

**Compliance Guide for Small Businesses
to the
Reinforced Plastic Composites Production
NESHAP**

40 CFR 63, Subpart WWWW

**United States Environmental Protection Agency
Office of Air Quality Planning and Standards**

**Information Transfer and Program Integration Division
Program Implementation Review Group
Research Triangle Park, NC 27711**

EPA-456/R-05-005
September 2005

**Compliance Guide for Small Businesses
to the
Reinforced Plastic Composites Production
NESHAP
40 CFR 63, Subpart WWWW**

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U.S. Environmental Protection Agency

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Reinforced Plastic Composites Production
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While the guidance contained in this document may assist you in applying regulatory requirements, the guidance is not a substitute for those legal requirements; nor is it a regulation itself. Thus it does not impose any legally-binding requirements on any party, including EPA, States, or the regulated community. In any civil or administrative action against a small business, small government or small nonprofit organization for a violation of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reinforced Plastic Composites Production Rule, the content of this guide may be considered in determining the reasonableness or appropriateness of proposed fines, penalties or damages. EPA may decide to revise this guide without public notice to reflect changes in EPA's approach to implementing the Revised National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reinforced Plastic Composites Production Rule or to clarify and update text. To determine whether EPA has revised this guide and/or obtain copies, please check the following website: <http://www.epa.gov/ttn/atw/rpc/rpcpg.html>. **Small Business Ombudsman Office Contact Info:** <http://www.epa.gov/sbo/>

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CHAPTER 1: INTRODUCTION

Why should I use this document?

You should use this guide to 1) determine if the Reinforced Plastic Composites NESHAP applies to your facility, and 2) to understand the requirements of the rule if it does apply to your facility. Chapter 2 of this document addresses primarily those aspects of the rule that will help you determine if the rule applies to your facility. Chapter 3 of this document has a table that shows you where to find specific requirements in the rule. This table is the “Requirements Matrix.”

Is there anything I should know before using this document?

First, when using this guide, remember that it does not replace the final rule. If there seems to be a discrepancy between the rule and this guide, the rule has final say. Second, this guide only covers requirements published on April 21, 2003, and the rule amendments published in August/September of 2005. If the rule is revised after the date of this report, the revisions are not incorporated in this document; therefore, you should keep up with any revisions, by periodically checking the *Federal Register* and the *Code of Federal Regulations* (CFR). You can download *Federal Register* notices by going to the Government Printing Office (GPO) website at www.access.gpo.gov/su_docs/aces/aces140.html. You can download an electronic copy of the rule at the electronic code of Federal regulation website: <http://ecfr.gpoaccess.gov/>.

Where can I get additional help?

You can get additional help from EPA’s Reinforced Plastic Composites Production web site: <http://www.epa.gov/ttn/atw/rpc/rpcpg.html>. You can also contact your regional EPA air toxics office for additional help. The table on the following page lists the contact information for each of EPA’s regional offices.

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EPA Regional Office Contact Information

Address	States	Website/ Phone Number
Region 1 1 Congress Street Suite 1100 Boston, MA 02114-2023	CT, MA, ME, NH, RI, VT	www.epa.gov/region1 (888) 372-7341 (Main) (617) 918-1656 (Air)
Region 2 290 Broadway New York, NY 10007-1866	NJ, NY, PR	www.epa.gov/region2 (212) 637-3000 (Main) (212) 637-4080 (Air)
Region 3 1650 Arch Street Philadelphia, PA 19103-2029	DE, MD, PA, VA, WV, DC	www.epa.gov/region3 (800) 438-2474 (Main) (215) 814-3297 (Main) (215) 814-5796 (Air)
Region 4 Atlanta Federal Center 61 Forsyth Street, SW Atlanta, GA 30303-3104	FL, NC, SC, KY, TN, GA, AL, MS	www.epa.gov/region4 (800) 241-1754 (Main) (404) 562-9063 (Air)
Region 5 77 W. Jackson Blvd Chicago, IL 60604	IL, IN, MI, WI, MN, OH	www.epa.gov/region5 (800) 621-8431 (Main) (312) 886-3850 (Air)
Region 6 1445 Ross Avenue Suite 1200 Dallas, TX 75202	AR, LA, NM, OK, TX	www.epa.gov/region6 (800) 887-6063* (Main) (214) 665-6444 (Air)
Region 7 901 N. 5 th Street Kansas City, KS 66101	IA, KS, MO, NE	www.epa.gov/region7 (800) 223-0425 (Main) (913) 551-7122 (Air)
Region 8 999-18th St. Suite 300 Denver, CO 80202-2466	CO, MT, ND, SD, UT, WY	www.epa.gov/region8 (800) 227-8917* (Main) (303) 312-6312 (Air)
Region 9 75 Hawthorne St., San Francisco, CA 94105	CA, AZ, HI, NV	www.epa.gov/region9 (415) 947-8000 (Main) (415) 947-8715 (Air)
Region 10 1200 6 th Avenue Seattle, WA 98101	AK, ID, WA, OR	www.epa.gov/region10 (800) 424-4372* (Main) (206) 553-1200 (Main) (206) 553-1814 (Air)

