes a major source after the initial 3 year compliance period.

Except for affected sources required to conduct performance tests, the initial compliance period for the compliant material option or the organic HAP overall control efficiency and oxidizer outlet organic HAP concentration options begins on the compliance date and ends on the last day of the first full month following the compliance date. For affected sources required to conduct performance tests, the initial compliance period ends on the last day of the first full month following the performance test if the performance test is conducted later than the compliance date (the final rule allows the test to be conducted up to 180 days later).

Except for affected sources required to conduct performance tests, the initial compliance period for the emission rate without add-on controls option and the emission rate with add-on controls option begins on the compliance date and ends on the last day of the 12th full month following the compliance date. For affected sources required to conduct performance tests, the initial compliance period ends on the last day of the 12th full month following the performance test if the performance test is conducted later than the compliance date (the final rule allows the test to be conducted up to 180 days later).

3.4 EMISSION LIMITATIONS

3.4.1 Coating/Printing MACT Floor

Comment 1: Seven commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-21, IV-D-22, IV-D-25, and IV-D-27) assert that EPA incorrectly set the OCE floor for existing sources in the coating/printing subcategory. The commenters further submit that the floor has been set at a level that cannot be met by all of the top 12 percent of MACT floor sources.

Five of the commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-22, and IV-D-27) cite a June 12, 2002, "Coating and Printing Floor" memo from Vince Hellwig, EPA in the Technical Support Document for this MACT, that states the top 12 percent of controlled Coating and Printing Facilities are the 3 highlighted facilities in Table 1-1 of the document. EPA indicates that the OCE of the facilities in the top 12 percent of controlled facilities ranges from 93.1 to 99.3 percent. As calculated by EPA, the average OCE of the 3 MACT floor facilities identified in Table 1-1 of the memo is 98.1 percent.

Commenters IV-D-16, IV-D-17, IV-D-18, IV-D-22, and IV-D-27 note that it is further indicated in this document that the coating sources being reviewed for the MACT floor were performing either rubber or urethane coating operations that are toluene intensive processes. The five commenters claim that these types of processes, while representing the top 12 percent of controlled sources in the EPA database, do not represent the type of coating performed by traditional textile

coaters, either in the coating chemistry used or the configuration of the coating application equipment.

The five commenters also note that as a result of a study conducted by EPA, which showed that "98 percent reduction is the control efficiency achievable by all new oxidizers", EPA adjusted the control efficiencies of the top 2 performing sources from 99.3 and 98.9 percent to 98 percent each and recalculated the MACT floor for existing sources. EPA's revised floor for existing sources was reported as an OCE of 97 percent. The commenters point out, however, that adjusting the MACT floor to 97 percent does not reflect the true arithmetic mean of these three sources, which is 96.3 percent.

Commenters IV-D-16, IV-D-17, IV-D-18, IV-D-22, and IV-D-27 point out that irrespective of whether 96 percent or 97 percent is the calculated average, EPA has calculated a MACT floor that cannot be met by even one of the sources used to determine the floor. The five commenters claim that this contradicts EPA's statement that this floor level OCE is achievable by all sources in the MACT floor, noting that one of the sources in the MACT floor uses carbon adsorption as a control device, and the OCE for this facility is 96 percent. Regarding EPA's statement that "a facility using carbon adsorption for control can achieve 97 percent by installing a PTE around the coating application station", the commenters submit that the addition of a PTE around a textile coating application station would be very expensive. The five commenters find this very troubling in light of the tremendous competitive pressure the industry is facing due to low-priced imports. The commenters don't believe it was the intent of Congress that a facility deemed to be in the best 12 percent of all controlled facilities would have to install costly additional controls in order to comply with the MACT floor. The five commenters believe that the proper Coating and Printing MACT floor OCE should be 93 percent or at most 96 percent and request that EPA change the MACT standard accordingly, including the compliant material option.

Response 1: The 93.1 percent OCE in the text of the MACT floor memo cited by the commenters is a typographical error. The 96 percent OCE as shown in Table 1-1 of the floor memo is correct. A corrected version of the MACT floor memo has been added to the docket (see Docket No. OAR-2003-0014, formerly A-97-51, Document No. IV-B-1).

The commenters are correct in observing that the coating sources represented in the MACT floor were performing either rubber or urethane coating operations that are toluene (and MEK) intensive processes. Toluene and MEK account for more than 80 percent of the emissions in the MACT database. Therefore, most of the coating facilities will be required to take measures to reduce organic HAP emissions, will be reducing toluene and MEK emissions. For coating facilities with high concentrations of toluene or MEK in the exhaust gases from drying and curing ovens, the OCE limit will probably be the compliance option of choice. However, several compliance options are offered, each of which is more appropriate than the OCE compliance option for certain situations.

For low inlet concentrations that may reduce the efficiency of oxidizers, the final standard includes the oxidizer outlet organic HAP option. For a fabric web coating operation with 100 percent capture effciency applying coatings that result in low inlet concentrations to the oxidizer, the minimum ppmv outlet concentration lowers the destruction efficiency required. The compliant material option and the emission rate limit options promote pollution prevention and do not include an OCE limit.

Under the compliant material option, a source may comply by using only coating materials that individually contain less than the allowable limit of organic HAP and by using no cleaning or thinning materials that contain organic HAP. The emission rate without add-on controls option allows a source to meet the emission rate limit by averaging the organic HAP content of all regulated materials used during the 12-month compliance period. The emission rate with add-on controls option allows a source that reduces the organic HAP content of regulated materials to control at lower levels with control devices. In other words, a source would not have to control to the OCE limit if it exercises the appropriate balance of coating formulation and emission control.

Regarding the fact that the MACT floor level of control is not being met by one of the floor facilities, the MACT floor level of control for this source category is based on the average of the top performing 12 percent, therefore, unless all are achieving the same OCE, there will be facilities that were included in our MACT floor determinations that are above and below the MACT floor OCE. The costs of adding and upgrading emission controls were estimated for the industry and accounted for in the economic analysis for the final rule.

Comment 2: Commenter IV-D-29 submitted that none of their five plants producing pre-preg/advanced composite materials received or responded to CAA 114 requests for facility-specific information. The commenter believes that their plants are representative of the pre-preg/advanced composite materials industry and therefore that a significant industry segment was omitted in the Agency's evaluation and establishment of the MACT floor. In this manner, the proposed rulemaking is fundamentally flawed.

Response 2: As a practical matter, we could not survey all of the facilities affected by this rule. Nevertheless, we believe that the facilities that were surveyed during our rule development efforts are representative of the surface coating operations that comprise this source category. Facilities coating fiberglass are included in the database used to determine the MACT level of control for this source category.

Comment 3: Commenter IV-D-29 notes that pre-preg/advanced composite materials are produced under SIC code 2295. The commenter points out that this SIC code and a description of the specific products produced at the commenters five plants are not explicitly included in the MACT applicability writeup. The commenter believes that the MACT database does not take the operational and compliance issues at this type of operation into account.

Response 3: The proposal preamble addressed NAICS codes, which are broader than SIC codes. As shown in Table 1-1 of the Technical Support Document (EPA-453/R-02-010) for this final rule, 10 of the non-CBI facilities in the database used to determine the MACT level of control for this source category, reported producing products under SIC code 2295. We believe that the facilities that were surveyed during our rule development efforts are representative of the surface coating operations that comprise this source category.

Comment 4: Commenter IV-D-29 claims that EPA failed to consider the inherent differences between solution coating and hot melt processes in establishing uniform MACT requirements across both processes. The commenter submits that in the solution coating process, resins are mixed with solvent to achieve a desired viscosity and then are applied to fiber or fabric. In the hot melt process, resins are heated without the addition of solvent and are then impregnated onto a fiber or fabric. The commenter observes that both processes appear to be subject to the proposed MACT and that the hot melt process has relatively low HAP emissions per square foot of product, whereas the solution process, because of the resin systems used and the added solvent, have relatively higher HAP emissions. The commenter also points out that it is not possible to unilaterally substitute a hot melt product for a solution coated product; this requires pre-qualification testing and approval by the customer. Many of the products are covered by a "MIL spec" or other restrictions that mandate how the product is to be produced. The commenter submits that it is, therefore, not reasonable to expect a switch from solution to hot melt products as a means to achieve compliance within the compliance timeframe allowed and requests that EPA consider a separate set of MACT requirements for solution coating and not combine this with other fabric coating processes in setting the MACT floor.

Response 4: Many of the processes in the database used to determine the MACT level of control for this source category are solution coating processes. Several compliance options are available from which to choose, some attainable through the use of low-organic-HAP, high-solids coatings and some attainable through the use of add-on emission controls. The monthly compliance period has been revised to a 12-month rolling average compliance period (See response to Comment 3.4.9 in this document) in response to data submitted by commenters demonstrating the month-to-month variability in organic HAP usage in coating processes. This should make the emission rate with add-on controls option a more viable compliance option for these type of operations.

Comment 5: Commenter IV-D-29 notes that as presented in the proposed rule, the rationale for the selection of the Fabric/Textile Coating MACT floor for existing units relied heavily on the results of an EPA study of the optimal destruction efficiencies for new units. The commenter asserts that it is an unwarranted assumption to consider new unit destruction efficiencies when developing criteria for existing units since existing units, some 10+ years old, would have lower destruction efficiencies due to normal operational use and improvements in oxidizer design.

Response 5: It should be noted that the destruction efficiencies reported by the two facilities with thermal oxidizers that were included in the MACT floor calculation were 99.3 and 98.9 percent. These levels were both adjusted to 98 percent, the level of control generally found to be achievable by oxidizers on a continuous basis. Regarding the EPA study referenced by the commenter, although the study states that existing incinerators may not be physically capable of achieving 98 percent OCE or 20 ppmv outlet concentrations, the study does go on to explain that the existing incinerators in question are small units included as part of the study, that were designed "over a decade ago" [approximately 1970] "to meet a 90 percent reduction. These units were in many cases designed for the same geographical area and by the same vendor. Thus, their lower level of OCE can be attributed to common factors and

do not represent a widespread inability to meet 98 percent reduction or 20 ppmv." It should also be noted that 57 percent of the existing incinerators in question were still able to achieve 98 percent destruction efficiency or higher, even though they were nearing the end of their useful lives. The same study cited by the commenter goes on to confirm that a 95 percent destruction efficiency is too lenient, and that a 98 percent OCE/20 ppmv could be reached with moderate adjustment. The 95 percent OCE would not the best available units, considering cost, energy, and environmental impact.

Comment 6: Commenter IV-D-29 submits that the requirement for demonstrating 100 percent capture efficiency is not demonstrated in the MACT floor analysis. The commenter asserts that this is an unnecessarily restrictive environmental requirement in terms of ambient air quality and community health and is inconsistent with the POWC MACT.

Similarly, commenter IV-D-30 is concerned that while the proposed rule does not specifically mandate PTEs, PTEs may be the only means of compliance using a control device in the cord treating industry due to capture efficiency limitations. The commenter feels that PTEs are an appropriate means of compliance in some situations. However, the commenter points out that on production lines applying high-solvent coatings, use of a PTE may not be possible, since a PTE will cause solvent concentrations to be increased within the enclosure, posing potential flammability and explosion concerns. In addition, according to the commenter, in some situations OSHA confined space regulations may apply in a PTE, which could severely hamper plant operations and productivity, due to restrictions on ease of worker access. Commenter IV-D-30 believes that EPA should revise the MACT floor calculations to reflect more achievable capture efficiencies including a compliance option that would set a destruction efficiency standard based on the MACT floor database and require maximum achievable capture efficiency specific to the cord treating industry.

Response 6: Each of the three facilities used to determined the MACT floor for this subcategory has demonstrated PTE using Method 204, as verified through telephone contacts. One of the facilities is a rubber coater with a room PTE.

Regarding the commenter's concerns with flammability and explosion hazards and OSHA confined space regulations, an engineering contractor that installs PTE cites the following 4 requirements beyond the 5 point EPA criteria for PTE that must be considered when designing a fully enclosed room: 1) OSHA exposure safety standards, 2) worker comfort, 3) insurance requirements, and 4) additional air conditioning requirements (Docket No. OAR-2003-0014, formerly A-97-51, Document No. IV-J-1). Of these, worker comfort has dominated the design of PTE for surface coating operations. The engineering contractor designs fully enclosed press rooms with 8 to 12 room air changes per hour for worker comfort. OSHA recommends 4 room air changes as a minimum.

Also, the final rule provides several options for complying with the emission limits. For example, the emission rate with add-on controls option can be achieved without the use of a permanent total enclosure to capture emissions. As is described in response to Comment 3.4.9 in this document, the compliance period has been revised to a 12-month rolling average. In addition, as explained in response to Comment 1 of Section 3.4.7 in this document, the final rule has been written to allow a source to account for reactive materials that are not emitted. This can be used to account for

formaldehyde in RFL dip that is reacted and not emitted. These revisions should make the emission rate with add-on controls option a more viable option for these type of operations.

Comment 7: Commenter IV-D-23 responded to a 114 ICR request that originated from the EPA team developing the POWC MACT standard. The commenter had one site that the commenter and EPA believed was part of the POWC source category at the time. That site is the commenter's Electromaterials site in Coshocton, Ohio. The commenter requests that EPA confirm that data on the Electromaterials site has been moved to and included in the database for the Fabric MACT rulemaking and removed from the POWC database. The commenter believes that regardless of whether the data on their site would influence the MACT floor determination in either source category, the source should appear in only one source category, i.e., the one in which EPA believes it belongs. The commenter considers this important in the event that post-promulgation questions of rule applicability arise.

Response 7: We have reviewed the data submitted by the commenter and agree that their web coating process would be subject to the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP. On the other hand, we have concluded that including this facility in database used to determine the MACT floor level of control for this subcategory would not affect the MACT floor level of control for the web coating and printing subcategory.

Comment 8: According to commenter IV-D-29, the number of potentially affected facilities evaluated to develop the POWC MACT floor was approximately 10 times that used to set the Fabric/Textile Coating MACT floor. The commenter submits that a survey of facilities used for the POWC MACT indicated several types of emission control devices including thermal and catalytic oxidizers, adsorption and condensation technologies and that based on a review of the facilities using emission controls, the EPA concluded that an OCE of 95 percent represented a reasonable upper limit value. The commenter believes that due to the larger sample size and similar control technologies and HAP emissions, the POWC MACT floor is more representative of specialty coating industry operational performance than textile manufacturing. The commenter also notes that the POWC MACT requires 95 percent removal and does not detail minimum capture efficiency or capture velocities and believes that this further supports a relaxing of the proposed requirements for the fabric/textile coating MACT.

Response 8: The MACT floor for the web coating and printing subcategory is based on available data from a survey of this industry. We believe that the facilities that were surveyed during our rule development efforts are representative of the surface coating operations that comprise this source subcategory.

3.4.2 Finishing MACT Floor

Comment 1: Eight commenters (IV-D-11, IV-D-16, IV-D-18, IV-D-21, IV-D-22, IV-D-25, IV-D-26, and IV-D-27) claim that the zero HAP MACT floor for finishing will lead to confusion and unnecessarily burden facilities that perform finishing but do not perform dyeing. Commenter IV-D-11

notes that using the equations in §63.4351(b) and computing for any finishing materials that contain any HAP above zero percent then the organic HAP emission rate for the compliance period could conceivably be greater than zero and a violation of the emission limit for that period. The commenter offers this as an example of the confusion caused by the loose definition of "low HAP", "no HAP", and "zero HAP". All of the eight commenters request an absolute numerical value for compliance determination rather than the zero kg organic HAP per kg of finishing material as proposed in Table 1.

Four of the commenters (IV-D-16, IV-D-18, IV-D-22, and IV-D-27) note that the proposed organic HAP emission limit for finishing operations is "zero kg of organic HAP per kg of finishing materials as determined according to §63.4341 and/or §63.4351." However, the commenters point out that Table 1 as proposed, only refers to section §63.4341 (the Compliant Material Option) and should be revised to also reference section §63.4351 to reflect the fact that the Emission Rate Without Add-On Control Option is an acceptable compliance option for finishing operations. Also, the commenters believe that zero as determined in §63.4341 applies when determining whether to count HAP to mass finishing material fraction, but it is not clear whether this same definition of zero as being less than 1 percent/0.1 percent HAP for non-carcinogens and carcinogens, respectively, applies to the final calculated total mass HAP to mass finishing material fraction, or limit, found in Table 1. The commenters point out it is possible to misinterpret the limit in Table 1 to mean, "absolute zero," which the commenters do not believe is EPA's intent.

Four commenters (IV-D-16, IV-D-18, IV-D-22, and IV-D-27) point out that EPA determined with industry support that all slashing materials can be supplied with less than 1 percent/0.1 percent HAP, and thus would be considered absolute zero HAP materials. However, the commenters assert that setting an emission limit of "zero kg of organic HAP per kg", defined in the same manner as for slashing in Table 1, for finishing-only operations is not appropriate since many essential finishing materials used by the best performing facilities have HAP content greater than 1 percent/0.1 percent, and therefore would automatically be unable to comply with an absolute zero limit. The commenters note that even though EPA proposes to allow the use of averaging calculations for finishing-only operations, where an affected facility may use averaging to calculate a single mass fraction value for HAP in finishing materials, the proposed NESHAP does not give a single numeric value to which this value may be compared to determine compliance.

Regarding the compliance determination, the four commenters (IV-D-16, IV-D-18, IV-D-22, and IV-D-27) submit that it is not clear as to which de minimus value, either 1 percent or 0.1 percent (0.01 kg HAP/kg material or 0.001 kg HAP/kg material), would have to be met by the averaged mass fraction value, or for that matter whether it would have to meet absolute zero. For instance, if a finishing operation only used a carcinogenic HAP containing material above 0.1 percent, such as the industry standard durable press resins, which contain between 0.1 percent and 0.5 percent formaldehyde, would they have to meet an emission limit of 0.1 percent or 1 percent (assuming that the limit is not absolute zero)? The commenters assert that in this example, trying to meet a 0.1 percent de minimus could result in the shutting down of many major finishing operations in the U.S. supplying permanent press industrial work clothing to the manufacturing, service and military sectors of our country, or severely hampering future growth and flexibility of this important domestic source of uniform fabrics. Likewise, the commenters question that if both carcinogens and non-carcinogens are used,

does the facility use an emission limit of 0.1 percent, 1 percent, or absolute zero to determine compliance?

Five of the commenters (IV-D-16, IV-D-18, IV-D-22, IV-D-26, and IV-D-27) recommend that EPA establish the emission limit for finishing-only operations as an absolute numerical limit of 0.01 kg HAP/kg of finishing materials. The commenters claim that this numerical emission limit is supported by the data previously submitted to EPA by industry groups such as the American Textile Manufacturers Institute, who represent textile manufacturers with numerous finishing operations.

