

## **REFRACTORY PRODUCTS MANUFACTURING NESHAP: OVERVIEW OF COMPLIANCE OPTIONS**

§63.9782(a)

### **Who is subject to the Refractory Products Manufacturing NESHAP?**

The Refractory Products Manufacturing NESHAP (national emission standards for hazardous air pollutants) applies to any facility that meets both of the following conditions:

- Manufactures refractory products, and
- Is either a major source of hazardous air pollutant (HAP) emissions, located at a major source of HAP emissions, or part of a major source of HAP emissions.

§63.9782(b)

### **What is a major source of HAP emissions?**

A major source of HAP emissions is any plant site that emits or has the potential to emit either

- 10 tons per year of any single/one HAP, OR
- 25 tons per year of any combination of HAP.
- Section 112(b) of the Clean Air Act lists the hazardous air pollutants.

§63.9784

### **What types of sources are regulated by the Refractory Products Manufacturing NESHAP?**

The Refractory Products Manufacturing NESHAP applies to the following three general types of refractory products manufacturing sources:

- Thermal process sources of organic HAP.
- Clay refractory products kilns.
- Chromium refractory products kilns.

The following sections describe the compliance options for each of these source types.

#### **I. THERMAL PROCESS SOURCES OF ORGANIC HAP**

### **What are thermal process sources of organic HAP?**

Thermal process sources of organic HAP are process units that satisfy ALL of the following conditions:

- Used to manufacture refractory products, AND
- Operated at elevated temperatures, AND
- Used to process refractory shapes that contain an organic HAP or contain one or more substances that form and release organic HAP when heated.

§63.9784

### **Which specific types of thermal process sources of organic HAP are regulated by the Refractory Products Manufacturing NESHAP?**

The specific types of thermal process sources that are regulated by the Refractory Products Manufacturing NESHAP depend on the type of process, source type, and other operating conditions. You can use Table 1 to determine which of your

process units are classified as thermal process sources of organic HAP under the Refractory Products Manufacturing NESHAP.

**Table 1. Thermal Process Sources of Organic HAP  
Subject to the Refractory Products Manufacturing NESHAP**

If you produce...	These process units are subject to the Refractory Products Manufacturing NESHAP:	If your facility meets the definition of major source AND:
Resin-bonded refractory products	Curing oven, kilns	The resin contains phenol, formaldehyde, methanol, ethylene glycol, or any other organic HAP
Pitch-bonded refractory products	Shape dryers, kilns	The products contain coal tar or petroleum pitch
Pitch-impregnated refractory products	Defumers, coking ovens, shape preheaters, pitch working tanks	The products are impregnated with coal tar or petroleum pitch
Other refractory products	Shape dryers, kilns	The refractory mix includes an organic HAP or any compound that forms and releases an organic HAP during thermal processing

§§63.9792  
and 63.9812  
through  
63.9816

### **What are my basic compliance requirements?**

To comply with the Refractory Products Manufacturing NESHAP, you must:

- Meet emission limits
- Monitor process and control device parameters
- Perform work practices
- Prepare and submit notifications and reports
- Keep records

These requirements are described in the following sections.

#### **A. Emission Limits**

§63.9788 and  
items 1  
through 9 of  
Table 1 of the  
rule

#### **What emission limits must I meet?**

You must meet ONE the following two emission limits:

- A total hydrocarbon (THC) concentration limit of 20 parts per million by volume, dry basis (ppmvd), corrected to 18 percent oxygen, OR
- A 95 percent reduction in the mass emissions of THC.

*Item 1 of  
Table 1 of the  
rule*

**Are there any distinctions in emission limits for new and existing sources?**

No, these emission limits apply to all existing and new thermal process sources of organic HAP.

*§63.9784(d)*

**Are there any exceptions to these emission limits?**

Yes, these emission limits do not apply to process units that are used for research and development.

*§63.9824*

**What is a research and development process unit?**

The Refractory Products Manufacturing NESHAP defines a research and development process unit as “. . . any process unit whose purpose is to conduct research and development for new processes and products and is not engaged in the manufacture of products for commercial sale, except in a de minimis manner.”

*Items 4.a.i,  
5.a.i, 9.a.i,  
and 10.a.i of  
Table 4 of the  
rule*

**How do I measure THC?**

You must measure THC using EPA Method 25A, which is described in Appendix A of 40 CFR, part 60.