* For sources within the region, only.

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Where do I get additional copies of this document?

You can get copies of this document from EPA's Air Toxics Website, Rule and Implementation Information for Reinforced Plastic Composites Production:

<http://www.epa.gov/ttn/atw/rpc/rpcpg.html>

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CHAPTER 2: WHAT THIS RULE COVERS – AN OVERVIEW

Why was this rule developed?

This rule was developed to comply with the requirements of section 112(d) of the Clean Air Act, which requires EPA to develop Hazardous Air Pollutant (HAP) emission standards reflecting Maximum Achievable Control Technology (MACT) for major sources in this and other source categories. This MACT standard protects the public health by reducing emissions of HAP from reinforced plastic composite production facilities. Facilities subject to this rule emit a variety of HAP, including styrene, methyl methacrylate, and methylene chloride. These HAP have adverse health effects including headache, fatigue, depression, and irritation of skin, eyes, and mucous membranes. Methylene chloride has been classified as a probable carcinogen. EPA estimates that this NESHAP will reduce nationwide emissions of HAP by 7,682 tons per year. The final rule was published on April 21, 2003. A revision is scheduled to be published in the August/September 2005 time frame that make clarification to rule requirements and correct come minor errors in Table 3.

How do I know if I am subject to this rule?

You are subject to this rule if you own or operate a reinforced plastic composites production facility that is located at a major source of HAP emissions.

For purposes of this NESHAP, reinforced plastic composites production is limited to operations in which reinforced or non-reinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites. The rule also applies to several operations that are ancillary to reinforced plastic composites production. These operations are cleaning, mixing, HAP-containing materials storage, and repair operations associated with the production of plastic composites. (See §63.5785(a).)

You are a major source if you emit or have the potential to emit (considering controls) 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAP. The pollutants to be considered for purposes of determining whether you are a major source are those pollutants identified as HAP in the Clean Air Act. Some states have their own lists of HAP or similarly designated air pollutants. Those state lists are not used to determine if

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your source is a major source and are not the basis for this rule. You can find the list of HAP on EPA's website at www.epa.gov/ttn/atw/188polls.html.

For determining your potential to emit, you must consider the maximum emissions from your facility if it operates at full capacity. Emission reductions achieved through emission controls must be included in the determination of potential to emit. Federally enforceable limits or restrictions must also be considered. To illustrate, consider "Facility A," a major source with a federally enforceable permit requirement that limits annual operation to 6,000 hours. The potential to emit for Facility A would be calculated based on the emission potential if the facility operates at maximum capacity for 6,000 hours per year only. On the other hand, if a similar facility, "Facility B," chooses to operate only 6,000 hours due to product market conditions but does not have a federally enforceable limit on operating hours, Facility B must calculate potential to emit based on operation at full capacity for 8,760 hours per year, even though the facility is not currently operating for that many hours.

Are there any facility exemptions?

Yes, there are three exemptions.