Response 1: The MACT floor for finishing was calculated as 0.03 weight percent organic HAP in finishing materials. As described in the Technical Support Document for the proposed NESHAP (see Docket No. OAR-2003-0014, formerly A-97-51, Document No. II-A-11), to determine the MACT floor for finishing, we calculated a weighted average organic HAP content of finishing materials as purchased from the finishing class MACT floors. The finishing emission limit has been revised in the final rule to be 0.0003 kg of organic HAP per kg of finishing material, which will provide a number other than absolute zero for averaging across all finishing materials applied. For example, a facility that applies only finishing materials with no organic HAP with the exception of a finishing material containing 0.2 percent formaldehyde that is needed for a niche product will have the opportunity of determining the weighted average organic HAP content of all finishing materials applied during the 12-month compliance period to demonstrate compliance with the emission rate without add-on controls option.

Individual organic HAP concentrations less than 0.1 percent by mass for OSHA-defined carcinogens and 1 percent by mass for other compounds will still be treated as zeros in the averaging for compliance determination with the organic HAP emission limit.

Regarding the reference in Table 1 to §63.4341, this was intended to be a reference to §63.4341(e)(1), "Determine the mass fraction of organic HAP for each material used" for the definition of zero kg of organic HAP per kg finishing materials. With the inclusion of a numerical emission limit for finishing, this reference is not needed and has been removed.

Comment 2: Commenter IV-D-11 questions the consistency of potentially subjecting finishing operations to two different emissions limitations. The commenter requests that the limitations of 0.016 kg organic HAP/kg dyeing and finishing material be applied to dyeing and/or finishing.

Response 2: Dyeing and finishing are different planks in the MACT floor for the dyeing and finishing subcategory, and therefore, different limits have been calculated for each plank. A facility with both dyeing and finishing operations may choose to average across the planks, since they are in the same dyeing and finishing subcategory.

Comment 3: Commenter IV-D-31 asserts that the use of the "zero" standard for slashing and finishing-only operations creates excessive confusion and relaxes the calculated MACT floor. The commenter believes that given the compliance determination procedures in §63.4341(e), which allows HAP to be reported in accordance with MSDS preparation standards (i.e., carcinogenic HAP less than 0.1 percent HAP equals zero and other HAP less than 1.0 percent also equals zero), compliance with

the calculated MACT floor appears easy to demonstrate without relaxing the MACT floor.

However, the commenter submits that the MACT floor for finishing-only operations is reported in the preamble to be "The weighted average organic HAP content in finishing materials as puchased was determined to be 0.03 weight percent for existing sources." The commenter claims that EPA used the same rationale for changing the MACT floor as used for slashing. The commenter also points out that EPA proposes a standard of 0.016 kg HAP per kg materials for the dyeing-only and dyeing and finishing subcategories, which should be more difficult to calculate and demonstrate compliance for than the 0.03 kg HAP per kg material standard calculated for finishing-only operations. The commenter asserts that EPA is allowed to select a standard beyond the MACT floor in order to protect human health or the environment, however, to make the MACT floor less stringent requires evidence of risk-based analysis or unwarranted cost without environmental benefit.

The commenter submits that compliance demonstrations for the zero standard, using the emission rate without add-on control device option, is confusing in that compliance is determined at 0.1 percent for carcinogenic HAP and 1.0 percent for non-carcinogenic HAP. The commenter believes the flexible standard is further complicated by the absence of a well-defined EPA list of carcinogenic HAP on which to base compliance determinations and that the zero emission standard is not clearly defined and causes confusion. The commenter further asserts that the compliance demonstration methodology using MSDS as a data source and MSDS preparation guidance to determine "counted" HAP is not challenged and is believed to enhance compliance determinations and ease the burden imposed by this proposed rule. The commenter does not see any alternative to changing the proposed standards for slashing and finishing-only to the calculated MACT floor.

Response 3: As is explained in Response 1 of this section of this document, the finishing emission limit has been revised to be the calculated MACT floor numerical limit of 0.0003 kg of organic HAP per kg of finishing material.

3.4.3 Consistency of Emission Limits

Comment: Six commenters (IV-D-6, IV-D-16, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) claim that EPA is inconsistent in the wording of emission limits throughout the preamble and the proposed subpart. The commenters submit that emission limits are inconsistently based on usage, purchase, or applied records and data. According to the commenters, EPA should eliminate these inconsistencies by ensuring text and actual emission limits of Subpart OOOO are always in agreement.

Specifically, five of the commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) request that the defined term "as purchased" be used for the compliant material option in each subcategory, as it is in the slashing subcategory. These commenters assert that this type of monitoring flexibility should be allowed for at least each and every subcategory that uses the compliant material option to reward their pollution prevention efforts with reduced regulatory burden and requirements. These five commenters further support the requirement for usage records to demonstrate compliance with emission rates with and without controls in the dyeing and finishing and the coating and printing subcategories. Commenter IV-D-6 claims there is no logical reason why EPA should not permit

demonstration of compliance based on usage, purchased, or applied records and data, so long as the methodology chosen is reasonable.

Response: The compliance demonstration for the compliant material option is based on purchase records for all regulated materials at the source. No records of the mass of materials used are required since the purchase records showing that all regulated materials received by the facility from the manufacturer or supplier are in compliance with the emission rate are sufficient to demonstrate compliance. The rule language for the web coating and printing and the dyeing and finishing compliant material option uses the term regulated materials used since an affected source may be using other compliance options (such as the emission rate without add-on controls) in addition to the compliant material option.

The emission limits for dyeing and finishing were based on the HAP content of materials as purchased. A compliance demonstration based on the HAP content as applied would be inconsistent with the basis for the emission limits.

3.4.4 Oxidizer Outlet Concentration Limit

Comment: Commenter IV-D-31 submits that the emission limit in Table 1 to Subpart OOOO for new and reconstructed sources using the Oxidizer Outlet Concentration Option should be, "HAP concentration of no greater than 20 ppmv on a dry basis..." rather than "...no greater than 20 ppmv **by compound** (commenter's emphasis) on a dry basis..."

Response: The commenter is correct, the final rule has been revised to incorporate the change.

3.4.5 Affected Source Terminology

Comment: Commenter IV-D-23 submits that §63.4290 incorrectly uses the terms referring to sources and the third sentence should be revised to correctly use words and terms that are defined in this part, as follows:

> "...for an affected source that is a new source and for an affected source that is an existing source in each..."

Response: The terminology used is consistent with the terminology in the General Provisions. Therefore, the suggested change was not made to the final rule.

3.4.6 Table 1

Comment: Commenter IV-D-23 has four comments regarding Table 1. First, the word "reconstructed" is unnecessary and creates confusion and should be deleted everywhere it occurs in the table, including in the table title. Second, the commenter concurs with EPA that reduction to an outlet

concentration level should be an alternative compliance option when capture efficiency is 100 percent. The commenter believes this is an excellent compliance option that should remain in the rule. Third, the commenter has a coating operation that uses a PTE and thermal oxidizer to achieve BACT and comply with 40 CFR 60, subpart VVV. The commenter has conducted a performance test that documented attainment of the Method 204 requirements for a PTE and that the destruction efficiency of the thermal oxidizer is above 98 percent. The commenter notes that if they assume that all VOCs in the oxidizer outlet are HAP, the measured levels of HAP during the emissions test were above 20 ppmv. The commenter believes that the way the outlet concentration level for combustion devices is written, it could be interpreted to require the commenter's emission control system to meet 20 ppmv, regardless of destruction efficiency. The commenter submits that EPA should clearly indicate that OCE of at least 97 percent for combustion or non-combustion devices or outlet concentrations of equal to or less than 20 ppmv for combustion devices are both acceptable alternatives. Fourth, the commenter asserts that when an owner or operator uses one or more PTEs and one or more control devices, and no other compliance options, at the affected source, EPA must allow compliance with either the 97 percent overall reduction or the outlet concentration level, whichever is less stringent. The commenter believes this is important, because as the agency knows, it may not be possible to achieve, or document, 97 percent reductions at low inlet concentrations and it may not be technically possible to achieve less than 20 ppmv at high inlet concentrations.

Response: The word "reconstructed" is used for clarity that new affected sources also include reconstructed affected sources.

The oxidizer outlet organic HAP concentration option has been included in the final rule. According to Table 1 of the rule, "you may choose any one of the following limits:" the OCE limit, the emission rate limit, **or** (emphasis added by EPA) the oxidizer outlet organic HAP concentration limit. Several compliance options are offered in Table 1 of the final rule in order for the owner or operator to have flexibility in choosing the appropriate compliance option for their particular situation.

3.4.7 Compliance Option Accounting for Reactive Materials

Comment 1: Four commenters (IV-D-16, IV-D-18, IV-D-20, and IV-D-27) assert that proposed §63.4291(a) does not include a compliance option for the coating and printing subcategory which takes into account the processes that utilize reactive materials such that all HAPs are not emitted. The commenters submit that processes that utilize reactive technologies may use materials containing HAPs which, when included with the other components of the coating mix, would not meet the kg HAPs per kg solids emission limit. The commenters point out that since the HAP reacts during the coating process to bind with other materials, only very small quantities of HAPs are emitted, however, the current compliance options for the coating and printing subcategory do not take this into account. Similarly, Commenter IV-D-33 submits that their facility uses numerous types of phenolic, epoxy and melamine resins in which the major HAPs are formaldehyde, methanol, phenol, and styrene. Commenter IV-D-33 notes that the formaldehyde and phenol in these resins form a bond with the substrate during the coating process and are not fully volatilized, e.g., up to 71 percent of the phenol

and 67 percent of the formaldehyde in the commenter's applied resins reacts during the drying stage of the process. Commenters IV-D-16, IV-D-18, IV-D-20, and IV-D-27 present a common example of this issue as a process where formaldehyde is added to a coating process and cross-links with resorcinol when heated on the coating range. As a result, the formaldehyde emissions are very low, therefore, the cost of abatement is prohibitive, unnecessary and offers no environmental advantage.

Commenters IV-D-16, IV-D-18, IV-D-20, and IV-D-27 request that EPA allow a compliance option which considers these low HAP-emitting processes. The commenters submit that if EPA does not, these processes, which occur at numerous facilities, will be eliminated in the U.S., even though the HAP emissions are trivial.

Commenter IV-D-33 notes that during the development of the POWC MACT, there were discussions with EPA staff about the web coating industry and its products. The commenter points out that the POWC Background Information Document clearly acknowledged the fact that reactive coatings are not necessarily emitted during the coating process and that EPA agrees with the need for consideration of reactive resins to demonstrate compliance for the POWC MACT. The commenter submits that since the processes and materials used for the POWC source category are similar to the coating and printing subcategory in the Fabric MACT, it would be appropriate for the Fabric MACT to also incorporate this option.

Commenter IV-D-33 provides testing data from two of their facilities confirming that coating HAPs are not all emitted. The commenter suggests that there are testing protocols that can be used to determine non-emitted reactive HAPs that remain in the web. According to the commenter, both stack testing with an enclosure and extraction methods should be scientifically acceptable. The commenter also notes that there may be other approaches existent now or developed in the future that have not been approved by EPA and requests that EPA put a placeholder for methods that are subsequently approved. This would allow manufacturers to use the as-emitted approach as soon as the tests are substantiated to EPA's satisfaction.

Commenter IV-D-33 further suggests that where reactive coatings are tied up in the web after the coating line, a far more equitable and environmentally friendly approach would be to set emission limits that are equivalent to the proposed content limits. This would assure an equivalent level of control, but provide flexibility and scientific underpinnings to the regulation. The commenter asserts this approach would not permit an increase in emissions, but would simply make the compliance options reflect the reality that some HAPs are not emitted.

Response 1: Reactive materials were addressed in the NESHAP for the printing and publishing industry (40 CFR 63, subpart KK). The final rule has been written to allow the use of Method 24 for multi-component coatings with reactive materials to determine the mass fraction of non-aqueous volatile matter. This empirical value can be used as a substitute for the mass fraction of organic HAP calculated from the sum of organic HAP in each coating component. Also, you may submit an alternative technique for approval by the Administrator (e.g., stack testing with an enclosure) to quantify the organic HAP actually emitted from the web coating process.

Comment 2: Commenter IV-D-30 submits that in the typical fabric or cord treating facility in the rubber industry, the dip formulations used commonly react during the mixing and storage prior to introduction to the saturators. During these reactions, a chemical such as formaldehyde (a HAP) cross-links the polymers contained in the dip formulation, making the reacted chemical unavailable for release as an air emission during subsequent fabric processing steps. The commenter points out that since these reactions occur prior to introducing the dip into the saturator where the dip formulation is actually applied to the fabric, the reacted HAPs cannot be emitted during fabric treating. According to the commenter, for formaldehyde, the chemical conversion rate typically ranges from 80 to 99 percent. The commenter notes that this means that if the amount of formaldehyde introduced into the dip mixing operations (without taking into consideration the chemical reaction conversion rate) is used to calculate HAP emissions, the formaldehyde emissions could be over estimated by as much as a factor of about 100.

Commenter IV-D-30 asserts that in order to accurately represent HAP emissions from fabric treating operations in the rubber industry, calculations of HAP emissions must account for these chemical reactions. The commenter suggests that this calculation can be done by using the mass percent of HAP in the coating, as it is used in the saturator, after any pre-reactions have occurred. These percentages can be calculated by the facility based on the conversion rates of the facility's individual dip formulations. The commenter points out that in addition, it must be recognized that some fabric or cord treating facilities can mix dip formulations for use in plants at other locations, therefore, it should be made clear that the mass percent HAP calculation should only include the mass of coatings that actually are applied to the fabric at the subject facility. The commenter believes that as proposed, it is unclear whether the language of §63.4351 allows facilities to take considerations such as formulation data, chemical reactions and stack testing into account.

Response 2: See Response 1 in this section of this document regarding revisions made to the final rule to account for reactive materials. Regarding the comment that it should be made clear that the mass percent organic HAP calculation should only include the mass of coatings that actually are applied to the fabric at the subject facility, the compliance demonstration language for each compliance option has been revised in the final rule to clarify that regulated materials applied in the affected source must be included in the initial and continuous compliance demonstrations.

3.4.8 Zero HAP Thinner/Cleaner Requirement

Comment: Five commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) note that to demonstrate compliance with the compliant material option for coating and printing operations, each coating and printing material used must meet the applicable emission limit in Table 1 and the affected facility must use no organic HAP containing thinning or cleaning materials. The commenters claim that this would be a viable compliance option except that many coating and printing operations use small quantities of thinning or cleaning materials that may contain HAPs. The commenters submit that the quantities of these thinning or cleaning materials are typically very low when compared to the overall material usage and the impacts are as a result very small. Therefore, the commenters propose that a de

minimus quantity of HAP containing thinners and cleaners be allowed in this compliance option.

The commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) believe that one justification for allowing a de minimus quantity of HAP containing thinners and cleaners is that the additional burden of recordkeeping and reporting to demonstrate compliance across the entire operation is excessive compared to the minimal impacts of low usage of HAP containing thinners and cleaners. In addition, the commenters point out that based on promulgated MACT standards, EPA clearly does not intend to regulate the use of aerosol cleaners and other similar adhesive, janitorial, and cleaning products that are not significant sources of HAP emissions. The commenters note that these types of chemical products are not traditionally regulated because they are low volume usage and ancillary to the main production process. For example, most state air programs and even some MACT standards (e.g., Subpart JJ) provide for some exemption or deminimus usage threshold, below which they are not regulated.

The commenters assert that since the compliant material option cannot be used by ANY coating or printing source that uses ANY (commenters' emphasis) amount of a cleaning product that contains greater than 1 percent HAP content, EPA is unfairly burdening those sources that could use the compliant material option except for having to account for those small volume, HAP containing, ancillary cleaning products. The commenters point out that given the ubiquity of aerosol and other type adhesives and cleaners that are used in manufacturing settings, very few sources will be able to use the compliance option that is least burdensome for facilities to meet.

The commenters present as one example a carpet facility that currently uses a degreaser that contains 90 percent trichloroethylene in order to meet the quality requirements of its customers. In a high volume production cycle this facility uses almost 8 cases of 12 x 20 ounce aerosol cans of this degreaser - releasing approximately 1/20th of a ton of HAP. Even though the process chemicals are almost HAP free and compliance with the compliant materials option can easily be demonstrated using purchase records, the 1/20th ton of HAP from this cleaner will require the source to perform complicated and more burdensome emission rate calculations. This is the result of the proposed rule even though such an insignificant amount does not affect overall compliance with Table 1 limits, given the vastly larger amounts of low HAP process chemicals in the denominator of the equations.

In addition, the commenters point out that the proposed rule will have an unfair and burdensome affect on certain sources. For instance, most textile subcategory sources have their product inspection stations in-line with the various printing and coating operations, as this is the most efficient configuration. However, many of the same sources also have off-line, separate inspection areas. In the event that an aerosol cleaner or other product is used to remove a grease or soil stain, its use would have to be tracked in the one configuration, but not in the other.

The commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) request that EPA provide either non-applicability criteria for certain categories of cleaners and adhesives that are not directly process related, or establish de minimus or incidental quantities of HAP containing thinners and cleaners that do not preclude the compliant materials option or have to be included in the emissions rate calculation.

Response: In the final rule, the definition of cleaning material has been written to exclude cleaners applied using handheld non-refillable aerosol containers. The proposed definition of coating operation stated that, coating application with handheld, nonrefillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart. The compliant material option is offered to simplify recordkeeping for a source that is able to use only compliant coating and printing materials and zero organic HAP thinning and cleaning materials. A source using non-aerosol organic HAP-containing cleaners and thinners can also use the emission rate without controls compliance option.

3.4.9 Annual Averaging Period

Comment: Seven commenters (IV-D-11, IV-D-15, IV-D-16, IV-D-17, IV-D-18, IV-D-22, and IV-D-27) request an annual averaging period in order for the subpart to be representative of the industries operations and the data used by EPA to set the MACT floor. The commenters assert that numerous sources in the industry have significant month-to-month variability in the types of products that are processed and the amount of HAP-containing materials that are used. The commenters point out that although EPA recognized the variety and diversity in the proposed subcategories for this MACT standard, EPA failed to consider this diversity when it set the compliance period.

The commenters support the averaging calculations provided for the emission rate without add-on controls options, but point out that the compliance period of one month does not account for the very significant variations in the types and quantities of materials used on a month-to-month basis in typical textile operations. The commenters note that there is significant variability in month-to-month usage of non-HAP chemicals as well as chemicals containing HAP. Commenters IV-D-11, IV-D-17, IV-D-18, and IV-D-22 submit plant specific data demonstrating the extreme volatility that occurs within both the coating and printing and dyeing and finishing subcategories over time. The commenters submit that the significant variability is entirely unpredictable from a manufacturing standpoint, with market (customer) demand being the driving force that changes the products that are manufactured and therefore changes the dyes and other materials used in the manufacturing processes. The commenters point out that the significant variability in chemical usage and calculated mass fractions in the data provided by the commenters are not dependent on production throughput.