**Why must I correct the THC concentration to 18 percent oxygen?**

Combustion sources, such as dryers and kilns, require additional air to complete the combustion process. This additional air dilutes the exhaust stream. To account for the amount of dilution air, the exhaust concentration must be corrected to a certain oxygen percentage. Without this correction, a facility could meet the concentration limit simply by introducing more dilution air into the system without actually reducing the mass of organic HAP emitted. The Refractory Products Manufacturing NESHAP requires you to correct the THC concentration to 18 percent oxygen because the exhaust from thermal process sources in the refractory products manufacturing industry typically contains about 18 percent oxygen.

**What are the advantages of a concentration limit?**

A concentration limit typically has the following advantages over a percent reduction limit:

- The testing costs are less for a concentration limit because you have to test at only one location: either at the outlet of the control device or in the stack. For a percent reduction limit, you must test at two locations: at the control device inlet and either at the outlet of the control device or in the stack.
- A concentration limit is generally easier to meet for sources that have relatively low emissions.

**What are the advantages of a percent reduction limit?**

A percent reduction limit typically has the following advantages over a concentration limit:

- A percent reduction limit is generally easier to meet for sources with relatively high emissions; when emission levels are high, it often is easier to reduce those emissions by a certain percentage than to reduce the emissions to a relatively low level.
- A percent reduction limit provides a better measure of the effectiveness of the control device because percent reduction measures how much emissions are being reduced.

§63.9790

**What are my options for meeting the emission limit?**

You have the following two general options for meeting the emission limit for thermal process sources of organic HAP:

- Install a control device that removes, destroys, or otherwise reduces emissions of organic HAP, or
- Implement process changes that reduce or eliminate emissions of organic HAP.

**What control devices can I use?**

You can use any of the following devices to control emissions of organic HAP:

- Thermal oxidizer
  - Often used in the refractories industry
  - Demonstrated to be effective in controlling organic HAP emissions from refractory products manufacturing sources
- Catalytic oxidizer
  - Often used in the refractories industry
  - Demonstrated to be effective in controlling organic HAP emissions from refractory products manufacturing sources
- Carbon adsorber
- Condenser
- Any other control device that destroys or reduces emissions of organic materials.

**What are their advantages and disadvantages of thermal and catalytic oxidizers?**

Table 2 lists some of the advantages and disadvantages of thermal and catalytic oxidizers.

**Table 2. Advantages and Disadvantages of Thermal and Catalytic Oxidizers**

Control device	Advantages	Disadvantages
Thermal oxidizer	Relatively simple operation	Emits NO <sub>x</sub> (a criteria pollutant)
	Very effective in reducing organic HAP emissions	
	Monitoring is simple	
	Reduces CO emissions	
Catalytic oxidizer	Relatively simple operation	Emits NO <sub>x</sub>
	Very effective in reducing organic HAP emissions	Needs more maintenance than a thermal oxidizer
	Monitoring is straightforward	Catalyst can become poisoned
	Reduces CO emissions	Catalyst bed can become blocked
	Does not emit as much NO <sub>x</sub> as a thermal oxidizer	
	Uses less fuel than a thermal oxidizer	

**What process changes can I use to meet the emission limits?**

If you choose to meet the emission limits for thermal process sources of organic HAP using process changes, you have the following two options:

- Use inorganic binders and additives, or
- Use organic binders and additives that do not contain or release organic HAP.

**If I use an add-on control device to meet the emission limits, must I install a separate control device on every affected source?**

No, it is not necessary to install a separate control device on each source. You can exhaust two or more sources to a common control device. However, you must also do one of the following:

- Design the control device with enough capacity to control emissions from all sources when the sources are operating simultaneously, or
- Design the control device for the source with the highest exhaust flow rate and/or emission rate, and operate only one of the sources at any given time.

**Can I operate any of my affected sources without a control device?**

Yes, you can operate an affected source without a control device if that source can meet the 20 ppmvd THC limit without any emission controls. In most cases, kilns are the only type of affected sources that you will be able to operate without a control device. The only way to determine if an affected source can be operated without a control device is to measure THC emissions from the source.

**When might I be able to operate a kiln without a control device?**

In general, it may be possible to operate an affected kiln without a control device if the refractory shapes that are fired in the kiln contain small amounts of organic HAP. This situation could occur under any of the following circumstances:

- The refractory mix contains small amounts of organic HAP,
- The kiln follows a curing oven or shape dryer that has a relatively long process cycle, or
- The kiln follows a curing oven or shape dryer that operates at a relatively high temperature.