You are not subject to this subpart if your facility only repairs reinforced plastic composites (including boat parts). Repair is defined in the rule as follows: "application of resin or gel coat to a part to correct a defect, where the resin or gel coat application occurs after the part has gone through all the steps of its typical production process, or the application occurs outside the normal production area." The definition also states that "for purposes of this subpart, rerouting a part back through the normal production line, or part of the normal production line, is not considered repair." Note that operations to repair reinforced plastic composite parts that were produced at your facility are not covered by this exemption and are subject to this rule. (See §63.5785(b) and §63.5935.)

You are not subject to this rule if your facility is a research and development facility as defined in section 112(c)(7) of the Clean Air Act. (See §63.5785(c).)

You are also not subject to this rule if all of your reinforced plastic composites operations use less than 1.2 tons per year (tpy) of thermoset resins and gel coats that contain styrene combined. (See §63.5785(d).)

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What parts of my facility are subject to this rule?

Covered Operations (See §63.5790(c).)

This rule applies to each new or existing affected source at reinforced plastic composites production facilities. The affected source consists of all parts of your facility engaged in the following operations:

- Open molding
- Closed molding
- Centrifugal casting
- Continuous lamination
- Continuous casting
- Polymer casting
- Pultrusion
- Sheet molding compound (SMC) manufacturing
- Bulk molding compound (BMC) manufacturing
- Mixing
- Cleaning of equipment used in reinforced plastic composites manufacture
- HAP-containing materials storage
- Repair on parts you also manufacture

Operations with no requirements (See §63.5790(c).)

The following operations are specifically excluded from any requirements in the rule:

- Application of mold sealing and release agents
- Mold stripping and cleaning
- Repair of parts that you did not manufacture, including non-routine manufacturing of parts
- Personal activities that are not part of the manufacturing operations
- Pre-preg materials (defined as reinforcing fabric received precoated with resin which is usually cured through the addition of heat)
- Non-gel coat surface coatings
- Repair or production materials that do not contain resin or gel coat
- Research and development operations as defined in section 112(c)(7) of the Clean Air Act
- Application of filler putties, polyputties, and adhesives.

Military Specification Resins

Production resins that must meet military specifications are allowed to meet the organic HAP limit contained in the specification (rather than meeting the limits in this rule), but certain requirements must be met to use this exemption. You must supply specifications certified by the military procurement officer that state a requirement for a specific resin or specific HAP content,

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and you must keep a record of the resins for which you use this exemption. Production resins for which the exemption is used must be applied with nonatomizing equipment unless you can demonstrate that such application is infeasible. (See §63.5790(d).)

What if I also manufacture boats or parts that are used in boats?

There is a NESHAP for Boat Manufacturing (40 CFR Subpart VVVV) that is similar to this rule for reinforced plastic composites production. If you manufacture boats or parts that are used in boats, you need to understand the applicability criteria of that rule as it relates to the Reinforced Plastic Composites rule. The Boat Manufacturing NESHAP applies to boat manufacturing facilities that are located at a major source of HAP. A boat manufacturing facility is a facility that manufactures hulls or decks of boats from fiberglass or aluminum, or assembles boats from premanufactured hulls and decks, or builds molds to make fiberglass hulls or decks. A facility that manufactures only parts for boats (such as hatches, seats, or lockers) or boat trailers is not considered a boat manufacturing facility for purposes of the Boat Manufacturing NESHAP. (See §63.5683 for the full applicability criteria for the Boat Manufacturing NESHAP.)

If your source does not meet the applicability criteria of the Boat Manufacturing NESHAP, but your source does meet the applicability criteria of the Reinforced Plastic Composites NESHAP (see §63.5785), then you are subject to the Reinforced Plastic Composites NESHAP regardless of the final use of the parts you manufacture. (See §63.5787(a).)

If you are subject to the Boat Manufacturing NESHAP and all of the reinforced plastic composites you manufacture are used in manufacturing your boats, then you are not subject to the Reinforced Plastic Composites NESHAP. (See §63.5787(b).)