The commenters assert that the significant variability in emission rates from month to month defeats the advantage gained through averaging calculations, whose purpose was to accommodate changes and provide a degree of flexibility. The commenters further assert that given that EPA has recognized this variety and volatility over time within this industry segment, and that monthly spikes in HAP usage could preclude a facility from using the emissions rate compliance option, EPA must instead provide a 12-month rolling average period for demonstrating compliance with the proposed limits. The commenters offer as further support for the 12-month rolling average compliance period the fact that all ICR data submitted by the textile industry, as well as data and surveys provided by ATMI, were based on annual averages. The commenters also cite as precedence for the 12-month rolling average compliance period the recently promulgated Metal Coil MACT (40 CFR 63, subpart SSSS), in which the 12-month rolling average compliance period was determined to be appropriate because the MACT

floor was based on annual average data.

The commenters request that EPA revise the proposed subpart to base compliance on a 12-month rolling average period for at least the dyeing and finishing and coating and printing subcategories. The commenters believe that otherwise, these restrictions on the textile industry's process and product flexibility will unnecessarily cause process shutdowns and further loses in sales and market share, and will result in a MACT that is not representative of the industry.

Response: Upon review and evaluation of the data submitted by the commenters, the final rule has been written to allow a 12-month rolling average compliance period for sources using the emission rate compliance option. This would allow for the month-to-month variability in organic HAP content of coating, dyeing, and finishing materials.

3.4.10 Demonstration of Compliance

Comment 1: Commenter IV-D-9 operates a coating source that has uncontrolled HAP emissions of 0.057 kg HAP per kg coating solids applied. The commenter submits that a portion of the emissions are captured and controlled in a packed bed scrubber resulting in emissions after control of 0.21 kg HAP per kg coating solids applied. The coatings applied are not compliant materials. In the production process between the coating applicator and the drying oven, the majority of HAP applied is removed from the coated web while still in the liquid phase, prior to volatilization from the process. The portion of HAP applied that is subsequently removed in this manner is contained and recycled via distillation for reuse in the associated coating mix preparation process, and is not reflected in the emissions from the process as would be the case where all HAP applied in a coating is volatilized. The commenter is seeking clarification as to EPA's intent in regard to the emissions limitations as expressed in Table 1 of the proposed NESHAP. The commenter questions whether it is EPA's intent that a coating source demonstrating an emission rate less than 0.12 kg HAP per kg solids applied has demonstrated compliance with the emission limitation? If the source operates capture and control equipment to further reduce emissions, does EPA intend that the source must demonstrate compliance using one of the compliance options for sources operating control devices?

Response 1: An affected source may choose which compliance demonstration is more appropriate for their particular situation. The affected source may choose to demonstrate compliance with the emission rate without add-on controls option, thereby, not taking credit for the emission reduction achieved by a control device. It may be to the affected source's advantage to choose the emission rate with add-on controls or the OCE compliance option for the coating operation with the control device to take credit for the reduction and to provide an additional margin within the emission limit for operating flexibility. The chosen compliance option dictates the monitoring, recordkeeping, and reporting required to demonstrate initial and continuous compliance.

Comment 2: Commenter IV-D-9 submits the following questions: "In a facility with multiple subject coating lines, each using a different compliance option (e.g., Line #1 complies using compliant materials,

Line #2 complies using control devices, etc.), would EPA permit averaging across lines for compliance purposes? If so, how does EPA envision averaging between lines will occur? Which emissions limitation and compliance option should serve as the basis for averaging?"

Response 2: A facility with multiple web coating lines subject to the rule , may use any one of the compliance options on an individual web coating/printing operation or on multiple web coating/printing operations in the affected source as a group or to the entire affected source in the coating and printing subcategory. A source may use different compliance options for different web coating/printing operations or at different times on the same web coating/printing operation. However, a source may not use different compliance options at the same time on the same coating/printing operation. Averaging is not allowed across web coating lines in different sub-categories.

3.4.11 Dyeing and Finishing Subcategory Compliance Options

Comment 1: Seven commenters (IV-D-6, IV-D-15, IV-D-16, IV-D-17, IV-D-18, IV-D-22, and IV-D-27) request an add-on control option for the dyeing and finishing subcategory. The commenters note that the two proposed compliance options for dyeing and finishing operations do not include demonstrating compliance by emission rate with add-on controls. The commenters submit that throughout the development process for this subpart, the ATMI MACT Task Force has repeatedly informed EPA that an add-on control option for the dyeing and finishing subcategory is necessary and appropriate. The commenters point out that as the industry moves from mass base goods production to specialized niche production, and as new products and technologies are developed and implemented, flexibility in the production process will be the key to the survival of this industry. The commenters assert that allowing dyeing and finishing sources an add-on control option would be more reflective of the variety of dyeing and finishing processes used by affected sources and would provide maximum process flexibility while also complying with the emission standards.

The commenters note that in the preamble to the proposed rule, EPA cited the absence of add-on controls for dyeing operations and the small number of inefficient add-on controls for finishing operations as a rationale for omitting the emission rate with add-on controls compliance option. The commenters point out that while this may well represent current industry practices, in some cases, compliance with the proposed emission limits cannot be achieved with either of the proposed compliance options. Furthermore, the commenters believe that EPA should be consistent across subcategories, i.e., although there are no add-on emission controls on textile printing operations, add-on control options were offered for printing sources.

The commenters also cite as further justification for an add-on control option EPA's methodology in setting MACT floor limits for the dyeing and finishing subcategory. The commenters note that EPA states in the preamble (p. 46045) "in some cases, sources reported different chemistry for finishes within the same finish class for use on different products" and "usage of different finish classes varied across sources" (p. 46046). Based on these observations, the commenters believe that the source selected as the finish class MACT floor will NOT (commenter's emphasis) be reflective of the variety of chemistry and products that are used by affected sources in that finish class. The

commenters submit that the same reasoning applies to the dyeing MACT floor.

In summation, the commenters submit that given the extensive pollution prevention that has already occurred in the industry and the variation in the chemistry used both between and within the numerous dye and finish classes, it is reasonable, appropriate, and required that EPA provide an add-on control option for the dyeing and finishing subcategory.

Response 1: In order to provide more compliance flexibility with the emission limits, the final rule has been written to include an emission rate with add-on control device compliance option for the dyeing and finishing subcategory.

Comment 2: Six commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-21, IV-D-25, and IV-D-27) assert that the proposed regulation will unfairly impact specialty dyeing and finishing because of EPA's failure to differentiate between textile dye and finish classes. The commenters submit that no compliance options are provided for those sources that produce specialty products which use high HAP content chemicals that have no significant air emissions due to the dyeing/finishing process conditions and that have no available low HAP substitutes. The commenters claim that the only option for these specialty processes is to cease production of those products.

Four of the commenters (IV-D-16, IV-D-17, IV-D-18, and IV-D-27) present an example of a specialty product manufactured by Commenter IV-D-17 that is used in the homeland security sector as well as in many safety and environmental products, including firefighters' protective clothing. The dyeing of this Kevlar/Nomex product requires an auxiliary chemical with a high HAP content. The four commenters note that Commenter IV-D-16 conducts a similar operation on a completely different fiber type of Kevlar/Nomex product that is dyed using auxiliaries with relatively no HAPs. The commenters assert that as the standard is proposed, i.e., without any 1) emission rate with add-on control option, 2) consideration of emission factors to reflect the fact that in dyeing HAP usage does not always result in HAP emissions, or 3) allowance for quantifiable HAP wastewater discharges, Commenter IV-D-17 will have to discontinue a product line which could negatively impact law enforcement, military operations, etc. The commenters note that in reality, the dyeing is performed in a pressure batch dyeing operation with negligible air emissions anyway.

Commenters (IV-D-16, IV-D-17, IV-D-18, and IV-D-27) note that EPA determined in this subpart that coating and printing operations that occur at ambient temperature are not regulated activities since the HAPs used in the activities are not emitted due to insufficient driving force. The four commenters request that this applicability concept be applied to dyeing and finishing operations for consistency with in the subpart to reflect the fact that for the dyeing and finishing subcategory HAP usage often does not result in HAP emissions due to operating conditions and the associated insufficient driving force for emissions. Specifically, the four commenters recommend that EPA provide additional compliance options within the subcategory including the use of 1) emission capture and control systems, 2) an emission limitation and compliance methodology based on HAP emissions versus simply HAP usage, and 3) an allowance for quantifiable HAP wastewater discharges.

Response 2: The final rule has been written to include the emission rate with add-on control

compliance option for the dyeing and finishing subcategory. In addition, language has been added to the final rule to account for reactive chemicals that are not emitted from dyeing and finishing operations . Also, a provision has been added to the final rule that allows for a source to account for quantifiable organic HAP that is biodegraded in wastewater and therefore not emitted to the atmosphere.

3.4.12 Table 2 – Operating Limits if Using Add-On Control Device and Capture System

Comment 1: Commenter IV-D-23 asserts that by proposing to create operating limits, EPA is fundamentally changing the regulatory approach. The proposed rule would impose operating limits as substantive requirements independent of emission limits.

The commenter notes that existing Part 63 and Part 60 rules use criteria such as the combustion chamber gas exit temperature, not as independent limits, but as operating conditions that, if deviated from, trigger a reporting requirement. Reporting such deviations gives EPA and the public notice about a potential problem and an opportunity to determine whether the deviation from the operating condition caused an exceedance of the underlying emission limit.

The commenter submits that the key here is that a failure to maintain a minimum gas temperature does not necessarily translate into a failure to meet an emissions limit, i.e., there is not a perfect correlation between an operating condition and an emissions limit. The commenter asserts that another performance test at the lower temperature could well indicate that no exceedance of the emission limit occurred.

The commenter also points out that and operating limit will be established based on a performance test. The commenter notes that it is rare that the results of a performance test show minimum compliance, e.g., if the emissions limit is a 97 percent reduction in emissions, the performance test of a thermal oxidizer that controls emissions showed exactly a 97 percent reduction with a minimum gas temperature of , say, 1450 °F. Typically, the testing demonstrates a control level greater than that required by the rule, e.g., at the minimum gas temperature of the test (say, 1500 °F), control of 98 percent or 99 percent was demonstrated.

The commenter asserts that by turning an operating condition into an operating limit, EPA is effectively imposing a more stringent standard (e.g., the 98 percent or 99 percent control actually achieved at 1500 °F) than the MACT floor it intends to adopt (97 percent control, achievable at a lower temperature that 1500 °F). This also leads to the actual standard varying from site to site, depending on the conditions of the performance test. The commenter urges EPA to change the operating limits to operating conditions, consisting of monitoring and recordkeeping requirements. Any deviations from these monitoring and recordkeeping requirements would need to be reported in the semiannual compliance report pursuant to §63.4320(a), but would not be per se violations of the rules.

Response 1: As is explained in response to Comment 3.9.2, if an oxidizer is operating below the minimum temperature established as the operating parameter value, this indicates a malfunction of the oxidizer or of the temperature monitoring equipment and also represents a deviation from the operating limit. However, Section 63.6(e) of the General Provisions to Part 63 requires the owner or operator of an affected source to "develop and implement a written startup, shutdown, and malfunction (SSM) plan

that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard. The SSM plan shall identify all routine or otherwise predictable CMS malfunctions." The purposes of the SSM plan are to ensure that a source maintains the affected source and associated air pollution control equipment such that HAP emissions are minimized at least to the levels required by all relevant standards, to ensure that you are prepared to correct malfunctions as soon as practicable after their occurrence to minimize HAP emissions, and to reduce the reporting burden associated with periods of startup, shutdown, and malfunction.

During periods of startup, shutdown, and malfunction, a source is required to follow the procedures specified in the SSM plan. The final rule requires a source to submit a startup, shutdown, and malfunction report documenting that asource followed the procedures in their plan, or if the plan was not followed, documenting what actions were taken. If the actions were consistent with the startup, shutdown, and malfunction plan, a source must include the information specified in §63.10(d) in the semiannual compliance report. If the actions were not consistent with the SSM plan, a source must submit an immediate startup, shutdown, and malfunction report. Hence, a source can include an explanation of actions taken to minimize HAP emissions during any startup, shutdown, or malfunction occurring during the semiannual reporting period. The report is submitted to the EPA Regional Office and to the delegated State agency, who will determine if a deviation constitutes a violation of the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP. Malfunctions which are addressed by following the SSM plan would likely not be considered a violation of the standard.

Regarding the commenter's assertion that by turning an operating condition into an operating limit, we would effectively be imposing a more stringent standard than the MACT floor it intends to adopt, the emission limits are a minimum (e.g., 97 percent OCE for an existing web coating and printing affected source) or maximum (e.g., 0.12 kg of organic HAP per kg of solids applied) limit, not to be exceeded. Therefore, demonstrating compliance with the OCE limit for an existing web coating and printing affected source requires demonstrating an OCE between 97 and 100 percent. The owner or operator of an affected source can choose the representative operating conditions under which to conduct the performance test to demonstrate compliance and to establish the operating limits. The performance test may be conducted under conditions designed to maximize control device performance (e.g., at a minimum gas temperature of 1500 °F) to provide a margin above the minimum OCE limit, thus setting the operating limit at 1500 °F. This is at the discretion of the owner or operator.

Comment 2: Commenter IV-D-23 believes that Table 2 should be deleted from the rule. However, if it is not deleted, the commenter recommends revisions regarding the use of terms "3-hour period", "3-hour average", and "3-hour block average". The commenter believes that these should all be "block" time periods. Thus the commenter recommends that EPA change all occurrences of "3-hour period" to "3-hour block period" (commenter emphasis) and change all occurrences of "3-hour average" to "3-hour block average".

Response 2: For clarity and consistency, all occurrences in Table 2 of "3-hour period" have been

changed to "3-hour block period" and all occurrences of "3-hour average" have been changed to "3-hour block average."

3.5 GENERAL COMPLIANCE REQUIREMENTS

3.5.1 Compliance With Startup, Shutdown, and Malfunction Plan Requirements

Comment: One commenter (IV-D-9) asks if a coating source complies with the emission limitation of 0.12 kg HAP per kg of solids applied prior to controls, but also employs a capture system and control device to further reduce emissions (i.e., capture and control is neither required by the NESHAP nor used to demonstrate compliance with the NESHAP), is it EPA's intent that the facility must comply with the Startup, Shutdown, and Malfunction Plan requirements of 40 CFR 63.4300(c).

Response: In the final rule an affected source must comply with the Startup, Shutdown, and Malfunction Plan requirements any time the source chooses to achieve compliance via a compliance option that requires the use of an add-on control system. If the affected source chooses to comply with the emission rate without add-on controls option, then compliance with the Startup, Shutdown, and Malfunction Plan requirements is not required.

3.5.2 Range of Subcategories and Compliance Options in Proposed Rule

Comment: One commenter (IV-D-23) submits that §63.4300, as proposed, does not clearly recognize the range of subcategories and compliance options that EPA has established in the proposed rule. The commenter also states that this paragraph creates a conflict with some of the sections of subpart A that apply to subpart OOOO as stated in Table 3 of subpart OOOO.

The commenter states that paragraph (a)(1) is a blanket statement that every affected source must comply with Table 1 limits "at all times". The commenter does not believe that this is true. The commenter offers, for example, that EPA has defined the compliance period for the emission rate without add-on controls option to be each month, and that the provisions of §63.4351(a)(6) and (7) and §63.4351(b)(5) and (6) clearly document compliance as an average over the compliance period. The commenter states that, thus, sources using this compliance option must be in compliance for all compliance periods, not at all times. The commenter recommends that EPA delete this paragraph or revise it to correctly state the compliance requirement for each compliance option in each subcategory.

The commenter notes that paragraph (a)(2)(i) also uses the term "at all times". The commenter states that, however, paragraph (c) of this section requires a startup, shutdown, and malfunction plan, and that Table 3 of the proposed rule indicates that §63.6(f)(1) of subpart A is applicable to this proposed subpart OOOO and that subpart A provision indicates that the Table 1 limits do not apply during periods of startup, shutdown, and malfunction. The commenter states that, thus, sources must comply with Table 1 at all times that they apply, not simply at all times.

The commenter notes that paragraph (a)(2)(ii) also uses the term "at all times". The commenter

submits that the rule clearly states, at Table 2 via §63.4292, that compliance is demonstrated based on 3-hour block averages. The commenter states that sources must be in compliance for every 3-hour block average, and not at all times.

Response: The general compliance requirements of the final rule have been clarified as follows:

- Any web coating/printing, slashing, or dyeing/finishing operation for which a source is using the compliant material option must be in compliance at all times.

- Any web coating/printing or dyeing/finishing operation for which a source uses the emission rate without add-on controls option must be in compliance with the applicable emission limit for all compliance periods.

- Any web coating/printing or dyeing/finishing operation for which a source uses the emission rate with add-on controls option or web coating/printing operation for which a source uses either the organic HAP control efficiency option or the oxidizer outlet organic HAP concentration option must be in compliance with the applicable emission limit or comply with the startup, shutdown, and malfunction plan at all times.

- Each controlled web coating/printing or dyeing/finishing operation must be in compliance with the operating limits for emission capture systems and add-on control devices for all averaging time periods except for solvent recovery systems for which a source conducts liquid-liquid material balances.

- Any dyeing/finishing affected source for which a source uses the equivalent emission rate option must be in compliance with the equivalent emission rate limit of less than 10 tons of organic HAP per year for all compliance periods; the dyeing and finishing operations must operate within the operating scenarios used to demonstrate initial compliance at all times, and affected wastewater streams must be discharged to a POTW or treated onsite in a wastewater treatment system with biological treatment at all times.

3.6 NOTIFICATIONS, REPORTS, AND RECORDS

3.6.1 Format and Content Details of Required Notifications, Reports, and Records

Comment: One commenter (IV-D-11) states that the descriptions of required notifications, reports, and records in paragraph 63.4310(c), paragraph 63.4320(a) through (c), paragraph 63.4330, and other similar paragraphs later leave formats and content details somewhat open to individual interpretation and preparation. The commenter suggests that perhaps EPA should confer with state agencies and regulated stakeholders to agree upon suitable templates. The commenter adds that this might reduce confusion, multiple reporting, and possible future incorrect interpretations of reports.

Response: The content of the required notifications, reports, and records in the final rule is the what we believe is appropriate for a source to demonstrate continuous compliance with the requirements of the final rule. Also note that example notification and report forms have been developed for sections 63.9 and 63.10 of part 63, Subpart A, General Provisions. Theseexample forms can be found at www.gov/ttn/atw/gp/gppg.

3.6.2 Contents of Initial Notification

Comment: One commenter (IV-D-22) states that in §63.4310(b), Initial Notification, the second sentence, which deals with existing sources, does not specify of what the notification consists. The commenter also states that the 1-year-after-rule-publication due date for an existing source conflicts with §63.9(b). The commenter requests clarification.

Response: The initial notification consists of the basic facility information such as, the name and address of the owner or operator; the address of the affected source; an identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date; a brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of HAP emitted; and a statement of whether the affected source is a major source or an area source.

3.6.3 Semiannual Compliance Reporting Period

Comment: One commenter (IV-D-22) states that §63.4320(a)(1)(iv) says that the semiannual compliance reporting period may be coordinated with Title V compliance reports instead of as specified in paragraph (a)(3) of that section. The commenter also states that paragraph (a)(1)(iv) conflicts with (a)(1)(i). The commenter suggests that this could be remedied by changing this reference to (a)(1)(i) and changing (a)(3)(iii) to delete the second sentence.