In any of these cases, most or all of the organic HAP contained in the refractory shapes is likely to be released during curing or drying and would no longer be present in significant concentrations in the shapes when they are transferred to the kiln. However, before operating an affected kiln without emission controls, you first must measure THC emissions from the kiln to demonstrate that a control device is not needed.

**If I use a control device to meet the emission limit, must I operate the control device whenever the source is in operation?**

Whether or not you must operate the control device depends on how you operate the affected source and the types of refractory products that you process in that source. The following clarify when you **MUST** operate the control device:

- If your source is a continuous source, you must operate the control device whenever that source is processing a product that contains or emits an organic HAP. The only exception to this is for the scheduled maintenance of a control device used on a continuous kiln.
- If your source is a batch process source and is controlled with a thermal or catalytic oxidizer, you can reduce the operating temperature of the oxidizer or shut off the oxidizer under certain conditions. However, you first must demonstrate during the performance test that the control device is not needed under those conditions.
- You do not need to operate the control device when the refractory products that are being processed do not contain or release organic HAP. For example, it is not necessary to operate the control device when a kiln is used to fire refractory shapes that contain only inorganic binders and additives.

**If I determine that a source does not need a control device, do I still need to perform an emission test on that source?**

Yes, even if a source does not need a control device, you still must perform an emission test on that source if it is used to process products that contain or emit organic HAP. You also must meet the following conditions when testing that source:

- The test must be performed while processing the refractory product that corresponds to the maximum organic HAP processing rate, and

§63.9792(e)

Item 13 of  
Table 4 of the  
rule

Item 2.a of  
Table 4 of the  
rule

- You must show that the source meets the THC concentration limit; the percent THC reduction limit does not apply to uncontrolled sources.

**What other options do I have to minimize the costs of installing and operating control devices?**

You can minimize control costs by restricting some sources to processing only products that do not contain or emit organic HAP. Those sources are not considered to be affected sources, and you would not need to install a control device or conduct a performance test on those sources.

§63.9792(e)

**Can I operate an affected source when the control device is being repaired and is offline?**

Yes, you can operate a continuous kiln while the kiln control device is under repair for scheduled maintenance, if you satisfy all of the following:

- You must request and receive case-by-case approval by the permitting authority before the control device is taken offline,
- You must minimize HAP emissions while the control device is offline, and
- You must minimize the period during which the control device is offline.

This provision applies only to scheduled routine maintenance of continuous kiln control devices. If the control device is taken offline as the result of a malfunction, you must follow the procedures specified in your Startup, Shutdown, and Malfunction Plan.

**B. Monitoring**

*Items 3 through 9 of Table 8 of the rule*

**What monitoring must I perform?**

For each affected thermal process source of organic HAP, you must monitor the following:

- Organic HAP processing rate, and
- Control device operating parameters, depending on the type of control device used.

**What are my options for monitoring control device operating parameters?**

The specific control device operating parameters that you must monitor are as follows:

*Items 5 and 8 of Table 8 of the rule*

- If the source is controlled with a thermal oxidizer, you must monitor the temperature of the oxidizer combustion chamber continuously.

*Items 6 and 9 of Table 8 of the rule*

- If the source is controlled with a catalytic oxidizer, you must
  - Monitor the catalyst bed inlet temperature continuously, and
  - Check the catalyst activity level at least once every 12 months.

§§63.8(f) and  
63.9800(i)

- If the source is controlled with any other type of control device, you must
  - Install and operate a THC continuous emissions monitoring system (CEMS),
  - Comply with Performance Specification 8 of Appendix B of 40 CFR part 60,
  - Comply with Procedure 1 of Appendix F of 40 CFR part 60, and
  - Request approval of alternative monitoring and perform the approved monitoring.

§63.9800(i)

- If you use process changes to reduce organic HAP emissions, you must request approval for alternative monitoring and perform the approved monitoring.

§§63.8(f) and  
63.9800 (i)

- For any control device, you have the option of requesting approval of alternative monitoring and, if approved, performing the alternative monitoring.

### **C. Work Practices**

Items 1 and 2  
of Table 3 of  
the rule

#### **Which types of thermal process sources of organic HAP are subject to work practices under the Refractory Products Manufacturing NESHAP?**

You must use work practices if you produce pitch-impregnated refractory products and you own or operate either of the following:

- Shape preheaters, or
- Pitch working tanks.