If you are subject to the applicability criteria of the Reinforced Plastic Composites NESHAP (see §63.5785) and you are subject to the Boat Manufacturing NESHAP and you produce reinforced plastic composites that are not used in fiberglass boat manufacture at your facility, then the operations associated with manufacturing the reinforced plastic composites that are not used in manufacturing boats at your facility are subject to the Reinforced Plastic Composites NESHAP. (See §63.5787(c).) If your facility is subject to both the Boat Manufacturing NESHAP and the Reinforced Plastic Composites NESHAP, you can choose to comply with the Boat Manufacturing NESHAP for your reinforced plastic composites operations

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if you can demonstrate that doing so will not increase emissions compared to complying with the Reinforced Plastic Composites NESHAP for those operations.

The table below presents examples of combinations of operations that might exist at a single facility and the rule(s) to which the facility would be subject. The table is not intended to be an exhaustive list of possible combinations of operations; it is simply a list of examples to help illustrate how the two different NESHAP apply.

**Boat Manufacturing vs. Reinforced Plastic Composite (RPC)
Applicability Based on Operation Type**

Considerations	Example Facility 1	Example Facility 2	Example Facility 3	Example Facility 4
Source meets § 63.5785 applicability criteria?	Yes	Yes	Yes	Yes
Source subject to boat NESHAP?	No	Yes	Yes	Yes
Are all RPC products used on site to make boats? (§ 63.5787(b))		Yes	No	No
Source elects to only meet boat NESHAP and can demonstrate no organic HAP increase?			No	Yes
Then the RPC NESHAP:	Applies	Does not apply	Applies to operations making RPC parts not used on site to make fiberglass boats	Does not apply
Relevant Citation from RPC NESHAP	§ 63.5787(a)	§ 63.5787(b)	§ 63.5787(c)	§ 63.5787(d)

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What if I do not use any reinforcements in my operations?

Not using reinforcements does not exclude you from this rule. As stated in §63.5785, “reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites.” If you meet these applicability criteria, you are subject to this rule even if you do not use reinforcements in any reinforced plastic composites operation.

Am I a new source or existing source?

You need to know if your source is a new source or an existing source because new sources are subject to more stringent requirements and different compliance dates than existing sources. Your source is a new source if construction of the affected source began after August 2, 2001, and no other reinforced plastic composites production affected source existed at the site when construction began. If your source does not meet the criterion for being a new source, then your source is an existing source. Note that an area source that existed prior to August 2, 2001, and subsequently becomes a major source is considered an existing source.

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CHAPTER 3: REQUIREMENTS MATRIX

What is the Requirements Matrix?

The Requirements Matrix is a set of two tables that tells you where in the rule to find information that is relevant to your facility in the rule. Table 1 addresses the rule requirements that are specific to each type of operation. Table 2 lists the requirements that are the same for all operations. Both tables are organized with the type of requirement (e.g., notification requirements, emission limits) in rows and the type of operation (e.g., open molding, centrifugal casting) in columns. Each cell lists the section(s) and/or table(s) in the rule where you will find the specific type of requirement for each operation.

How do I use it?

Before using the matrix, you may wish to browse the tables to familiarize yourself with the requirement categories and types of operations. Table 1, which lists specific requirements for each type of operation, is broken down into the following main requirement categories, with each category broken down further into specific items:

- Emission Limits
- Options for Meeting Standards
- Calculations
- Work Practice Requirements

Table 2, which lists requirements that are the same for all operations, is broken down into the following main requirement categories, with each category broken down further into specific items:

- General Compliance Requirements
- Testing & Initial Compliance Demonstration
- Continuous Compliance Requirements
- Notifications
- Recordkeeping
- Reports

To use the matrix, identify the type of information you are seeking based on the above list of categories. Find the appropriate table; then find the row(s) in the table corresponding to the information you need. Once you have found the correct row, read across that row to the cell

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in the column for the RPC operation(s) at your facility. The information in each cell will direct you to the specific section(s) and/or table(s) of the rule covering the requirement. You should then read that section of the rule to identify the requirement. The text of the rule is included in Appendix A.

Some cells will refer to more than one section of the rule if the requirement is addressed in multiple sections of the rule. For example, there are many instances where a requirement is addressed in a text section of the rule and some of the specifics of that requirement are addressed in a table. In this situation, the cell in the matrix will direct you to both the text section of the rule and the table that includes the detail of the requirements.