Response: A correction has been made in the final rule to correctly cross-reference the due dates for the semiannual reports. Regarding the commenter's suggestion that the second sentence in §63.4320(a)(3)(iii) could be deleted; the second sentence restates the reporting period and for clarity it has not been revised.

3.6.4 Implementation of Work Practice Plan

Comment: One commenter (IV-D-31) states that paragraph 63.4330(j)(8) requires a record of the work practice plan required by §63.4293 and "documentation that you are implementing the plan on a continuous basis." The commenter believes that an inspection regimen and/or training program constitutes implementation of the work practice plan. The commenter states that following this reasoning, the required documentation should include an inspection log and/or a training record. The commenter adds that it is unclear what constitutes proper documentation of the implementation of the

work practices plan and requests that EPA include a short discussion in the preamble.

Response: We do not believe that a record of performance of the requested actions necessitates the maintenance of training or inspection logs. Visual inspection by regulatory personnel should suffice.

3.6.5 Keeping Records On Site

Comment: One commenter (IV-D-23) states that paragraph 63.4331(c) requires that each record be kept on site and does not recognize the trend toward computerization of monitoring records. The operations at the commenter's site that would be affected by subpart OOOO are controlled by computerized distributive control systems (DCS). The commenter employs software packages that are generally referred to as data historians to access process control parameter information from the DCS and store that data for future reference. The commenter states that these same data historian systems are used to access and create records of air compliance critical data for analysis and reporting. The commenter's company is making an intentional effort to move away from paper records of air compliance critical data whenever the opportunity presents itself. The commenter states that these electronic data records reside on hardware referred to as servers. The commenter submits that, for a variety of reasons, these servers are not always located at the major source that would be affected by subpart OOOO. There are cases at the commenter's company where the server for an affected source is not located in the same state as the affected source. The commenter states that the concept of "readily accessible" should be more important, relative to current records, than the need for them to be on site at the major source. The commenter urges EPA to change the paragraph to read as follows:

> "(c) Each record must be accessible from on site at least 2 years..."

Response: The language in the final rule is consistent with §63.10(b)(1) of the General Provisions, and therefore, has not been revised. It should be noted that the final rule requires that a source keep records in a form suitable and readily available for expeditious review. The records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

3.7 COMPLIANT MATERIAL OPTION

3.7.1 Test Methods

Comment: Six commenters (IV-D-16, IV-D-18, IV-D-19, IV-D-22, IV-D-27, and IV-D-20) assert that the two standard methods referenced in the subpart for determining hazardous air pollutant content of materials (Method 311 or Method 24) are not representative of the wide range of diversity found in the textile industry. The commenters state that many chemical products used in the treatment of textiles are used with the intent of reacting either with the substrate (a formaldehyde-based resin) or with other components to create an "in situ" polymer product, which is not volatile (e.g., formation of a urethane backing). The commenters add that the testing of individual components as proposed by

EPA's methods without the benefit of this type of reaction chemistry is not relevant to actual or potential emissions. The commenters believe that the generic reference test methods proposed by EPA for the overall coating industry, in which organic solvents play no part in a reaction, are not appropriate for many textile chemicals.

Response : As explained in Response 1 of Section 3.4.7 in this document, a provision has been added to the final rule to account for reactive materials that are not emitted to the atmosphere.

3.7.2 Clarification of the Terms "Truncating" and "Test Material"

Comment 1: Five commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) ask that EPA clarify what it means by "truncating" values used in mass fraction calculations (§63.4341(e)(1)(i)(A), 67 FR 46063). The commenters ask for confirmation that it is not required to take out a calculation to three or four decimal places if the information to do so is not available. The commenters add that, however, if the calculation yields a result that does go beyond three or four decimal places, the result can be rounded to the appropriate decimal place as described in that section.

One commenter (IV-D-11) adds further that paragraph 63.4341(e)(1)(i)(A) is confusing or needs more explanation. The commenter states that if the reference is to "counting materials" then truncation would (should) not apply because the decimals would not apply if the material contains less than 1.0%/0.1% HAP. The commenter states that, on the other hand, if the reference is to the results derived from the various equations then additional explanation and specifics are needed. The commenter notes that the language might then suggest that the resultant decimal fraction contain only as many places as the emission limits shown in Table 1 (of the proposed rule), provided the basic terms and underlying information support more than one decimal place.

Response 1: The final rule has been written to clarify that the calculation required in the compliance demonstrations are not required to be taken to four decimal places.

Comment 2: One commenter (IV-D-11) states that the reference in paragraph 63.4341(e)(1)(i)(B) to "test material" is not clear and is not explained.

Response 2: The final rule has been written to clarify that the tested material is the regulated material.

3.8 EMISSION RATE WITHOUT ADD-ON CONTROLS

3.8.1 HAP In Wastewater

Comment 1: Six commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, IV-D-22, and IV-D-27) agree with EPA's decision to allow sources that produce waste that is shipped offsite to reduce their inferred (i.e., not actual, estimated, or calculated) HAP emissions by the amount of HAP determined to be present in the shipped waste. The commenters state that in order for sources in the coating/printing

and dyeing/finishing subcategories to use this allowance they must meet the criteria of proposed Section 63.4351(a)(4)(iii)(A) through (D). The commenters note that according to this proposed section, sources in these subcategories must quantify the amount of waste shipped during the period, the organic HAP content, and document how the HAP content was determined. The commenters submit that for other sources that can meet the criteria of Section 63.4351(a)(4)(iii)(A) through (D) for quantifying the HAP in their wastewater on a consistent, periodic basis, this same allowance should also be available.

The commenters add that EPA has historically recognized that certain organic chemicals are not volatilized during their processing or in the wastewater treatment process. The commenters state that throughout EPA's history significant effort has been extended in developing release estimates and waste treatment efficiencies for numerous hazardous chemicals. The commenters add that various EPA documents have been published that conclude that certain organic chemicals are not volatilized during their processing or in the wastewater treatment process. The commenters state that EPA has acknowledged in this proposed subpart that the majority of textile dyeing is performed in an aqueous solution (water is by far the largest solvent used in textile and other fabric dyeing). The commenters submit that, however, in developing the MACT floors, EPA assumed that 100 percent of all HAP in all subcategories is emitted to the air, contradicting both its own previous publications, (e.g., EPA 560/4-88-002, December 1987) and its statements in the preamble that most of the HAP in dyeing is rinsed off and remains in the source's wastewater.

The commenters submit that just as EPA determined in the proposed subpart that all non-organic HAP should not be regulated because they are not likely to be emitted, equal consideration should be given to those regulated sources that can show with analytical data that certain high molecular weight, high boiling point, and highly water-soluble organic HAPs are also unlikely to be sources of HAP air emissions. The commenters state that given that EPA has acknowledged the considerable variations in the conditions under which dyes are applied (continuous or batch, open to atmosphere or under pressure, high or low dyebath temperature, etc.), and that sources are being knowingly asked to overestimate their emissions in order to determine compliance with subcategory limits, EPA would be acting capriciously by not also allowing deductions for known quantities of wastewater HAP that are not emitted to the air by that source. The commenter submits that, therefore, EPA should allow all sources subject to the proposed rule to take advantage of the criteria in §63.4351(a)(4)(iii)(A) through (D).

Response 1: The final rule has been written to allow a dyeing and finishing affected source to account for organic HAP that are discharged to wastewater and not emitted to the atmosphere. An equivalent emission rate compliance option has been added, and a procedure written to provide the option of accounting for the mass of organic HAP contained in wastewater discharged to a POTW or treated onsite prior to discharge.

In order to be able to use the equivalent emission rate option, a source must demonstrate that at least 90 percent of the mass of organic HAP contained in dyeing and finishing materials applied in the dyeing and finishing affected source are discharged to the wastewater and not emitted to the atmosphere; and that the total organic HAP emissions from the dyeing and finishing affected source must be less than 10 tons per year. This compliance option is designed to minimize the recordkeeping

burden on the dyeing and finishing source. To demonstrate continuous compliance a source must document that the dyeing/finishing affected source operated within the operating scenarios used to demonstrate initial compliance and that affected wastewater streams were discharged to a POTW or treated onsite in a wastewater treatment system with biological treatment and you must maintain purchase records showing that organic HAP emissions do not exceed 10 tons per year for each compliance period.

To demonstrate initial compliance with the equivalent emission rate option and to account for the mass of organic HAP contained in wastewater and not emitted to the atmosphere, procedures have been written in the final rule by which the total mass of organic HAP contained in wastewater streams generated by the dyeing and finishing affected source can be determined by testing. EPA Methods 305, 624, 625, 1624, other EPA methods, and methods other than EPA methods may be used to determine the organic HAP content of the wastewater stream in accordance with specified requirements. A source must consider the actual or anticipated production over the compliance period and include all wastewater streams generated by the affected dyeing/finishing operation(s) during this period. A performance test must be performed for each "operating scenario" (in terms of factors affecting the fraction of organic HAP discharged to the wastewater, such as the type of substrate, the type and mass fraction of organic HAP entering the dyeing/finishing operation and the process temperature and pressure) during the compliance period. As long as the operating scenarios do not change, no additional wastewater testing is required to demonstrate continuous compliance.

Comment 2: One commenter (IV-D-11) notes that at one or more points the proposed rule will allow a facility to deduct from the total organic HAP computation any justified HAP amounts contained in the waste materials sent to a TSDF for further processing. The commenter states that this is a welcomed option and if a facility can overcome the high hurdle of the accounting, storage, time, accumulation points, etc., then it will be utilized. The commenter notes that the option and the premise do however seem to be at odds with the proposed rule when considering the "usage = 100% emissions" if a mass balance approach is considered. The commenter states that if all of the HAP contained in a material used is emitted during processing then there would be none to deduct when sending waste offsite or vice versa (emphasis added by commenter). The commenter states that the HAP cannot be in two places at one time and submits that EPA must review and reconsider the accuracy of the proposed 100% usage = emissions premise. The commenter further adds that there are many situations where it is simply not the case but the industry will be penalized if the proposal is not modified.

Response 2: The assumption that organic HAP used equals organic HAP emissions is based on the premise that all organic HAP used in dyeing and finishing processes are subjected to sufficient driving force to subsequently be emitted to the atmosphere or to streams generated by the process, such as wastewater or solid waste streams. Driving forces include, but are not limited to, heat and agitation in mixing, the heat of drying and curing, agitation and aeration of wastewater, and the exposure of wastewater and wastes to sun and wind.

3.8.2 HAP In "Waste Derived From Cleaning and Thinning"

Comment: One commenter (IV-D-11) states that it is not completely clear that the amount of HAP that may be contained in "waste derived from cleaning and thinning" may be deducted if it is sent offsite for treatment as is described for other coating and printing materials, for example. The commenter adds that, presuming that the HAP contained therein would cause the requirement for the waste material to be managed as a hazardous waste, then other issues evolve. The commenter states that RCRA allows, in some cases, accumulation of hazardous wastes on site for periods longer than a month for consideration of economic disposal factors. The commenter adds that yet the presently proposed requirement for monthly accounting will only serve to confuse this situation as stored wastes may tend to be mixed and mingled at the storage area even under the best of conditions. The commenter states that the disposal service provider may require that testing be done on the waste to determine the final treatment process or destination, and if those test results disagree with the "Usage = 100% emissions" then another confounding factor is thrown into the fray and the textile facility suffers, not just from additional recordkeeping headaches.

The commenter further states that another confounding factor is that one or more of the equations require that the recordkeeper must segment wastes (perhaps from the same production line) into categories as having been derived from, say a compliant material option product run, separate from the wastes derived from a product run under the emission rate without add-on controls option. The commenter submits that it may be very difficult to keep segregated the various wastes from the different runs and then account for them on monthly periods, and notes that this is another plus for the request for twelve month averaging. The commenter states that these requirements will surely increase the burden of recordkeeping beyond the four hours per week for the "average facility" (and the attendant costs).

Response: As stated before in this document, upon review and evaluation of the data submitted by the commenters, the final rule has been written to allow a 12-month rolling average compliance period for sources using the emission rate compliance option. The comment on the assumption that HAP use equals 100 percent emissions is addressed in Response 1 of Section 3.8.3 in this document. Regarding the difficulties of segregating various wastes from different runs and the associated recordkeeping requirements, as is explained in the response in Section 2.2.2 of this document, multiple compliance options are offered for flexibility. We anticipate that a facility will choose the compliance option that best fits range of operations and organic HAP emissions typical for the facility, thereby, limiting the amount of switching between compliance options required to comply with the final rule.

3.8.3 100 Percent HAP Emitted

Comment 1: Six commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, IV-D-22, and IV-D-27) state that in proposed Section 63.4351(b)(3)-(5), EPA incorrectly assumed that 100% of all organic HAPs are emitted into the air when it defined the equations to be used when determining compliance with this subpart. The commenters note that in the preamble to the proposed MACT, EPA recognizes that "the fraction of HAP contained in dyeing materials is generally estimated to range from zero to ten percent" and that, "[m]ost HAP constituents are believed to be rinsed from the substrate before the substrate is dyed." The commenters further point out that EPA also recognizes that inorganic HAPs are

not volatile in the textile dyeing and finishing processes and has assigned a "zero" emissions factor to these inorganic HAPs. The commenters reiterate that, however, in the body of the standard in Sections 63.4351(b)(3) through (5), in defining equations to use to determine compliance with the subpart, EPA incorrectly assumes that 100% of all organic HAPs are emitted into the air.

The commenters agree with EPA's finding that the amount of any HAP constituent emitted into the air "particularly from dyeing, are dependent on the site specific conditions the textile passes through in the process, the types of equipment used for the process, the dye or finish chemistry, and the process conditions, e.g., the points in the process where the textile is subjected to heat" (p. 46045). The commenters submit that it would therefore seem reasonable for sources in the dyeing and finishing subcategory to make use of physical chemistry laws (Henry's, Raoult's, Arrhenius' equations, etc.) to demonstrate compliance with the subpart. The commenters note that EPA has utilized this approach in many areas, including AP-42, SARA 313 Emission Calculations, EPA's TANKS Software Program, and the latest version of EPA's own water modeling software (Water 12) for emissions from wastewater treatment. The commenters state that these types of engineering calculations based on physical laws are referenced in other parts of 40 CFR 63, such as subpart G, in calculating Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry for Process Vents. The commenters state that in many types of pressure dyeing (package, beam, jet, etc.), constant emissions are not possible because the process is under pressure in a totally enclosed vessel; the only emissions are from mixing, storage, and transfer losses. The commenters submit that these short-lived losses are more similar to the losses accounted for in these types of engineering calculations.

The commenters further add that the temperatures reached in many dyeing processes are below 135°C while under pressure and are generally below 75°C before any transfer to the wastewater system. The commenters note that many HAPs used within the industry have low volatility due to high boiling points (naphthalene) or have a high solubility coupled with high boiling points (glycol ethers). The commenters state that this information clearly shows that to assume a 100% emission factor across the board is not supported by the facts and will place an inappropriate burden on the industry, especially for some specialty niche businesses. The commenters add that to use a 100% emission factor is an overestimate of the actual emissions, which only serves to maximize any regulatory burden, fee imposed, etc., and may be a driving force of more textile business leaving the United States.

The commenters state that, furthermore, there are those in the industry providing high tech fabrics for homeland security and DOD uses (ballistics) that cannot meet the standard as proposed but could meet the subpart if compliance were shown with the use of the tools mentioned above. The commenters add that failure of EPA to develop a subpart that is representative of the industry and that accommodates these concerns may mean an elimination of a business sector vital to the national security interests.

The commenters also state that this is further supported by EPA's determination in this subpart that coating and printing operations that occur at ambient temperature are not regulated activities since, even though HAPs are used, they are not emitted due to insufficient driving force. The commenters state that this applicability concept should also be applied to dyeing and finishing operations in order to be consistent within the subpart to reflect the fact that for the dyeing and finishing subcategory HAP usage often does not result in HAP emissions due to insufficient driving force.

Response 1: The comment on the assumption that HAP use equals 100 percent emissions is addressed in Response 1 of Section 3.8.3 in this document. The final rule has been written to allow a dyeing and finishing affected source to account for organic HAP that are discharged to wastewater. An equivalent emission rate compliance option has been added to the final, as well as a procedure to account for the mass of organic HAP contained in wastewater discharged to a publically owned treatment works (POTW) or onsite secondary wastewater treatment.

In order to be able to use the equivalent emission rate compliance option, a source must make an initial compliance demonstration that at least 90 percent of the mass of organic HAP contained in dyeing and finishing materials applied in the affected source is discharged to the wastewater; and, the total organic HAP emissions from the dyeing and finishing affected source must be less than 10 tons per year. The source must also document that the affected wastewater streams are discharged to a POTW or treated onsite in a treatment system that includes at least secondary treatment with biological treatment processes.

Furthermore, this subpart has been revised in the final rule such that it does not apply to coating, printing, slashing, dyeing, and finishing operations performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any State).

Comment 2: One commenter (IV-D-15) states that yarn dyeing systems, with the exception of space dyeing and some coating operations, do not emit pollutants into the air. The commenter notes that with closed kier systems used in package dyeing, dyes and other chemicals are added after the kier is closed, and it is not possible to open the kier before the dyeing process is complete without ruining the yarn. The yarn undergoes rinsing and the kiers are flushed out before being opened. The commenter submits that other federal laws and regulations already cover the wastewater from such operations. The commenter further submits that dryers must comply with laws and regulations governing the wastewater sent to municipal water treatment facilities. The commenter strongly opposes the concept in the standard that usage of the covered HAPs equals emissions, as the two are unrelated in the package dyeing of yarn.

Response 2: See Response 1 of Section 3.8.1 in this document regarding the equivalent emission rate option and provisions for a wastewater allowance that have been written in the final rule.

Comment 3: One commenter (IV-D-32) states that EPA's conclusion that the use of a HAP in a process equates to the emission of that pollutant is of major concern to them. The commenter states that this denotes to the HAP is used as a "carrier" and negates it being consumed in reactive chemistry. A second commenter (IV-D-25) states that EPA's policy of using HAP use as HAP emissions and failing to account for reactive materials in coatings seriously over predicts emissions and will result in the elimination of certain coating processes from the U.S., even though these processes emit negligible amounts of HAPs.

Response 3: Provisions have been written in the final rule that will allow facilities to determine the

fraction of organic HAP in reactive materials that is bound in the coating materials or to the substrate and therefore not emitted to the atmosphere (see Response 1 of Section 3.4.7 of this document).