Item 1 of  
Table 3 of the  
rule

#### **What are my options for complying with the work practice standards for shape preheaters?**

To comply with the work practice standard for shape preheaters, you must:

- Clean the refractory shape holding baskets or containers used in the preheater by abrasive blasting at least every 10 preheating cycles, OR
- Subject the refractory shape holding baskets or containers used in the preheater to a thermal process cycle at least every 10 preheating cycles, OR
- Exhaust the shape preheater to a thermal or catalytic oxidizer that controls emissions from an affected coking oven or defumer, OR
- Exhaust the shape preheater to a comparable thermal or catalytic oxidizer.

Item 2 of  
Table 3 of the  
rule

#### **What are my options for complying with the work practice standards for pitch working tanks?**

- Exhaust the pitch working tank to a thermal or catalytic oxidizer that controls emissions from an affected coking oven or defumer, OR
- Exhaust the pitch working tank to a comparable thermal or catalytic oxidizer.

### **D. Reporting and Recordkeeping**

§§63.9812  
and 63.9814

#### **What notifications and reports must I submit?**

Table 3 lists the notifications and reports that you must submit if you own or operate an affected thermal process source of organic HAP.



**Table 3. Notifications and Reports**

	You must submit a(an)...	By...	For the following conditions:
§§63.9(b) and 63.9812(b) and (c)	Initial Notification	August 14, 2003	Your affected source is an existing source, or Your affected source is a new source with a startup before April 16, 2003
		120 days after startup	Your affected source is a new source with a startup on or after April 16, 2003
§§63.9(e) and 63.9812(d)	Notification of Performance Test	60 days before the test	In all cases
§§63.9(h) and 63.9812(e)	Notification of Compliance Status	60 days after the initial performance test	In all cases
§63.9812(g)	Request for Approval to Bypass a Kiln Control Device	The time required to receive approval prior to taking the control device offline	The kiln is a continuous kiln, and you must take the kiln control device offline to perform scheduled maintenance on the control device
§63.9814(c) through (f)	Compliance Report	July 31 of each year following the compliance date	For each 6-month compliance period that ends on June 30 of the same year
		January 31 of each year following the compliance date	For each 6-month compliance period that ends on December 31 of the same year
§63.10(d)(5)(i)	Report of Immediate Startup, Shutdown, or Malfunction	7 working days after the end of the event	You had a startup, shutdown, or malfunction that is not consistent with your Startup, Shutdown, and Malfunction Plan

**Where can I find examples of these reports?**

Examples of these reports can be found at the following website:

<http://www.epa.gov/ttn/atw/gp/gppg.html#IMP>

**Can I submit notifications and reports electronically?**

Yes, you can submit all required notifications and reports electronically, and we encourage you to do so. Electronic reporting is easier and faster than hard copy reporting and eliminates the need to maintain paper copies. Guidance on filing reports electronically can be found at the following website:

<http://www.epa.gov/ttn/atw/certs/>

§63.9816

**What records must I keep?**

You must keep records of the following:

- Each notification and report that you are required to submit under the Refractory Products Manufacturing NESHAP;
- Records related to startups, shutdowns, and malfunctions;
- Records of performance tests;
- Records of emission data used to develop an emissions profile;
- Records that document how you comply with any applicable work practice standard;
- For each deviation of an operating limit parameter value, the date, time, and duration of the deviation, a brief explanation of the cause of the deviation and the corrective action taken, and whether the deviation occurred during a period of startup, shutdown, or malfunction;
- For each affected source, records of production rate on a process throughput basis (either feed rate to the process unit or discharge rate from the process unit);
- Records of any approved alternative monitoring methods or test procedures;
- Records of maintenance activities and inspections performed on control devices;
- If you operate a source that is controlled with a catalytic oxidizer, records of annual checks of catalyst activity levels and subsequent corrective actions; and
- Current copies of your Startup, Shutdown, and Malfunction Plan and your Operation, Monitoring, and Maintenance Plan, including any revisions and records documenting conformance with those revisions.

**II. CLAY REFRACTORY PRODUCTS KILNS**

§63.9824

**How does the Refractory Products Manufacturing NESHAP define clay refractory products?**

The Refractory Products Manufacturing NESHAP defines clay refractory products as any refractory products that contain at least 10 percent uncalcined clay by weight prior to firing in a kiln. The rules clarifies that the term “clay” means any of the following six classifications of clay defined by the U.S. Geologic Survey: ball clay, bentonite, common clay and shale, fire clay, fuller’s earth, and kaolin.