Note that all citations and tables listed in the matrix refer to 40 CFR 63 Subpart WWWW. So, for example, “5905(a)” in the matrix is 40 CFR 63.5905 (a), also designated as §63.5905(a), and “Table 1” is the first table at the back of Subpart WWWW. Where a table number is followed by another number in parenthesis, that means the table includes a list of items, and only the number in parenthesis is relevant. For example, if a cell directs you to Table 13(2), that means the relevant requirement is the second item in the list of items in Table 13 of 40 CFR 63 Subpart WWWW.

Consider this example: if you have an existing source that emits less than 100 tpy from continuous casting and continuous lamination/casting combined, and you want to know the emission limit for centrifugal casting operations at your facility, go to Table 1 and look in the first column for the “Emission Limits” section, then move to the next column to find the row for “Existing source w/ <100 tpy emitted from continuous casting & continuous lamination/casting combined” and then follow the row until you get to the Centrifugal Casting column. The cell directs you to 5805(a), which will be §63.5805(a) in the rule, and Table 3 (7)-(8), which refers to items (7) and (8) in Table 3 at the end of the rule.

Consider a second example: if you have a pultrusion operation and want to know the how long you need to maintain records, go to Table 2 and look in the first column for the “Recordkeeping” section, then move to the next column to find the row for “How Long” and then follow the row until you get to the Pultrusion column. The cell directs you to 5920(b)(c), which will be §63.5920(b) and §63.5920(c) in the rule.

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REQUIREMENTS MATRIX
40 CFR 63.5780-63.5935**

(All subparts and tables listed in this matrix are in 40 CFR 63 Subpart WWWW)

Table 1: Requirements by Type of Operation

Category	Requirement	Open Molding	Centrifugal Casting	Continuous Lamination/Casting	Pultrusion	SMC Manufacturing	BMC Manufacturing	Compression / Injection molding	Cleaning	Material Storage	Mixing	Polymer Casting	Repair Operations
Emission Limits	Existing source w/ <100 tpy emitted from centrifugal casting & continuous lamination/casting combined	5805(b) Table 3 (1)-(6)	5805(a)(2) Table 3 (7)-(8)	5805(a)(2) Table 3 (10)	5805(b) Table 3 (9)								
	Existing source w/ 100 tpy or more emitted from centrifugal casting & continuous lamination/casting combined	5805(b) Table 3 (1)-(6)	5805(a)(1)	5805(a)(1)	5805(b) Table 3 (9)								
	New facility emitting <100 tpy HAP from combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing	5805(c) Table 3 (1)-(6)	5805(c) Table 3 (7)-(8)	5805(c) Table 3 (10)	5805(c) Table 3 (9)								
	New facility emitting 100 tpy or more HAP from combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing	5805(d) Table 5 (1)-(6) Large Parts: 5805(d)(2)(i)-(ii) Table 3 (1)-(6)	5805(d) Table 5 (7)-(9)	5805(d)	5805(d) Large Parts: 5805(d)(2)(i)-(ii) Table 3 (9)	5805(d) Table 5 (9)	5805(d)				5805(d)		
Options for Meeting Standards		5810	5810	5820	5830								
Calculations	Data to collect			5865									

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(All subparts and tables listed in this matrix are in 40 CFR 63 Subpart WWWW)