Comment 4: One commenter (IV-D-6) states that EPA should not ignore the scientific fact that volume of HAPs usage does not always equate to a corresponding amount of HAP emissions. The commenter submits that accordingly, the regulations should permit demonstration of reduced emissions levels due to retention of HAPs in the product (due, for example, to reactive technologies, or due to inclusion of HAPs in solid or liquid waste streams). The commenter states that to assume arbitrarily that all HAPs used are emitted into the atmosphere makes no more logical sense than to arbitrarily assume that none are emitted. The commenter does not object to a presumption that all HAPs are emitted, and notes that such a presumption should be rebuttable upon a reasonable demonstration of a contrary result. The commenter notes that, for example, in their business they use processes which utilize reactive technologies and may involve the use of materials containing HAPs which, when included with other components of a mix, would not meet the kg HAPs/kg solids MACT limitation. According to the commenter, since the HAP reacts during the process to bind with other materials, only very small quantities of HAPs are emitted. The commenter submits that they also use some HAPs which, due to their molecular weight, are eliminated in wastewater rather than through air emissions. The commenter states that the current compliance options for the coating, printing, finishing, and dyeing subcategory do not take any of this into account. The commenter adds that to ignore these scientific facts yields results which are unduly harsh and are potentially devastating to their business, without any demonstrable environmental benefit.

Response 4: Provisions have been written in the final rule that will allow facilities to determine the fraction of organic HAP in reactive materials that is bound in the coating materials or to the substrate and not emitted to the atmosphere (see Response 1 of Section 3.4.7 of this document). Also see Response 1 of Section 3.8.1 in this document regarding the equivalent emission rate option and provisions for a wastewater allowance that have been written in the final rule to enable an affected dyeing/finishing source to account for HAP discharged to wastewater that is not emitted to the atmosphere.

Comment 5: One commenter (IV-D-11) states that the language in the proposed rule, as well as the terms of the equations to be used, suggest that the industry must consider that 100% of any organic HAP contained in any material used will be emitted during processing (emphasis added by commenter). According to the commenter, their suppliers tell them that this is not the case for many compounds or products depending upon the formula, the use, the process conditions of temperature and equipment, etc. The commenter notes that EPA also advises that emissions often may be much less than 100%, even as low as "zero to 10%" (Page 46031) and that the HAPs will likely end up in the wastewater rinses. The commenter states that EPA decided to forego properly establishing any true usable emission factors to resolve this situation for the textile industry as has been done for other industry segments and published in AP-42 and other sources. The commenter notes that according to the Technical Support Document for the proposed rule EPA decided to dismiss or otherwise not consider

test data and results submitted from the industry that portrayed some emission factors for some typical processes. The commenter states that this appears to be a deliberate bypass of duties that EPA should have performed in preparing the proposal. The commenter adds that the textile industry was willing to assist and participate in these efforts but will now suffer from EPA's reluctance to act appropriately.

Response 5: Emission factors have not been developed for textile dyeing and finishing processes because data submitted by the industry reflected a wide range of emission factors depending on process conditions such as the type of substrate, the type and mass fraction of organic HAP entering the process operation, and process temperature and pressure. Provisions have been written in the final rule enabling facilities to account for organic HAP that are not emitted to the atmosphere.

Comment 6: One commenter (IV-D-11) notes that coating and printing materials used at "ambient temperature" (quotes added by commenter) are not regulated by definition. The commenter adds that cleaning materials (including those used in coating and printing operations) are frequently used at ambient temperature but are included in the regulated set. The commenter questions whether this is consistent and asks does this situation add more to the argument for "usage = 100% emissions" or further contradicts it. The commenter adds that one of the implications here is that elevated temperatures have an influence on whether a HAP is emitted or not yet that premise is contradicted in other spots.

Response 6: The MACT floor for the web coating and printing subcategory is based on the use of a permanent total enclosure to capture organic HAP emissions from application and the drying/curing oven. Web coating and printing operations that dry at ambient temperatures are not representative of the web coating and printing operations in the database used to determine the MACT floor for the web coating and printing subcategory. These low-production rate operations make up only a small segment of the overall coating and printing industry. It was also determined that the emission capture and control technologies applicable to these operations would be considerably different (because of temperature, concentration, and flow rate differences) than those operations involving drying and curing equipment which are the basis of the MACT floor determination.

3.8.4 Use of All Materials in Dye Formulations in Compliance Averaging Calculations

Comment 1: Five commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-20, and IV-D-27) state that the proposed rule is unclear as to how you perform compliance averaging calculations for dyeing materials. The commenters note that in order to demonstrate compliance the proposed subpart requires, in several option choices, that the operator collect and keep comprehensive records of the consumption or use of various materials for the various processes in the facility and periodically prepare reports of those consumptions by using one or more of several equations provided. The commenters state that some of the equations require that multiple, and perhaps functionally similar, materials are segregated into categories to be *"counted"* separately or in combination with other materials used in the coating, printing, dyeing, finishing, thinning, or cleaning operations.

The commenters note that the preamble states that EPA is proposing standards that would limit and ultimately reduce HAP emissions from the affected sources by applying the MACT standards. The commenters then point out that when applying the collected data to the equations (to derive HAP emission rates, for example) one facility may easily interpret the terms differently from another facility and thereby arrive at different answers even though they could have consumed the same compounds in a similar process.

The commenters therefore recommend that EPA amend the subpart to provide clarification as to the specific materials that must be considered, *"counted"*, and summarized (typically) in the numerator of the emission rate equations. The commenters add that by the same token, the materials summarized (typically) in the denominator should include *all* of the materials consumed in the respective operations, not just a loosely defined subset of the total (which may be subject to varying interpretations). The commenters state that many of the materials consumed in the affected sources are purchased and shipped as dry powders or granules or as a concentrated liquid stock. Before final consumption of these materials in the process they will be solubilized or otherwise liquefied with water and other liquids or thinners. The commenters add that, for example, a typical recipe in the dye house may list "X" gallons of compound "Y" to be added at some time in the process. Compound "Y" may have been prepared by liquefying one of the powders or decreasing the concentration of a stock liquid by adding another liquid (such as water). Thus, the commenters feel justified in requesting that the record keeping and reporting requirements should be modified to allow the option of applying the respective equations to the materials "as used" (kg or lbs) rather than only "as purchased" and to include the liquids added in the preparation of the mix for use.

According to the commenters, the shipping of concentrated liquid and dry powders or granules encourages pollution prevention by way of reduced truck or rail traffic and allows more widespread use of returnable (or recyclable) containers which leads to conservation of other resources. The commenters add that the effort to implement the newly required record keeping would be aided by this action because, in many cases, the existing inventory and consumption reporting systems could be adjusted to add in the future needs to demonstrate compliance.

According to the commenters, this would be consistent with other pollution prevention efforts as well. The commenters state that some of the materials ultimately "counted" may have been previously reformulated to remove or reduce the HAP content. The commenters add that the textile industry has been discussing these possible reductions with their suppliers for years as evidenced, for example, in the preamble discussions of the slashing and dyeing/finishing subcategories. The commenters submit that there should be no penalty now for those continuing efforts.

Another commenter (IV-D-11) states that many of the coating, printing, dyeing, and finishing materials are received from the suppliers as concentrated stock solutions, dry powders, or granules (for transportation or other reasons). According to the commenter, before use in the process these will be solubilized or liquefied or weakened or thinned according to the recipe for the process. The commenter states that it is not clear whether these additions are to "be counted" for inclusion in the equations (typically in the denominator) and that they should be counted there.

Response 1: The final rule language has been written to clarify that the compliance averaging

calculations for dyeing materials should include only regulated materials as received from the manufacturer or supplier, and prior to any on-site alteration of the material (e.g., mixing with solvent); and, that water added in a mixing operation is not a regulated material and should not be included in the determination of the total mass of dyeing and finishing materials applied during the compliance period. This would be consistent with how the MACT floors for this subcategory were calculated.

3.8.5 Mass of Cleaning Materials Term in Initial Compliance Demonstration Equations

Comment: One commenter (IV-D-11) states that upon reviewing the various equations in paragraph 63.4351 (but not running some trial examples with actual numbers) it appears that there may be an inadvertent mixing of terms in that the mass of cleaning materials is included in some places but not included in others when in fact it should or was intended. The commenter submits that EPA should review these and the other equations for consistency and to check that the equations match the definitions. The commenter adds that "all regulated materials" (as used in the explanation of terms in Equation 3 for example) can be interpreted to include cleaning materials in some operations, while other terms specifically spell out the inclusion of cleaning materials.

Response: The final rule does not regulate cleaning materials and preparation materials in the slashing or the dyeing and finishing subcategories. Slashing and dyeing and finishing operations are aqueous processes, and therefore, the cleaning materials and preparation activities used in these operations do not contain HAP. The most common cleaning material used in these operations is water. The final rule has been written to clarify that cleaning materials and preparation activities in the slashing and the dyeing and finishing subcategories are not subject to the requirements of this final rule.

3.8.6 Other Organic HAP Materials in Initial Compliance Demonstration Equations

Comment: One commenter (IV-D-9) states that a subject coating line utilizes organic HAP in a coating process for purposes other than as a coating or printing material, cleaning or thinning material, or waste. The commenter asks how would this HAP be considered in the compliance calculations at 40 CFR 63.4351. The commenter states that it does not appear that this material would be counted in the calculation of mass of organic HAP emission (H_e) at Equation 1 of 63.4351(a)(4).

Response: In the final rule, the regulated materials for the web coating and printing subcategory are the coating, printing, thinning, and cleaning materials used in the affected source. An organic HAP material that is not used as a coating, printing, thinning, or cleaning material is not included in the affected source, and therefore, is not subject to the final rule.

3.9 EMISSION RATE WITH ADD-ON CONTROLS

3.9.1 Timing of Performance Test

Comment: One commenter (IV-D-8) states that under section 63.4360 and 63.4365, performance tests are required prior to the compliance date specified in 63.4283. According to the commenter, this effectively moves the compliance date for equipment installation back a few months due to pre-test notification requirements. The commenter proposes that the performance test be required no later than 150 days following the compliance date specified in 63.4283. The commenter adds that there is precedence for type of approach in the amino/phenolic MACT, subpart OOO (section 63.1413(a)(2)(ii)(c)).

Response: The final rule has been written to correct the timing of performance tests for new and existing sources. Consistent with the General Provision, performance tests are required within 180 days of the compliance date.

3.9.2 Zero Percent Destruction Efficiency During Deviations

Comment: One commenter (IV-D-11) states that paragraph 63.4363(c)(2) requires that a zero efficiency of destruction be assumed for portions of operations during deviations. The commenter submits that this is a much too severe penalty considering the following facts: a control device such as a thermal oxidizer operating at a few degrees less than the temperature established as the operating limit will still be providing some destruction of HAPs. The commenter notes that while it may not be perfectly linear the operator could establish a performance chart for the various devices. The commenter states that the rule does not provide for the tolerances inherent in most sensors or instruments or the controls that will be reacting to the signals generated. The commenter adds that no device is 100% accurate, and there will be degradation in sensor signals and instrument reactions as well as performance in oxidizers and other devices after hours of operation. The commenter further adds that this could invoke further difficulties on some operations considering the fact that the rules assume that "usage = 100% emissions".

Response: If an oxidizer is operating below the minimum temperature established as the operating parameter value, this indicates a malfunction of the oxidizer or of the temperature monitoring equipment and also represents a deviation from the operating limit. However, Section 63.6(e) of the General Provisions to Part 63 requires the owner or operator of an affected source to "develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard. As required in the final rule, the plan shall identify all routine or otherwise predictable CMS malfunctions." The purposes of the startup, shutdown, and malfunction plan are to ensure that a source maintain the affected source and associated air pollution control equipment such that HAP emissions are minimized at least to the levels required by all relevant standards, to ensure that you are prepared to correct malfunctions as soon as practicable after their occurrence to minimize HAP emissions, and to reduce the reporting burden associated with periods of startup, shutdown, and

malfunction.

During periods of startup, shutdown, and malfunction, the final rule requires a source to follow the procedures specified in the startup, shutdown, and malfunction (SSM) plan. The final rule also requires a source to submit a startup, shutdown, and malfunction report documenting that a source follow the procedures in their plan, or if the plan was not followed, documenting what actions were taken. If the actions were consistent with the startup, shutdown, and malfunction plan, a source must include the information specified in §63.10(d) in the semiannual compliance report. If the actions were not consistent with the SSM plan, a source must submit an immediate startup, shutdown, and malfunction report. Hence, a source can include an explanation of actions taken to minimize HAP emissions during any startup, shutdown, or malfunction occurring during the semiannual reporting period. The report is submitted to the EPA Regional Office and to the delegated State agency, who will determine if a deviation constitutes a violation of the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP. Malfunctions which are addressed by following the SSM plan would likely not be considered a violation of the standard. Likewise, if a deviation from the emission limit occurs due to assuming zero efficiency during such a malfunction, it would not likely be considered a violation assuming there is no other reason for the deviation.

3.9.3 Predictive Emissions Monitoring System

Comment: Five commenters (IV-D-16, IV-D-17, IV-D-18, IV-D-22, IV-D-27) request EPA to revise portions of the rule to allow different capture and control efficiencies and associated operating limits established during the performance testing for different operating scenarios and required levels of control. The commenters submitted the following examples of when multiple control efficiencies would be needed:

1. An operator may need to have multiple control efficiencies to comply with the emission rate with add-on controls compliance option during differing product production,
2. An operator may need more than one control efficiency to comply with the organic HAP overall control efficiency compliance option when operations change between having uncontrolled HAP use and not having uncontrolled HAP use,
3. An operator would need to have more than one control efficiency to switch between the emission rate with add-on controls compliance option and the organic HAP overall control efficiency compliance option, and
4. An operator should not be unfairly penalized for insignificant fluctuation in control device performance.

The commenters request EPA to review portions of the rule to allow for the use of a Predictive Emissions Monitoring System to calculate control efficiency between multiple performance test relationships addressed above. Only when the monitored operating parameters are outside of the range of acceptable performance test results would the resulting control efficiency then be assumed to be zero percent.

The commenters are requesting the flexibility to allow a control device to have some limited variability in the optimal operational control limits to better align the proposed MACT subpart with NSPS Subpart VVV. The commenters believe this alignment is justified because facilities that comprise the best 12 percent had those controls to comply with NSPS Subpart VVV; which does allow for limited variation from performance test conditions.

Response: The first 3 examples submitted by the commenters of when multiple control efficiencies would be needed can more reasonably be addressed through the choice of an appropriate compliance option(s) than through the use of a PEMS. As has been explained in response to Comment 2.2.2, we anticipate that a facility will choose a compliance option that best fits the range of operations and organic HAP emissions typical for the facility, thereby, limiting the amount of switching between compliance options required to comply with the final rule. Also, regarding an operator needing to have more than one control efficiency to switch between the emission rate with add-on controls compliance option and the organic HAP overall control efficiency compliance option, if this is the case, the owner can demonstrate, e.g., different oxidizer destruction efficiencies at different temperatures and establish corresponding operating limits during the performance test.

The primary concern of the commenters requesting the PEMS is the requirement to assume zero destruction efficiency during an excursion from the operating limits. This is addressed in response to Comment 3.9.2 of this section.

3.9.4 Equation for Mass of Organic HAP Used During Deviations

Comment: One commenter (IV-D-11) states that Equation 1C of paragraph 63.4361(d)(4)(iii) as described may unduly over-penalize an operator during a deviation period. The commenter states that the explanation of the term W_h (as written) doesn't specify or consider that the mass fraction of organic HAP could be different for coating, printing, and cleaning materials used during deviation periods as compared to those used during non-deviation periods. The commenter asserts that the total mass of HAP used during a deviation period could be overstated if the overall mass fraction were greater than the specific mass fraction of the subset of materials used during the deviation period. The commenter adds that some of the other equations may suffer from this same malady and deserve review to correct.

Response: Equation 1C of the final rule is used to factor the total mass fraction of all coating, printing, cleaning, and thinning materials used during deviation periods in the controlled operation by the mass of all coating, printing, cleaning, and thinning materials used during deviation periods in the controlled operation on a material by material basis. Only the materials used during deviation periods are to be used in this equation.

3.10 OCE AND OUTLET CONCENTRATION

3.10.1 Inconsistencies in Compliance Monitoring Requirements with Other Air Regulations

Comment: Several commenters (IV-D-16, IV-D-17, IV-D-18, and IV-D-27) state that many coating facilities subject to this subpart are also subject to the New Source Performance Standard (NSPS) Subpart VVV. The commenters note that many of the sources used to develop the MACT floor installed controls to be in compliance with NSPS Subpart VVV and should not now be penalized with extra monitoring, recordkeeping and reporting. One commenter states that they will be required to install expensive software to record operating limits every 15 minutes (averaged over 3-hours) when they are already performing continuous monitoring for compliance with the NSPS. The commenters state that the correlation between the two standards is described on page 46031 of the preamble and that the statement is made that overlapping reporting, recordkeeping, and monitoring requirements may be resolved through the Title V permit. The commenter adds that it should be noted that if this is not followed through properly, the burden on facilities will be severe and they foresee difficulties when interpretations are left to different permitting authorities. The commenters request that facilities subject to NSPS Subpart VVV be allowed to continue with NSPS methodology for reporting, recordkeeping, and monitoring and to use such for MACT compliance as well. The commenters add that there are also many other facilities that have controlled their emissions due to other federal and state regulations, and these compliance overlaps should also be considered in developing more flexible MACT compliance monitoring requirements.

The commenters list the following issues as differences between NSPS Subpart VVV and the proposed MACT that should be resolved by EPA:

1. Continuous monitoring vs. 15-min. readings/3-hr. averaging
2. VOC content measured with Method 24 vs. Method 311
3. 95 Mg/yr. Exemption
4. 90%/95% total destruction vs. 97%/98%
5. Solids calculations, etc.

The commenters believe that the flexibility provided in NSPS Subpart VVV regarding the 5% variance on operating limits is much more in-line with normal operating conditions than the "zero-tolerance" philosophy portrayed in this MACT. The commenters state that EPA has allowed the use of a variance in some other MACT standards and requests EPA to include in the proposed MACT a 5% variance on operating limits as it has in NSPS Subpart VVV and other MACTs.

One commenter also requests that the continued use of continuous parameter monitoring systems (CPMS) be allowed.

Response: See Response 7 of Section 3.1.5 in this document.

3.10.2 Capture Efficiency Requirements

Comment 1: One commenter (IV-D-30) states that based on extensive experience with stack testing, 100 percent or even 99 percent capture, based on stack testing, is virtually impossible, at least in the cord treating industry. The commenter questions the capture efficiencies achieved by the 3 facilities in the coating MACT database that reported 100 percent capture through use of a Method 204 permanent total enclosure (PTE).

The commenter appreciates that EPA has allowed for the use of a PTE as a means of demonstrating compliance rather than requiring stack testing to show the required overall control efficiencies. However, the commenter is concerned that while the proposed rule does not specifically mandate PTEs, using PTEs would effectively be the only means of compliance using a control device in the cord treating industry due to capture efficiency limitations. The commenter states that PTEs are an appropriate means of compliance in some situations; however, on production lines applying high-solvent coatings, use of a PTE may not be possible, since a PTE will cause solvent concentrations to be increased within the enclosure, posing potential flammability and explosion concerns. The commenter adds that in some situations OSHA confined space regulations may apply in a PTE, which would severely hamper plant operations and productivity, due to restrictions on ease of worker access. The commenter states that this type of additional requirement would particularly affect production lines where multiple types of cord and coatings are treated on the same lines, requiring worker access on a regular and consistent basis.