§63.9784

**What types of clay refractory products sources are subject to the Refractory Products Manufacturing NESHAP?**

The Refractory Products Manufacturing NESHAP applies only to clay refractory products kilns.

§§63.9792  
and 63.9812  
through  
63.9816

### **What are my basic compliance requirements?**

To comply with the Refractory Products Manufacturing NESHAP, you must do the following:

- For existing clay refractory products kilns, meet a work practice standard;
- For new clay refractory products kilns,
  - Meet emission limits, and
  - Monitor control device parameters;
- For all affected clay refractory products kilns, prepare and submit notifications and reports; and
- Keep records.

These requirements are described in the following sections.

#### **A. Emission Limits**

§63.9788 and  
items 10 and  
11 of Table 1  
of the rule

#### **What emission limits must I meet for clay refractory products kilns?**

- If your affected source is an EXISTING clay refractory products kiln (i.e., began operation before June 21, 2002), you do not have to meet any emission limits.
- If your affected source is a NEW clay refractory products kiln (i.e., began operation on or after June 21, 2002), you have to meet emission limits for hydrogen fluoride (HF), and hydrochloric acid (HCl).

Items 10 and  
11 of Table 1  
of the rule

#### **What are the emission limits for HF?**

For HF, you must meet either of the following emission limits:

- Production-based mass emission limit of 0.038 pounds per ton (lb/ton) of uncalcined clay processed, or
- 90 percent reduction in mass emissions.

Items 10 and  
11 of Table 1  
of the rule

#### **What are the emission limits for HCl?**

For HCl, you must meet either of the following emission limits:

- Production-based mass emission limit of 0.18 lb/ton of uncalcined clay processed, or
- 30 percent reduction in mass emissions.

#### **Why are the production-based mass emission limits specified in terms of uncalcined clay?**

Most clays form and release HF and HCl when the clays are heated to temperatures in excess of 1000°F. Because calcining generally is performed at temperatures much higher than 1000°F, we assume that any emissions of HF or HCl that result from the heating of the clay would occur during calcining.

§63.9784(d)

#### **Are there any exceptions to these emission limits?**

Yes, these emission limits do not apply to process units that are used for research and development.

§63.9824

### **What is a research and development process unit?**

The Refractory Products Manufacturing NESHAP defines a research and development process unit as “. . . any process unit whose purpose is to conduct research and development for new processes and products and is not engaged in the manufacture of products for commercial sale, except in a de minimis manner.”

Items 14.a,  
15.a, 16.a,  
and 17.a of  
Table 4 of the  
rule

### **How do I measure HF and HCl?**

You can measure HF and HCl using any of the following methods:

- EPA Method 26A, which is described in Appendix A of 40 CFR part 60;
- EPA Method 26, which is described in Appendix A of 40 CFR part 60, if the exhaust stream does not contain HF or HCl in the form of a particulate; or
- EPA Method 320, which is described in Appendix A of 40 CFR part 63.

### **What are the advantages of a production-based mass emission limit?**

A production-based mass emission limit has the following advantages over a percent reduction limit:

- The testing costs are less for a production-based mass emission limit because you have to test at only one location: either at the outlet of the control device or in the stack. For a percent reduction limit, you must test at two locations: at the control device inlet and either at the outlet of the control device or in the stack.
- A production-based mass emission limit is generally easier to meet for sources that have relatively low emissions.

### **What are the advantages of a percent reduction limit?**

A percent reduction limit typically has the following advantages over a production-based mass emission limit:

- A percent reduction limit is generally easier to meet for sources with relatively high emissions; when emission levels are high, it is often easier to reduce those emissions by a certain percentage than to reduce the emissions to a relatively low level.
- A percent reduction limit provides a better measure of the effectiveness of the control device because percent reduction measures how much emissions are being reduced.

§63.9790

### **What are my options for meeting the emission limits for clay refractory products kilns?**

You have the following two general options for meeting the emission limits for new clay refractory products kilns:

- Install a control device that removes, destroys, or otherwise reduces emissions of HF and HCl; or
- Implement process changes that reduce or eliminate emissions of HF and HCl.

**What control devices can I use?**

You can use any of the following control devices to reduce emissions of HF and HCl:

- Dry limestone absorber (DLA),
- Dry lime scrubber/fabric filter (DLS/FF),
- Dry injection fabric filter (DIFF),
- Wet scrubber, or
- Any other control device that reduces or removes HF and HCl.