Category	Requirement	Open Molding	Centrifugal Casting	Continuous Lamination/Casting	Pultrusion	SMC Manufacturing	BMC Manufacturing	Compression / Injection molding	Cleaning	Material Storage	Mixing	Polymer Casting	Repair Operations
	Determining HAP content of resins and gel coats	5797	5797	5797	5797	5797	5797	5797	5797	5797	5797	5797	5797
	Calculating percent reduction			Compliant line: 5885(a) Averaging: 5885(b) Combination: 5885(d)									
	Calculating emission factor	5796 Table 1(1)	5796 Table 1(2)	Compliant line:5890(a) Averaging: 5890(b) Combination: 5890(c)									
	Calculating amount of resin and/or gel coat applied			5880									
	Calculating facility tpy emissions	5799	5799	5799	5799	5799	5799	5799	5799	5799	5799	5799	5799
	Calculations for new application technology	5798	5798	5798	5798	5798	5798	5798	5798	5798	5798	5798	5798
	Emissions from wet-out area and oven			5870									
	Determining capture efficiency			5875									
Work Practice Requirements	Existing source w/ <100 tpy emitted from centrifugal casting & continuous lamination/casting combined				5805(a) Table 4 (9)	5805(a) Table 4 (4)- (5)	5805(a) Table 4 (6)- (8)	5805(a) Table 4 (1)	5805(a) Table 4 (2)	5805(a) Table 4 (3)	5805(a) Table 4 (6)- (8)		

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 40 CFR 63.5780-63.5935**

(All subparts and tables listed in this matrix are in 40 CFR 63 Subpart WWWW)

Category	Requirement	Open Molding	Centrifugal Casting	Continuous Lamination/Casting	Pultrusion	SMC Manufacturing	BMC Manufacturing	Compression / Injection molding	Cleaning	Material Storage	Mixing	Polymer Casting	Repair Operations
	Existing source w/ 100 tpy or more emitted from centrifugal casting & continuous lamination/casting combined				5805(b) Table 4 (9)	5805(b) Table 4 (4)-(5)	5805(b) Table 4 (6)-(8)	5805(b) Table 4 (1)	5805(b) Table 4 (2)	5805(b) Table 4 (3)	5805(b) Table 4 (6)-(8)		
	New facility emitting <100 tpy HAP from combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing				5805(c) Table 4 (9)	5805(c) Table 4 (4)-(5)	5805(c) Table 4 (6)-(8)	5805(c) Table 4 (1)	5805(c) Table 4 (2)	5805(c) Table 4 (3)	5805(c) Table 4 (6)-(8)		
	New facility emitting 100 tpy or more HAP from combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing				5805(d) Table 4 (9)	5805(d) Table 4 (4)-(5)	5805(d) Table 4 (6)-(8)	5805(d) Table 4 (1)	5805(d) Table 4 (2)	5805(d) Table 4 (3)	5805(d) Table 4 (6)-(8)		

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REQUIREMENTS MATRIX
40 CFR 63.5780-63.5935**

(All subparts and tables listed in this matrix are in 40 CFR 63 Subpart WWWW)

Table 2: Requirements For All Operations

Category	Requirement	All Operations
General Compliance Requirements	Compliance Dates	5800, Table 2
	Comply with work practice standards and emission limits	5835(a-b)
	Startup, shutdown, malfunction	5835(c-d)
Testing & Initial Compliance Demonstration	Date for initial performance test or compliance demonstration	5840, Table 2
	Demonstrating initial compliance	5860, Table 8, Table 9
	Date for subsequent performance tests	5845
	Conducting performance tests and evaluations	5850
	Monitor requirements	5855
Continuous Compliance Requirements	Monitoring and collecting data	5895
	Demonstrating continuous compliance	5900
Notifications	Existing Source	5905(a), Table 13 (1)
	New Sources	5905(a), Table 13 (2)
	Request for extension	5905(a), Table 13 (3)
	Using averaging option for compliance	5905(a), Table 13 (1)
	Complying using other provisions (not averaging)	5905(a), Table 13 (5)
	Using add-on control to comply	5905(a), Table 13 (6)(a-c)
	Changes to previous notifications	5905(b)
Recordkeeping	What records must be kept	5915
	What form must records be in	5920(a),(d)
	How long	5920(b),(c),(h),(i)
Reports	Compliance Report	5910(a)-(e),(h), Table 14
	Exceedance of 100 tpy threshold	5910(f)
	Deviations	5910(a),(g), Table 14
	Startup, shutdown, malfunction	5910(a),(h), Table 14

Appendix A

Reinforced Plastic Composites Production NESHAP

United States
Environmental Protection
Agency

Office of Air Quality Planning and Standards
Air Quality Strategies & Standards Division
Research Triangle Park, NC

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