The commenter recommends that EPA revise its MACT floor calculations to reflect more achievable capture efficiencies including a compliance option that would set a destruction efficiency standard based on the MACT floor database and require maximum achievable capture efficiency specific to the cord treating industry.

Response 1: Based on experience cited by several engineering contractors that install PTEs, we believe that existing process exhaust airflow will be adequate to satisfy Method 204 criteria and to provide worker safety and comfort. Also, difficulties with airflow can generally be managed with the use of pick-up vents near emission points.

Comment 2: One commenter (IV-D-7) states that use of PTEs on fabric coating operations within the rubber industry creates a number of problems that make it infeasible to retrofit existing sources. The commenter states that PTEs cause concentrations of organic materials to increase inside enclosures, and these increased concentrations can create fire and explosive hazards, and worker exposure hazards. The commenter adds that even on well designed, well maintained, well operated coating lines, operating personnel must have ready access to the operating equipment to perform needed operational adjustments, switch coating materials, switch fabric materials, or perform routine maintenance. The commenter adds that in large coating lines, commonly used in the rubber industry, the PTE may involve room-size enclosures that the worker must physically enter through a doorway. The commenter states that under OSHA regulations these structures would be considered confined spaces, so that extensive confined space entry procedures would need to be followed each time the operator must enter to make even slight equipment adjustments that are frequently needed. The commenter submits that one way to minimize or avoid buildup of hazardous concentrations is to increase the airflow rate through the capture

system. The commenter states that this greatly increases the size and cost of the control system that must handle the increased flow of air with contaminants at diluted concentrations. The commenter further states that solvent concentrators can be added, and heat recovery units installed if fume incinerators are used, but these greatly increase capital cost, add operational complexity, and increase maintenance.

Response 2: Based on experience cited by several engineering contractors that install PTEs, we believe that existing process exhaust airflow will be adequate to satisfy Method 204 criteria and to provide worker safety and comfort. Also, see Response 6 of Section 3.4.1. Further difficulties with airflow can generally be managed with the use of pick-up vents near emission points.

Comment 3: One commenter (IV-D-29) supports, in principle, the concept of a fixed enclosure at the major emission areas to assure high capture efficiency. The commenter states that, however, the required 200 feet/minute minimum air flow velocity to demonstrate 100 percent capture in the proposed MACT will likely significantly increase the exhaust gas flow to the thermal oxidizers. The commenter adds that this will require that existing oxidizers be replaced with new larger units or be supplemented by additional units to handle the higher flow. The commenter states that the small improvement in HAP removal that will result from these changes does not justify the significant capital requirement and increased operating costs. The commenter notes that this appears to have been inadequately addressed in the Agency's economic analysis.

Response 3: Based on experience cited by several engineering contractors that install PTEs, we believe that existing exhaust gas flow will be adequate to sustain the required 200 feet/minute minimum air flow velocity to demonstrate 100 percent capture. Also, see Response 6 of Section 3.4.1. Further airflow difficulties can generally be managed with the use of pick-up vents near emission points. If additional exhaust gas flow is needed, a rotary concentrator could be installed to enable the plant to continue to use an existing oxidizer. The advantage of the concentrator is its ability to absorb volatile organics from large streams having relatively low concentrations of constituents, then desorb them from the concentrator activated carbon bed using a much smaller air stream for the desorption. Typically, the flow rate of the desorption stream is about 10 percent of the flow rate for the waste stream entering the concentrator. The reduced flow rate and higher organic compound concentration entering the oxidizer results in reduced operating costs for the oxidizer, offsetting much of the annual cost of the concentrator. Based on rotary concentrator costs estimated for coil coating lines (See Appendix A and Table 7-6 in Appendix B of EPA-453/R-02-009.), a rotary concentrator installed on a coating line with an exhaust flow rate of approximately 14,000 acfm (the flow rate calculated for the largest coating model plant), would result in total annual costs in the range of $12,000 to $45,000.

3.10.3 Stringency of Capture Efficiency Test Method

Comment: One commenter (IV-D-7) states that for coating operations that cannot reformulate to compliance coatings, Table 1 of the proposed regulations requires an overall control efficiency of 97%

for existing sources and 98% for new or reconstructed sources and that this means that capture systems must have capture efficiencies of at least 97% (for existing sources) and 98% (for new sources) even if the control device is 100% percent efficient. The commenter notes that it the control device is less than 100% efficient, then even more stringent capture efficiencies must be achieved for compliance.

The commenter states that Method 204 measures capture systems by the construction of a temporary total enclosure surrounding the complete permanent capture system and all other uncaptured portions of the process. The air flow rate from the temporary total enclosure must be carefully regulated so as not to interfere with the proper operation of the permanent capture system, and the emissions from the permanent capture system and the temporary total enclosure are both measured simultaneously to determine capture efficiency. The commenter states that this is an extraordinarily complicated and extremely expensive test procedure.

According to the commenter, even a relatively simple, well-conducted standard stack test is likely to show measurement variations of plus or minus 10% to 15%. The commenter further states that Method 204 involves multiple measurements (each with their own margin of error) and the delicate manipulation of airflow balance through large and complex systems, and that therefore Method 204 measurement variability is expected to be much higher than the variability for a much simpler standard stack test. Since the proposed regulation only allows 2% (new source) or 3% (existing source) of the total emissions to go uncaptured, the commenter believes that this small amount that must be measured will be overwhelmed and lost within the measurement variability and margin of error of the test method itself; in short, the proposed capture system requirement is so stringent that compliance cannot reliably be determined by existing test methods.

The commenter adds that the physical extent of the coating process has not been defined, so it is impossible to determine how far a Method 204 temporary enclosure must extend to include all of the emissions that EPA intends to include in the capture system efficiency determination. The commenter states that even after a coated fabric has passed through the final process equipment, a small amount of residual organic HAP material may be present on the finished product. The commenter further states that this residual may be present for many hours or even days after the final product has been processed. The commenter adds that in some instances in the rubber industry, this residual material may be necessary to keep the final coated fabric product fresh for further processing at other manufacturing facilities. The commenter states that although this residual material is not a significant emission source, it may be appreciable when compared to the very small amount of uncaptured emissions that the proposed regulations allow. The commeter further states that the existence of these residual materials causes uncertainty concerning how to interpret the proposed regulations regarding evaluation of capture system efficiency. The commenter submits that obviously, a Method 204 temporary total enclosure cannot be constructed to extend hundreds of miles that the finished product may travel before all residual material is emitted, or until the coated fabric product is further processed. The commenter suggests that the coating process should end at the point that the coated fabric exits out of the final oven, and emissions beyond this point need not be considered for purposes of determining capture system efficiency.

Response: The equipment used in the rubber coating industry and the organic HAP emission sources

from this industry are very similar to the other web coating processes subject to this final rule. The applicable add-on emission controls identified and required in the NSPS (40 CFR 60, subpart VVV) and the Tire Manufacturing NESHAP (40 CFR 63, subpart XXXX) are the same. One of the facilities that was used to determine the MACT floor for this subcategory applies both not rubberized [SIC 2295] and rubberized coatings [SIC 3069] in coating rooms determined to be PTE by using Method 204.

3.10.4 Elimination of Control System Design Flexibility

Comment: One commenter (IV-D-7) states that the proposed regulation only allows 3 percent of emissions to go uncaptured from existing sources and only 2 percent from new or reconstructed sources. The commenter submits that if Method 204 is used to determine capture efficiency, the 1 percent difference in capture efficiency between new and existing sources is not detectable, and therefore capture systems for both new and existing sources must be designed the same since the must both meet performance standards that, as a practical matter, are indistinguishable. The commenter further states that because fabric coating operations in the rubber industry are very large and complicated operations that fill large room, or even entire buildings, construction and operation of a Method 204 temporary total enclosure for test purposes is extremely expensive and totally impractical. The commenter states that even if a Method 204 test were to be conducted, test results may not indicate compliance because of the margin of error and measurement variability inherent in the test method even if the source is actually emitting within allowable limits. The commenter adds that use of a permanent total enclosure obviates the need for a capture efficiency test and that it is therefore impractical for the control system design engineer to design a capture system that is anything other than a permanent total enclosure. The commenter states that the net result is that, for sectors of fabric coating operations in the rubber industry, there is really no option except to retrofit existing operations with permanent total enclosure systems that have not been used within the sector, and which may not be feasible for use within the sector.

Response: The final rule provides several options for complying with the emission limits. For example, the emission rate with add-on controls option can be achieved without the use of a permanent total enclosure to capture emissions. As described in response to Comment 3.4.9 in this document, the final rule has been written to allow a 12-month rolling average compliance period for sources using the emission rate compliance option. This should make the emission rate with add-on controls option a more viable compliance option for these sources. Also, as explained in Response 1 of Section 3.1.5 of this document, the final rule exempts web coating lines that coat tire cord for use in both tire manufacturing and in the production of belts and hoses from the requirements of the final rule.

3.10.5 Simplification of Equation

Comment: One commenter (IV-D-22) states that Equation 1 of §63.4366 lacks a pair of parenthesis to make it algebraically correct and submits a simplified version of the equation.

Response: The equation in the final rule has been simplified as suggested by the commenter.

3.10.6 Off-line Uses and Destination HAPs in MACT Floor OCE Compliance Option

Comment: One commenter (IV-D-22) states that on page 46044 of the Federal Register, EPA discusses that their floor data was from "...coating line application drying/curing OCE for each source...". The commenter adds that, however, in §63.4282(b), included is cleaning, storage, mix, conveyance, of the regulated materials, conveyance of waste, and conveyance of wastewater. The commenter asserts that these off-line use points, or destinations, were not considered for the OCE of the MACT floor facilities. The commenter requests that EPA investigate the issue of whether the MACT floor is based on accurate data of OCE of the top performing existing operations as it would be calculated in accordance with the regulation or to clarify that the off-line HAP use or destination should not be included in H_e of Equation 1 of §63.4366.

Response: The MACT floor is the average OCE of the 3 top performing facilities in the database used to determine the MACT floor level of control. All of the three facilities are using permanent total enclosures to capture web coating line application and drying/curing and cleaning emissions. Two of the facilities route organic HAP emissions to thermal oxidizers. The third facility routes organic HAP emissions to carbon adsorption systems that are continuously monitored to determine removal efficiency. For each of these facilities, Equation 1 of of the final rule would be used to calculate the organic HAP overall control efficiency for the compliance period by applying the coating application and drying/curing OCE to the mass of organic HAP in the coating, thinning and cleaning materials applied in the web coating operations to calculate the emission reduction and dividing by H_e , i.e., the mass of organic HAP in the coating, thinning and cleaning materials applied in the coating operations. Therefore, the MACT floor is based on data as it would be calculated in Equation 1 of the final rule.

3.11 PERFORMANCE TESTING AND MONITORING

3.11.1 Operating Limits of Thermal Oxidizer

Comment: One commenter (IV-D-8) notes that under section 63.4373(a)(2) the operating limits of the thermal oxidizer are established as the average temperature maintained during the performance test. The commenter proposes that this be changed to the minimum temperature rather than average.

Response: Establishing the operating limits of the thermal oxidizer as the average temperature maintained during the performance test is consistent with the procedure for determining the destruction efficiency of the thermal oxidizer as the average of the efficiencies determined in the three test runs required by the standard. This procedure is also used in other MACT rules, e.g., the Large Appliances Surface Coatings Operations NESHAP (40 CFR 63, Subpart NNNN).

3.11.2 Recording of Multiple Data Points for Operating Limits

Comment: One commenter (IV-D-31) states that the language in §63.4373(c)(1) appears to require multiple data points for total regeneration desorbing gas mass flow and carbon bed temperature due to the inclusion of the terms, "for each regeneration cycle" and "for each carbon bed regeneration cycle." The commenter notes that the belief that multiple data points are required to be recorded is further reinforced by the language in the following paragraph (§63.4373(c)(2)), where the minimum or maximum values are chosen as the operating limits. The commenter then states that, however, §63.4373(c)(1) ends with the phrase "for the regeneration cycle immediately preceding or immediately following the performance test." The commenter believes that the data should be recorded after each test run rather than after each performance test. The performance test is comprised of 3 test runs (§63.4372), which will give 3 data points from which to select the minimum or maximum value.

Response: The final rule has been written to state that the data should be recorded after each test run rather than after each performance test.

3.11.3 Consistency in Approach to Carbon Bed Inspection and Maintenance

Comment: One commenter (IV-D-31) states that paragraph 63.4373(b)(4)(iii) requires an annual internal and monthly external visual inspection of the catalyst bed. The commenter notes that if problems are found, "you must take corrective action consistent with the manufacturer's recommendations..." The commenter further notes that other recent surface coating MACTs (i.e., MMMM and RRRR) require the same annual/monthly inspection; however, these MACTs require "you must replace the catalyst bed..." The commenter agrees that not all catalyst bed problems will require catalyst bed replacement. However, the commenter requests consistency in the approach of the newer surface coating MACTs to carbon bed inspection and maintenance.

Response: Based on conversations with a catalytic testing services vendor (see Docket No. OAR-2003-0014, formerly A-97-51, Document No. IV-E-2), we do not believe that every problem found during catalyst bed inspection requires replacement of the catalyst bed. The testing services vendor we contacted recommends conducting a stack test to determine if the performance of a catalytic oxidizer that has a catalyst bed that is in marginal to moderately good condition is acceptable. If the performance is unacceptable, the options depend on the type of bed. If the oxidizer has a bead or pellet type bed, the catalyst must be replaced. If the oxidizer has a monolithic bed, the bed can be washed to remove surface contaminants. The testing services vendor further noted that washing can only be performed once or twice, and if washing the bed does not provide the needed improvement in performance, the catalyst then must be replaced. Therefore, we believe that if problems are found, the source should take corrective action consistent with the manufacturer's recommendations, which may not necessarily be to replace the catalyst bed in every case.

3.11.4 Frequency of Inspection of Flow Control Position Indicators

Comment: One commenter (IV-D-31, p. 3) states that all of the capture system bypass line monitoring devices in §63.4374(b) are required to be inspected monthly except for flow control position indicators. The commenter submits that there is no discussion in the preamble or other rationale for not subjecting flow control position indicators to the same level of monitoring required for other bypass line monitoring devices. The commenter requests an explanation of why flow control position indicators do not require monthly inspection to verify that it will detect a diversion.

Response: A flow control position indicator is intended to be a flow sensor of some sort, e.g., it could be a temperature sensor that will indicate the flow of the hot exhaust gas into the bypass line if it is diverted from the add-on control device. Monthly inspection of the flow control position indicator is not required. The final rule requires that you must install, calibrate, maintain, and operate the flow position indicator according to manufacturer's specifications.

3.11.5 Performance Specifications for CPMS

Comment: One commenter (IV-D-23) states that performance specifications for CPMS are included in the proposed rule at §63.4374(c) through (g). The commenter notes that in response to comments, EPA removed these proposed provisions from subpart SS in final amendments to the generic MACT. The commenter submits that for the same reasons stated in that rulemaking, EPA should delete the paragraphs in §63.4374 identified by the commenter in Comment 3.11.9.

Response: The commenter is correct in stating that the Agency plans to propose, take comment on, and ultimately promulgate performance specifications and quality assurance (QA) procedures for continuous parameter monitoring systems (CPMS). Those performance specifications and QA procedures will apply to owners and operators of all affected sources that are subject to part 63 standards and are required to install and operate CPMS for temperature, pressure, flow rate, or pH monitoring. We also agree that many of the proposed monitoring requirements cited by the commenter are subject to interpretation and would be better addressed under the CPMS performance specifications and QA procedures. For these reasons, we have revised the final rule to remove the requirements for monitoring carbon adsorbers, condensers, and concentrators. If a source wishes to use one of these control devices or comply with a different operating limit, it must apply to the Administrator for approval of an alternative monitoring method under §63.8(f). Similarly, the specific monitoring requirements for emission capture systems have been removed. In the place of the proposed requirements, a source is required to develop a site-specific monitoring plan identifying the operating parameter to be monitored, explaining why this parameter is appropriate for demonstrating ongoing compliance, identifying the specific monitoring procedures, and specifying the operating parameter value or range of values that demonstrate compliance with the applicable emission standard.

3.11.6 Use of Cleaning Materials Outside the Capture System

Comment: One commenter (IV-D-23) notes that in setting the criteria for allowing the assumption of

100% capture, paragraph 63.4371(a)(2) includes the following text, "...and the removal or evaporation of cleaning materials from the surfaces they are applied to occurs within the capture system." The commenter asserts that EPA is well aware that coating, thinning, and printing materials are handled, conveyed, and/or piped outside the capture system. The commenter notes that in the event of a spill or leak, cleaning materials may need to be used at locations that are not inside the capture system. The commenter states that as currently worded, the text of this paragraph appears to imply that any use of cleaning materials outside the capture system means the capture system is not 100% efficient. The commenter does not believe that this is EPA's intent, and that EPA intended that "surfaces" referred to the surfaces inside the capture system. The commenter does not believe EPA intended to deny the assumption of 100% capture if a spill on the floor or ground needs to be cleaned up. The commenter requests clarification from EPA.

Response: All coating, printing, thinning, and cleaning materials used in the web coating/printing operation are applied within a capture system, and the removal or evaporation of cleaning materials from the surfaces of equipment used in printing operations occurs within the capture system. Use of cleaning solvent to clean up an accidental spill while transporting or handling materials outside the operation (enclosure) would not negate the designation of an enclosure as a PTE with 100 percent capture.

Facilities using a capture system and add-on control device for compliance are required to develop and implement on an ongoing basis a work practice plan that must specify practices and procedures to ensure that steps are taken to minimize organic HAP emissions from storage, mixing, and waste handling operations, including the minimization of spills of organic-HAP-containing coating, printing, thinning, or cleaning materials. Furthermore, materials used during a deviation from work practice standards must be treated as if they were used on an uncontrolled operation for the time period of the deviation.

3.11.7 Use of Method 18 as an Alternative to Methods 25 and 25A

Comment: One commenter (IV-D-23) states that paragraph 63.4372(b) requires the use of Method 25 or 25A when testing control devices. The commenter notes that these methods measure all organic matter in the gas streams and do not differentiate between HAP and non-HAP organic materials. The commenter states that while these methods could be appropriate when all organic materials expected to be in the gas stream are HAP (or if the source, for the sake of simplicity, wishes to assume all VOCs are HAP), they are inappropriate if the organic materials are a mix of HAP and non-HAP organic materials. The commenter requests that EPA revise this section to allow the use of Method 18 as an alternative to Methods 25 and 25A. The commenter further adds that this proposed subpart will regulate the organic HAP emissions from this source category and it is inappropriate to require a measure of total organic materials for comparison against the organic HAP limits in the rule.

Response: We have not included Method 18 as a compliance test method in the final rule. We recognize that Method 18 also is an appropriate method for determining compliance in many instances.

However, in some cases, (such as when the emission stream includes many HAPS) the use of Method 18 becomes difficult to apply. If the owner operator believes Method 18 is an appropriate (or preferred) method for demonstrating compliance, they can request the use of Method 18 under the provisions for using an alternative test procedure (40 CFR 63.7(f)).

3.11.8 Use of "Combustion" to Refer to Temperature to be Established as Operating Limit

Comment: One commenter (IV-D-23) believes that EPA should delete the word "combustion" when referring to the temperature to be established as an operating limit in paragraph 63.4373(a) since the temperature is not truly a combustion temperature. The commenter submits the following revised language:

> "(1) During the performance test, you must monitor and record, at least once every 15 minutes during each of the three test runs, the temperature in the firebox...
> 2. Use...calculate and record the average temperature...This average temperature is..."

The commenter also believes the word "combustion" should be deleted from Table 2 from the two places where it appears in item 1.a and from the two places where it appears in item 1.a.i.

Response: We agree that the firebox temperature is not truly a combustion temperature and have deleted the word combustion in the final rule.

3.11.9 Quality Assurance/Quality Control Procedures for Parametric Monitoring

Comment: One commenter (IV-D-23) asserts that paragraphs 63.4374(c), (f), and (g) contain requirements that are vague, unnecessary and outdated. The commenter states that EPA has already decided not to promulgate these requirements in amendments to 40 CFR 63 subpart SS (see 67 FR 46258, 46260) because it is moving to develop a comprehensive rule on CPMS requirements and these may conflict with those future requirements. The commenter provides extensive rationale as to why the provisions at 63.4374(c)(3)(iii), (v) and (vii); (f)(2)(ii), (iv), (v), (vi), and (vii); (g)(1)(ii) and (iv); (g)(2)(ii), (iii), (iv), and (vi) should be deleted.

Response: See response to comment in Section 3.11.5 above.

3.12 DEFINITIONS

3.12.1 "Research and Laboratory Facilities"

Comment: One commenter (IV-D-24) supports the definition of "research and laboratory facilities" in the proposed rule. The commenter states that this definition, contained in proposed section 63.4381, is consistent with the definition of "research and laboratory facilities" under Clean Air Act Amendments

Section 112(c)(7) as follows: "any stationary source whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically-trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner."

Response: Typically in this source category, research and development activities are conducted on web coating and printing lines or dyeing and finishing operations located within a manufacturing plant. These research and development operations are co-located with manufacturing lines in order to test the product being at the same manufacturing variables (e.g., temperature and humidity) as those of the products currently being used. Therefore, the final rule language has been written to reflect this. The use of the terms research or laboratory operations, rather than facilities, will also make this language consistent with the affected source description in the final rule. A corresponding change has also been made to the definition of research or laboratory facility to reflect this change.

3.12.2 Diisocyanates as "Regulated Materials" or "Organic HAP"

Comment: Four commenters (IV-D-18, IV-D-20, IV-D-27, and IV-D-32) agree with EPA's decision to not list polyurethane foam backcoating operations as one of the processes subject to the proposed subpart, since polyurethane foam backcoating operations are a lamination process. However, to avoid any future uncertainties at regulated sources, the commenters request EPA to clarify that diisocyanates used in polyurethane foam production are also not regulated by this Subpart.

The commenters state that although the principal diisocyanate used in polyurethane doam backcoating operations is MDI (vs. TDI in other polyurethane manufacturing industries), the same logic that was applied in other MACT standards that addressed isocyanate processes (specifically Subpart III - Flexible Polyurethane Foam Manufacturing, and to a lesser extent Subpart MMMMM - Flexible Polyurethane Foam Fabrication) should apply in this case. The commenters note that in theses other Subparts EPA recognized that although the diisocyanates were by definition *organic HAPs* (emphasis added by commenter), the levels of HAP emissions were very low and were present in the exhaust streams at less than 1 ppm (FR 63194, October 7, 1998 - Pages 53989-53990). As such, for compliance demonstration the sources regulated by the polyurethane Subparts only needed to consider and track HAP emissions from the auxiliary blowing agents (ABA) and HAP-based cleaners (except where diisocyanates were used to flush-clean the equipment in a closed loop system and met certain work practice limitations).

The commenters note that specific information on this backcoating process, including any associated HAP emissions, was submitted by several sources as part of the 1998 carpet ICR. The commenters state that due to the insignificant levels of HAP emissions and that all sources currently performing this process are not major sources, no data from polyurethane backing operations were included in the determination of the Coating MACT floor. The commenters submit that however, as currently written, the printing/coating subcategory could be interpreted to apply to polyurethane backing operations. The commenters state that, therefore, in order to minimize any potential future confusion of

the status of this process during compliance inspections by state air agencies and/or by EPA, EPA should clarify the status of MDI in polyurethane foam backing processes - consistent with previously promulgated MACT standards (Subparts MMMMM and III). The commenters recommend that EPA clarify this issue by 1) defining that diisocyanates are not considered to be "regulated material" or "organic HAPs", as defined in §63.4381; or 2) excluding polyurethane backing from the definition of "coating operations" in §63.4381 when there are no HAP ABA or HAP based cleaners used in the process (except where diisocyanates were used to flush-clean the equipment in a closed loop system and met certain work practice limitations).

Response: The Paper and Other Web Coating NESHAP applies to web coating lines engaged in the coating of fabric for use in flexible packaging, pressure sensitive tapes and abrasive materials. We have written language in the final rule clarifying that web coating lines where both fabric and other webs are coated for use in flexible packaging, pressure sensitive tapes or abrasive materials or where fabric is being laminated to a paper and other web substrate are subject to 40 CFR 63, subpart JJJJ, and not this final rule.

For other web coating lines engaged in the coating of fabric and other webs on the same web coating line, we have added a provision to the final rule in whereby a source can determine which MACT standard they must comply with based on the predominant surface coating activity conducted on the web coating line. Predominant activity has been determined to be 90 percent or more of the mass of substrate coated on the web coating line. For example, a web coating line that coats 90 percent paper and 10 percent fabric substrates would have to comply with the Paper and Other Web NESHAP (40 CFR 63, subpart JJJJ).

Regarding the commenters concern with the applicability of the rule to polyurethane foam backcoating operations, as explained in Response 1 of Section 3.1.4 in this document, the coating operation definition in the final rule has been written to exclude polyurethane foam backcoating operations.

3.12.3 "Laminated Fabric" and "Coating"

Comment: Three commenters (IV-D-18, IV-D-20, and IV-D-27) submit that EPA has correctly defined coating as not including the production of laminated fabric, and that therefore laminated fabric processes, such as carpet backcoating lamination, will not be subject to this Subpart. The commenters note that this relieves sources that have fabric lamination processes from unnecessary and burdensome paperwork compliance requirements for processes that EPA correctly identifies as not being significant sources of HAP air emissions. The commenters request that for the purposes of clarity, EPA amend the definition of laminated fabric, as described below, and also amend the definition of coating to make clear that adhesives are not considered coatings in this Subpart (similar to the process followed for Subpart JJ - see FR60 235 12/7/95, Page 62934 and 62936).

The commenters explain that the carpet backcoating process is the final step in the manufacture of carpet. It involves the use of an adhesive to bond carpet fibers (either natural or synthetic fibers) to a woven fabric sheet, typically referred to as primary backing. The commenters submit that as described

in a 1991 EPA OPPTS document - Carpet Policy Dialogue Compendium Report (EPA/560-91-002), "Lamination is used primarily in tufted carpet and has an important functional role in making tufted carpet a stable product which will perform properly when installed." According to the commenters, the most commonly used adhesive is a styrene-butadiene-rubber (SBR) latex mixture, although polyurethane foam, PVC, and molten polypropylene are also used. The commenters add that backcoating lamination is also essentially a HAP-free process, as demonstrated by the data previously supplied to EPA and in meetings with EPA staff at RTP, NC in 1997/98, and as reiterated by EPA Coating Group staff during various public forums in 2002.

The commenters therefore request that EPA make a minor revision to the laminated fabric definition at Section 63.4381. The commenters state that much of this definition appears to be taken almost verbatim from the "Dictionary of Fiber and Textile Technology" - Hoescht and Celanese Corporation, 1990 - or some similar source provided to EPA. The commenters submit that while this is an adequate description for most types of lamination performed by traditional textile operations, this does not adequately describe the construction techniques used to backcoat carpet. The commenters point out that for many styles and end-uses, an additional fabric sheet, commonly referred to as secondary backing, is overlaid with the adhesive mixture and sandwiched together with the fibers and primary backing to provide additional dimensional stability. The commenters further note that as described in EPA/560-91-002 "although double lamination backcoating is almost mandatory for most residential type carpets, there are several large volume uses of broadloom carpet that can utilize merely the latex unitary carpet...In this instance...latex is applied without a secondary backing of any kind." The commenters therefore recommend that this definition be revised to state "...Also two or more fabrics or textiles or a fabric and a paper substrate may be bonded with an adhesive to form a laminate."

The commenters add that, as demonstrated and agreed to by EPA in previous MACT standards (e.g., Subpart JJ), the application of an adhesive to a substrate should not be considered coating. The commenters also request EPA to either add an adhesive definition to the Subpart similar to that used in NESHAP 40 CFR 63 Subpart JJ, or amend the coating definition to state that coating does not include the use of adhesives to bond two or more textile and/or fabrics. The commenter adds that these simple and minor changes would better match the commonly used industry definitions of carpet backcoating lamination and help avoid confusion between state permitting agencies and regulated sources with carpet manufacturing operations as to which processes and operations are covered by this Subpart.

Response: Refer to Response 2 in Section 3.1.4 of this document for a description of the applicability of the final rule to carpet backcoating operations. To clarify the applicability of the final rule to lamination processes, the definition of "laminated fabric" in the final rule has been written to state,...Also two or more fabrics or textiles or a fabric and a paper substrate may be bonded with an adhesive to form a laminate. Consistent with the comparison of the backcoating process in which adhesives are applied with solvent-based web coating of traditional textiles that is presented in Response 2 in Section 3.1.4, adhesives are defined as coating materials in the final rule, as in the proposed rule.

3.12.4 "Printing"

Comment: Under the definition of "printing" in §63.4381, one commenter (IV-D-12) recommends that the word inkjet should be removed. According to the commenter, inkjet printing is a "non-impact printing process in which an intermittent or continuous stream of electrostatically charged microscopic ink droplets are projected onto a substrate at high velocity from a pressurized system." The commenter notes that inkjet printing could be classified as a web operation, but because of the low production speeds (an average inkjet printer produces product at a rate of 1,000 square feet an hour versus production rates of 45 to 80 feet per minute for a rotary screen printer), it should be classified by the Agency in the same category as flatbed screen and heat transfers.

The commenter also notes that the ink systems used for production presses include UV curable, dye based systems, waterbased systems, and solvent systems, the choice of which depends on the end use of the product and the type of textile substrate. The commenter asserts that including inkjet in the definition of printing will impose an increased regulatory burden on an emerging small business sector not considered during development of the regulation. The commenter notes that the printing of textiles via inkjet operations falls within a NAICS code that was not considered during development of the rule, 323115, Digital printing and claims that the cost impacts and analysis used within the proposed rule are not applicable and do not consider the substantially higher compliance costs that may be incurred by these facilities. The commenter further claims that the compliance options developed did not take into account the technologies and systems used by this industry sector nor was this sector, which averages well below 500 employees per facility, considered in the small business impact analysis.

Response: As is explained in response to Comment 3.1.9 in this document, ink jet printing has not been removed from the definition of printing in the final rule.

3.12.5 "Printing Operation"

Comment: To further define the applicability of the proposed rule, Commenter IV-D-12 offers the following recommended word change to the definition of "printing operation":

> "...There may be multiple printing operations in an affected source. **Coating and printing operations refer to those processes that coat and/or print on one or both sides of a continuous web substrate.** ..." (Emphasis added by the commenter).

The commenter recommends adoption of this wording in this definition so that further clarification of the applicability of this standard is provided. The commenter states that throughout the Agency's discussion on this rulemaking, references to printing and coating on continuous web substrates are offered. According to the commenter, a July 12, 2002 USEPA memo discussing the methodology and conclusions used for the MACT floor analysis for this standard indicates that the printing and coating employ web processes, and that while flatbed screen falls under textile printing, it was not considered in the development of the MACT floor. Also according to the commenter, in the July 2002 Fact Sheet for this rulemaking the Agency clearly states that the coating and printing process refers to a continuous web substrate.

The commenter adds that further, the Agency does state on page 46040 of the preamble "Flatbed screen is typically not a high production technique and does not emit large quantities of HAP over a period of time given the limits of production. Heat transfer emits little or no HAP in the transfer of the print to this substrate." The commenter notes that both of these printing operations are employed by the textile screen printing facilities. The commenter submits that inclusion of the recommended language will clarify the applicability of this standard to those facilities employing web operations for the production of textiles.

Response: The definition of printing operation in the final rule has been written to read as follows: "Printing operation means equipment used to apply cleaning materials to a web substrate to prepare it for printing material application (surface preparation), to apply printing material to one or both sides of a web substrate (printing application)..." Web is defined in the final rule as "a continuous textile substrate which is flexible enough to be wound or unwound as rolls."

3.12.6 Addition of Definitions for "Repair and Maintenance" and "Manufacture"

Comment: One commenter (IV-D-3) states that the military repairs and maintains clothing and other textile items on a regular basis. Items such as tents, chemical protective ensembles, and rainwear are repaired when economically feasible rather than disposing of the item. The commenter points out that typical repair activities center on the use of adhesives and sealants to fix seams and patch tears performed at military facilities that are major for HAP because of activities that take place fence line to fence line.

The commenter believes that EPA did not intend the proposed rule to apply to the repair and maintenance of clothing and textile items on a military installation where this is not the principal activity nor an integral part of a production process that is the principal activity. In addition the commenter points out that some large and operationally diverse military facilities may have repair operations that are co-located at the same "major source" as a manufacturing operation, but which are completely unrelated from a functional standpoint. For example, an installation may have a shop that manufactures seat covers, while incidental tent or tarpaulin repair may occur at different locations on the installation. The commenter believes that repair operations performed on products that are manufactured by the facility should be covered while all other repair operations should not.

The commenter requests the addition of the following definitions to §63.4381 'What definitions apply to this subpart?'

"Repair and maintenance means coating, printing, slashing, dyeing, or finishing operations on previously manufactured fabric and textile items that allow the item to function for its designed purpose. Repair includes non-routine production of individual components or parts intended to repair a larger item."

"Manufacture means the routine production of new fabric and other textile products. For the purpose

of this rule, manufacture does not include research and development activities, prototype development, or repair operations."

Response: The operations the commenters describes are not web coating activities, therefore the requirements of this final rule do not apply to them. As explained in Response 3 in Section 3.1.6, in order to clarify that the final rule only applies to fabric and other textile web coating operations, the definition of coating operation has been revised to specifically include "web substrate." The revised final rule reads as follows: "Coating operation means equipment used to apply cleaning materials to a web substrate to prepare it for coating material application (surface preparation), to apply coating material to a web substrate (coating application)..." Web is defined in the final rule as a continuous textile substrate which is flexible enough to be wound or unwound as rolls. We believe that these changes clarify the applicability of the final rule, and therefore, the suggested definitions for repair and maintenance and manufacture are not needed.

3.12.7 "Deviation"

Comment: One commenter (IV-D-11) asks whether a deviation is the same as a permit violation.

Response: We are using the term deviation to standardize the regulatory language used in NESHAP and to avoid any confusion that might be caused by using multiple, related terms such as excess emissions, exceedence, excursion, and deviation in the same regulatory program. The definition of deviation is consistent with the use of the term deviation in the title V operating permit program.

The definition of deviation clarifies that any failure to meet an emission limitation (including an operating limit or work practice standard) is a deviation, regardless of whether such a failure is specifically excused, or occurs at times when the emission limitation does not apply, for example, such as during startup, shutdown, and malfunction. All deviations, therefore, are not necessarily violations. The enforcement authority determines violations. All deviations from emission limitations (including operating limits and work practice standards) are required to be reported, regardless of whether or not they constitute violations.

3.12.8 "OCE"

Comment: Commenter IV-D-11 states that the acronym "OCE" is introduced in the preamble and used but is not in the list of definitions in the proposed subpart or in the list of definitions in Part 63.2. The commenter adds that it can be inferred that the definition is "overall control efficiency", but it deserves additional comment.

Response: A definition for the term "overall control efficiency " (OCE) has been written in the final

rule.

3.12.9 "Thinning Material"

Comment: Commenter IV-D-11 states that "thinning material" is defined at paragraph 63.4381 as an organic solvent for coating and printing materials. The commenter submits that in reality, there are other thinning materials used which may not be organic solvents - water is a significant example due in part to the industry's efforts to meet the earlier VOC emissions reduction requirements. The commenter adds that there are other examples so the definition should be modified as appropriate.

Response: The definition of thinning material as an organic solvent for coating and printing materials was correct as proposed. The organic HAP emission limit for the web coating and printing affected source is in terms of kg of organic HAP per kg of solids. Inorganic solvents such as water do not enter into the compliance determination. Water substituted for organic HAP in the coating/printing material formulation reduces the organic HAP content and the organic HAP emission rate.

3.12.10 "Manufacturer's Formulation Data"

Comment: Commenter IV-D-11 states that the definition for manufacturer's formulation data is somewhat confusing. The commenter asks why the restriction "rather than based on testing of the material" is included. The commenter states that the MSDS information may be based on testing as well as the manufacturer's knowledge of the product. The commenter suggests changing "rather than..." to "but may be based on testing of the material."

Response: The definition of manufacturer's formulation data is to meant to differentiate manufacturer's formulation data as a separate and viable source of information for determining HAP emission calculations.

3.12.11 "Textile"

Comment: Commenter IV-D-14 expresses concern that the proposed NESHAP could be applied to synthetic fiber manufacturing. The commenter notes that the definition of textile in the proposed rule has been expanded from the original source category listing in 1992 as covering "printing, coating, and dyeing of fabrics" to include "staple fiber, fiber, and filaments". The commenter also notes that the term "finishing" is a generic term often used in other industries such as synthetic fiber manufacturing. The also asserts that the synthetic fiber manufacturing industry was not considered in the process of developing the proposed rule. The commenter requests a clarification of the applicability language in the proposed rule by deleting the words "fiber, staple and filament" from its definition of textile and a statement of clarification from EPA stating specifically that this regulation does not apply to synthetic fiber manufacturing.

Response: The final rule is written to clarify that coating, slashing, dyeing, and finishing operations that are part of a synthetic fiber manufacturing process, and are part of the affected source of another NESHAP, such as the Group IV Polymers and Resins NESHAP (40 CFR 63, subpart JJJ) are not subject to the requirements of the final rule. For example, finishes that are applied in an affected source to which subpart JJJ applies are not subject to the requirements of the final rule.

3.12.12 "Cleaning Material"

Comment: Commenter IV-D-22 states that the definition of "cleaning material" is very problematic because it appears to be all-inclusive for any "solvent used to remove contaminants and other materials...from a textile before or after a coating/printing operation, slashing operation, or dyeing/finishing operation or from equipment associated with the coating/printing operation, slashing operation, or dyeing/finishing operation..." The commenter states that the "before or after" in the definition appears to reach backward and forward from any of the regulated, named operations to any cleaning process performed at any time on a textile substrate anywhere in the affected facility. The commenter submits that this appears to include even the often distinctly separate operations of scouring, bleaching, and preparation even when they are done other than as part of the affected operations. The commenter notes that, however, it also appears from §63.4282(b)(1) that cleaning materials in printing/coating are those used on the web coating and printing equipment and those in dyeing/finishing [§63.4282(d)(1)] are those used on dyeing and finishing equipment. The commenter states that if cleaning materials are only those used on such equipment and the latter meaning is the correct interpretation, the definition of "cleaning material" should clearly reflect it.

Response: See Response 1 and Response 3 of Section 3.2.1 for revisions addressing the definition of cleaning material.

3.12.13 "Coating"

Comment: Commenter IV-D-23 presents the definition of "coating" from §63.4381. The commenter operates a coating process wherein fiberglass is coated with a resinous material then dried/cured. The commenter has historically referred to this process as "impregnating" because the process is designed to deposit the resinous material throughout the fiberglass fabric, not just on "one or both sides". The commenter believes they would not have recognized the definition of coating as describing the commenter's activity without the benefit of numerous conversations with EPA on both the Paper and Other Web and this NESHAP. The commenter notes that the inclusion of the phrase "continuous solid film" in the definition does help the commenter to distinguish their operation from finishing operations, though it might be useful to delete the phrase "one or both sides of" for added clarity that operations like the commenter's are covered by the rule. The commenter knows there are a number of coating activities like theirs in the U.S. that may also be confused by the definition of coating and urges EPA to make an extra effort to confirm that it has identified all operations that are coating fiberglass that will be used to manufacture circuit-board substrate. The commenter suggests it may be possible that these

sources represent a subcategory in the coating and printing subcategory.

Response 3: The final rule considers the coating of glass fibers, such as fiberglass, a coating operation rather than a finishing operation because the coating materials do not impregnate the glass fibers. The MACT database included 1 facility web coating fiberglass used to manufacture circuit board. The facility uses an incinerator to control ethylene glycol emissions from one of the finish formulas.

3.12.14 "Exempt Compound"

Comment: Commenter IV-D-23 states that §63.4381 contains a definition for "exempt compound", but that term is not used anywhere in the proposed rule. The commenter submits that the definition should be deleted, since reference in it to VOC is confusing in a rule dealing with organic HAP limits.

Response: Since the term is not used in the final rule, the definition for "exempt compound" has been deleted.

3.13 TYPOGRAPHICAL ERRORS

Comment: Four commenters (IV-D-11, IV-D-22, IV-D-23, and IV-D-31) submitted the following comments regarding typographical errors:

- Paragraph 63.4330(j) incorrectly refers to "paragraphs (i)(1) through (8) of this section. Subparagraph (i) has no further subparagraphs.
- Paragraph 63.4340 last sentence refers to 63.4341(h) but there is no subparagraph (h).
- Paragraph 63.4341(e)(2) mixes units, kg and lb, in first sentence.
- Paragraph 63.4341(e)(4)(ii) refers to subparagraph (h)(1) which does not exist. GADNR submits the cite should be to subparagraph (e)(1).
- Paragraphs 63.4351(a)(4)(iii)(D) and 63.4351(b)(3)(ii)(D) refer to paragraph 63.4530(g) which does not exist. GADNR suggests the correct citation is 63.4330(g).
- Paragraph 63.4351(b)(3) - Term A explanation calls for use of Equation 4B which does not exist.
- Paragraph 63,4351(b)(3)(ii)(D) refers to paragraph 63.4530(g) which does not exist.
- Paragraph 63.4361(d)(6) should read *for which* not *or which*.
- Paragraph 63.4366(d)(4)(iii) refers to paragraphs 63.4563(c) and (d) which do not exist.
- Paragraph 63.4366(d)(6) - the explanation for Equation 1 term $H_{CSR,j}$ refers to Equation 4 of 63.4361 but it should refer to Equation 3. The explanation for the term E_{HAP} is missing. Equation 1 may be missing a bracket for math function purposes. GADNR suggests a simplified equation and notes the above corrections to definitions of terms following the equation.
- Table 2 No. 6 refers to 63.44371(a) which does not exist.
- Paragraph 63.4361(d)(4)(iii) refers to 63.4563(c) and (d) which do not exist.

- Page 46082 of the FR, under the heading "Tables to Subpart OOOO of Part 63" - the introductory paragraph appears to refer to Table 1 as the "following table" but the reference of Paragraph 63.4292 actually refers to Table 2. Below Table 1 the same introductory reference is repeated but there it appears to be correct.
- Paragraph 63.4282(d)(4) should be changed from "...coating and printing operation: and" to "**dyeing and finishing** operation; and."
- Language at the end of paragraph 63.4330(c)(1)(iii) incorrectly cites the equations for calculating the mass of organic HAP emission reduction.
- Paragraph 63.4330(c)(2)(i) contains an incorrect reference to 63.4341(h)(1). The reference should be to 63.4341(e)(1).
- Paragraph 63.4330(j) contains an incorrect reference to "paragraphs (i)(1) through (8) of this section." The cite should be changed to "paragraphs (j)(1) through (8) of this section."
- Paragraph 63.4341(e)(1)(i) contains an incorrect reference to "...paragraphs (e)(1)(i) and (ii)...". The cite should be changed to "...paragraphs (e)(1)(i)(A) and (B)...".
- Commenter submits that Equation 2 of 63.4351 calculates the total mass of coatings used and not the total mass of coatings solids and suggests revisions to the equation.
- The equations in 63.4341, 63.4351, and 63.4361 use an inconsistent subscript for coating and printing material quantities and properties. Commenter submits the subscript for all coating and printing materials should be consistent (either all capital letter or all small letter) and the subscript for dyeing and finishing should be different.
- In Table 3, in the explanation column for the entries for 63.6(h) and 63.10(b)(2)(xiii), subpart OOOO is erroneously referred to as "subpart 0000" (i.e., with zeros rather than capital letter "O")
- The word "organic" should be inserted as follows: "...from the applicable <u>organic</u> HAP content requirements..."
- This paragraph contains a redundancy and should be revised as follows: "...and the TVH for all materials..."
- The word "organic" should be inserted as follows: "...redetermine the <u>organic</u> HAP per kg of material."
- In the description of the term $W_{c,j}$ for Equation 4A, the word "organic" should be inserted as follows: "...kg <u>organic</u> HAP per kg of material."
- In the definition of regulated materials, the word "organic" should be inserted in two places immediately in front of "HAP".

<u>Response</u>: We appreciate the commenters' attention to detail. The final rule reflects changes made to correct these typographical errors.

3.14 ADMINISTRATIVE REQUIREMENTS (EXECUTIVE ORDERS)

3.14.1 <u>"Once In, Always In"</u>

<u>Comment</u>: Several commenters (IV-D-9, IV-D-11, IV-D-16, IV-D-17, IV-D-18, IV-D-20, IV-D-

22, IV-D-25, IV-D-27, and IV-D-32) state that EPA has impermissibly relied upon a Policy Memorandum issued in May 1995 to interpret that once a facility has at anytime been subject to a MACT standard it will always be subject to that standard, even if future technological or pollution prevention opportunities evolve to allow for emissions to be reduced below the applicable regulatory trigger levels. The commenters state that this policy has never been subjected to the rulemaking process and as a result is defined as "regulation by policy" contrary to the requirements of the Administrative Procedures Act.

The commenters argue that the current "Once In, Always In" policy is contrary to the regulatory and industry goals of pollution prevention and minimization through technological advances and that it serves to tell industry that new advances in technology/pollution prevention opportunities offer no substantive regulatory gain since their implementation will not relieve them of their MACT compliance requirements. The commenters add that industry as a whole, and particularly the textile industry, has made significant movement in the areas of pollution prevention and that continued use of this policy hampers future pollution prevention efforts.

The commenters request that, therefore, to promote pollution prevention and to reward facilities for accepting HAP emission limitations, the EPA revise/eliminate the "Once In, Always In" policy to allow facilities previously considered major sources of HAPs and subject to a MACT(s) to subsequently become area sources and eliminate MACT applicability. The commenters add that if, however, EPA insists on relying upon the Policy Memorandum to support the "Once In, Always In" policy, the Policy Memorandum be subjected to the appropriate rulemaking, public notice, and comment as required by the Federal Administrative Procedures Act.

Response: As stated therein, the May 1995 memorandum presents EPA's legal interpretation of how Congress intended the regime established by section 112 of the CAA to be implemented. It is not an attempt by EPA to regulate through policy as some contend, but rather, an attempt by EPA to inform the regulated community of how it plans to implement section 112 in light of its interpretation of Congressional intent. The EPA does, however, strongly support pollution prevention efforts. As a result, we have developed, through discussions with State and Territorial Air Pollution Program Administrators & Association of Local Air Pollution Control Officials (STAPPA/ALAPCO), a tentative solution to the problem identified by the commenters that will require changes in the Part 63 General Provisions or individual MACT rules rather than a change in our policy memo on this subject. The solution is intended to both preserve what EPA believes is the correct legal interpretation of the CAA section 112 regime and to actively encourage the development and implementation of pollution prevention activities. To this end, we have been working to develop regulatory options that would allow qualifying sources to satisfy the MACT requirements through innovative streamlined approaches after the compliance date if they achieve emission reductions equivalent to or better than MACT levels of control through pollution prevention (P2) measures. The regulatory options under consideration will include components that meet the legal requirements of the CAA and still resolve the issues regarding P2. After concluding discussions of the options, we intend to develop the appropriate regulatory language and propose changes to the Part 63 General Provisions or existing rules in the near future. No changes were made to the final rule to address this issue.

3.15 MISCELLANEOUS COMMENTS

3.15.1 Use of Available Industry Data

Comment: Four commenters (IV-D-16, IV-D-17, IV-D-18, and IV-D-27) state that EPA failed to consider all available industry data when it did not use significant portions of the information compiled from approximately 400 sites. The commenters state that the industry cooperated with EPP in the original ATMI MACT survey which included information from approximately 400 sites. The commenters submit that, however, when promulgating the proposed subpart, it is their understanding that EPA did not consider a majority of this survey because of facility identification issues. The commenters states that instead they believe EPA considered a significantly limited scope of data from this complex and diverse industry. The commenters add that the data EPA considered is therefore not as representative of the industry as the ATMI MACT survey. The commenters therefore request EPA to consider a broader set of data before finalizing the proposed subpart.

Response: We used as much of the original ATMI MACT survey data as possible to develop the final rule. We are not allowed to use data in the MACT floor determination that cannot be linked to a specific facility. The original ATMI survey was submitted with the industry names concealed, and, therefore, could not be used for determining MACT floors. However the ATMI MACT survey data were used to estimate baseline organic HAP emissions and nationwide emissions reductions for printing, dyeing, finishing, and slashing and to estimate the compliance costs associated with reformulating finishing materials to meet the finishing organic HAP emission limit.

3.15.2 Emission Rate Requirements Mixed with Mass Fraction Limits in Rule Language

Comment: Commenter IV-D-11 states that there are several instances where the language mixes emission rate requirements and mass fraction limits of organic HAPs in contrast to the Table 1 (of the proposed rule) listing of only emission rate limits. The commenter submits that this may need additional explanation.

Response: For the compliant material option, compliance is demonstrated by using only coating, printing, slashing, dyeing, and finishing materials with a HAP content below the limit referred to as the emission rate limit along with the use of non-organic-HAP-containing thinning or cleaning materials in web coating/printing operations.

3.15.3 Sequential Numbering of Equations

Comment: Commenter IV-D-11 states that it would possibly reduce confusion if all of the equations were numbered sequentially throughout the proposed rule, especially if some are referred to from other sections.

Response: Equations are not numbered sequentially throughout the final rule. However, they are numbered sequentially within each section of the final rule to which they correspond.

3.15.4 Provision of Substantial Compliance Flexibility

Comment: Commenter IV-D-10 submits that the 60 percent reduction in HAP emissions from printing, coating, and dyeing of fabrics and other textiles facilities is needed and that the proposed rule provides substantial compliance flexibility and low cost options for facilities to achieve these reductions.

Response: Multiple compliance options are provided in the final rule to allow facilities to achieve compliance in the least costly manner.

3.15.5 Characterization of Printing

Comment: Commenter IV-D-27 objects to EPA's characterization of printing in the Technical Support Document (page 1-3) and submits that EPA incorrectly states that the "processes, application, and drying of printing are identical or nearly identical to coating". The commenter claims that EPA has correctly determined in previous regulations (such as NSPS, subpart VVV) that printing is not similar to, and definitely not identical to coating. The commenter submits that virtually all printing in the U.S. is performed with water-based print pastes and auxiliary chemicals using the same dye types that are used in the textile dyeing process. The commenter has no problem with the emissions limitations and other requirements placed on printing processes at major facilities, but believes it is important for EPA to know that above characterization is incorrect.

Response: See response to Comment 2 of Section 3.1.7.

3.15.6 Consistency of Words and Terms Within Rule and Between Rule and Subpart A

Comment: Commenter IV-D-23 states that EPA must be consistent in the use of words and terms within this rule and between this rule and subpart A. The commenter offers that, for example, Section 63.4282 establishes differentiation between new, reconstructed, and existing sources. The commenter states that, however, an electronic search of the rule for the word "source" locates numerous other places throughout the rule, including the tables, were the terms new affected source, reconstructed affected source, and existing affected source are routinely used and this is not the correct phrasing. The commenter submits that subpart A provides definitions of "affected source", "new source", and "existing source", all of which are applicable to subpart OOOO. The commenter states that subpart A defines a reconstructed source as a new source. The commenter submits that nowhere are the terms "reconstructed affected source" or "existing affected source" defined. The commenter submits that, for clarity and consistency, EPA must use only defined terms in the rules or owners and operators will not be able to determine how the rule affects their operations.

The commenter further states that there is inconsistency in the use of the term "HAP". The commenter submits that sometimes it appears alone, sometimes preceded by "organic", and sometimes preceded by "total organic". The commenter submits that in nearly all cases, the correct term is "organic HAP". The commenter states that his facility's comments note some occasions of inconsistency and suggest corrective wording, but that every instance of inconsistent use within the rule may not have been addressed. The commenter states that EPA should throughly review the language of the proposed rule and correct these inconsistencies.

Response: The use of the terminology new or reconstructed affected source is consistent with the language used in the General Provisions and provides clarity that both new and reconstructe" affected sources are new sources. The final rule has been written to clarify that the requirements apply only to organic HAP.

3.15.7 Inconsistent Use of "Emission Limitation" and "Emission Limit"

Comment: Commenter IV-D-23 states that EPA defines "emission limitation" in the proposed rule, and that both that term and the term "emission limit", which is not defined, are used frequently throughout the proposed rule. The commenter submits that there is no need for a definition of "emission limitation". The commenter states that subpart A defines the term "emission standard" and that term is adequate for the purposes of this proposed rule. The commenter submits that the use of emission limitation and emission limit creates unnecessary confusion in attempts to interpret subpart A sections that apply to this proposed rule but refer to an "emission standard". The commenter states that EPA should replace every occurrence of "emission limitation(s)" and "emission limit(s)" in the proposed rule with the term "emissions standard" and point to the definition of that term in subpart A as applicable for use in this subpart.

Response: Emission limitation is defined in the final rule as an emission limit, an operating limit, or work practice standard. The use of the term emission limit is correct as currently used, and therefore, no clarification is needed.

3.15.8 Use of "Log"

Comment: Commenter IV-D-23 states that EPA should not use words in the rule that might prohibit use of developing technologies. The commenter submits that, for example, the word "log" is used in the rule and it could be interpreted to require only a written record as acceptable. The commenter believes that in all cases within this rule, the words "record" or "records" are an acceptable substitute. The commenter adds that, alternatively, EPA should add text in the rule that clearly indicates that logs may be maintained electronically.

Response: The final rule requires that a source keep records in a form suitable and readily available for expeditious review. The records may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

3.15.9 Updated ASTM Standards

Comment: Commenter IV-D-01 informed us that several of the ASTM standards referenced in the proposed rule have been updated: D1475-90 is now D1475-98, D2369-95 is now D2369-01, D3792-91 is now D3792-99, D4017-96a is now D4017-02, D4457-85 is now D4457-02; D1979-91 is now D1979-97, D4747-87 is now D4747-02, and PS9-94 has been withdrawn without replacement.

Response: The commenter offers ASTM standards that have been updated by ASTM since being listed in the proposal. Section 12(d) of the National Transfer Technology Transfer and Advancement Act (NTTAA) of 1995 (Public Law No. 104-113; 15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in their regulatory and procurement activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards developed or adopted by one or more voluntary consensus bodies. The EPA conducts searches to identify standards compatible with EPA Methods, in this case EPA Methods 24 and 311.

The ASTM Standard D-3154-00 is not an acceptable alternative in lieu of EPA's standard reference method.

The ASTM D1475-90, ASTM D2369-95, ASTM D3792-91, ASTM D4457-85 (Reapproved 91), and ASTM D1979-91 are incorporated by reference into Method 24. ASTM D1979-91, ASTM D3432-89, ASTM D4747-87, ASTM D4827-93, and ASTM PS9-94 are incorporated by reference in EPA Method 311. These standards are already acceptable procedures that were actually incorporated by reference in Method 24 as they were established at the time of EPA review.

However, the standards cannot be changed to reflect the dates specified by the commenter. We cannot cite the new dates of the updated standards because it we have not been able to determine if these updated versions are technically the same as the previously incorporated versions. If the updated versions of these methods were technically different from the previously incorporated versions, their use might change the applications of the Methods. This might in turn affect the stringency of the emission limits that use Methods 24 and 311 to determine compliance.

Only the most recent versions of the standards will be approved by the Office of the Federal Register for incorporation by reference in the final rule. We have reviewed the new versions and found that they remain appropriate for their intended use. We removed reference to PS-94 and replaced it with ASTM D5910-96.

3.15.10 Education and Teaching Activities

Comment: Commenter IV-D-02 stated that Purdue University is a major source of HAP emissions

due to the size of their coal-fired boilers at their power plant. The commenter notes that their Visual and Performing Arts Department is one of the departments on campus that has activities on occasion involving coating of textiles as part of their undergraduate and graduate curricula. The commenter states that these activities may involve only de minimus quantities of materials, on the order of several gallons annually. Under Indiana's title V permit program, education and teaching activities are insignificant sources of emissions and are specifically exempted from title V rules. The commenter requests that a similar exemption be added to the final Printing, Coating, and Dyeing of Fabrics and Other Textiles rule.

Response: The final rule is clear that sources that perform coating, printing, slashing, dyeing, or finishing but are not commercial manufacturers are not required to comply with it.

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16. ABSTRACT

This document contains a summary of public comments and responses on the proposed NESHAP for Printing, coating and Dyeing of Fabrics and Other Textiles (40 CFR 63, subpart OOOO), proposed on July 11, 2002 (67 FR 46208). This document also provides the EPA's response to each comment, and outlines the changes made to the regulation in response to public comments.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. Field/Group

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