**Which control devices are most often used to control HF and HCl emissions from kilns?**

There are currently no refractory products kilns equipped with emission controls for HF or HCl. However, several kilns used in the brick and structural clay products industry are currently controlled with DLAs. In addition, some brick kilns are controlled with DIFFs, DLS/FFs or wet scrubbers. Other industries also use DIFFs for controlling HCl.

**What are the advantages and disadvantages of these control devices?**

See Table 4 for a list of some of the advantages and disadvantages of these control devices.

**Table 4. Advantages and Disadvantages of HF and HCl Emission Controls**

Control device	Advantages	Disadvantages
DLA	<ul style="list-style-type: none"> <li>• Effective in reducing HF</li> <li>• Low installation and operating cost</li> <li>• Relatively simple operation</li> <li>• Does not affect kiln operation</li> </ul>	<ul style="list-style-type: none"> <li>• Less effective for controlling HCl</li> <li>• Must use same source and grade of limestone as used for the performance test</li> <li>• Less effective in controlling particulate matter (PM) and SO<sub>2</sub></li> </ul>
DIFF	<ul style="list-style-type: none"> <li>• Very effective in reducing HF and HCl</li> <li>• Provides very good PM control</li> </ul>	<ul style="list-style-type: none"> <li>• High capital cost</li> <li>• High maintenance</li> <li>• High operating costs</li> <li>• Can affect kiln operation</li> </ul>
DLS/FF	<ul style="list-style-type: none"> <li>• Very effective in reducing HF and HCl</li> <li>• Provides very good PM and SO<sub>2</sub> control</li> </ul>	<ul style="list-style-type: none"> <li>• High capital cost</li> <li>• High maintenance</li> <li>• High operating costs</li> <li>• Can affect kiln operation</li> </ul>
Wet scrubber	<ul style="list-style-type: none"> <li>• Very effective in reducing HF and HCl</li> <li>• Low installation and capital cost</li> </ul>	<ul style="list-style-type: none"> <li>• High operating cost</li> <li>• Generates significant amounts of wastewater</li> </ul>

**What process changes can I use to meet the emission limits for clay refractory products kilns?**

If you choose to meet the emission limits for new clay refractory products kilns using process changes, you have the following options:

- Use calcined clay,
- Use clays with low concentrations of fluorides and chlorides, or
- Substitute clays with nonclay raw materials.

**If I use an add-on control device to meet the emission limits, must I install a separate control device on every affected kiln?**

No, it is not necessary to install a separate control device on each kiln. You can exhaust two or more kilns to a common control device. However, you also must do one of the following:

- Design the control device with enough capacity to control emissions from all of the kilns when the kilns are operating simultaneously, or
- Design the control device for the kiln with the highest exhaust flow rate and operate only one of the kilns at any given time.

**Can I operate an affected kiln without a control device?**

Yes, you can operate an affected kiln without a control device if that kiln can meet the production-based mass emission limits for HF and HCl without any emission controls. The only way to determine if a kiln can be operated without a control device is to measure HF and HCl emissions from the kiln.

§63.9792

**If I use a control device to meet the emission limit, must I operate the control device whenever the source is in operation?**

Yes, you must operate the control device whenever the kiln is being used to fire clay refractory shapes. The only exception to this is for the scheduled maintenance of a control device used on a continuous kiln. If you use the same kiln to fire nonclay refractory shape, you are not required to operate the control device while firing those nonclay shapes.

Items 14.a  
and 17.a of  
Table 4 of the  
rule

**If I determine that a source does not need a control device, do I still need to perform an emission test on that source?**

Yes, you must perform an emission test on any new kiln that is used to fire clay refractory products, even if the kiln does not need a control device to meet the emission limits. You must also meet the following requirements when testing the kiln:

- The test must be performed while the kiln is operating at the maximum production level, and
- You must demonstrate that the kiln meets the production-based mass emission limits for HF and HCl; the percent reduction limits do not apply to uncontrolled kilns.

§63.9792(e)

**Can I operate an affected kiln when the control device is being repaired and is offline?**

Yes, you can operate a continuous kiln while the kiln control device is under repair for scheduled maintenance, if you satisfy all of the following:

- You must request and receive case-by-case approval by the permitting authority before the control device is taken offline,
- You must minimize HAP emissions while control device is offline, and
- You must minimize the period during which the control device is offline.

This provision applies only to scheduled routine maintenance of continuous kiln control devices. If the control device is taken offline as the result of a malfunction, you must follow the procedures specified in your Startup, Shutdown, and Malfunction Plan.

**B. Monitoring**

*Items 11 through 13 of Table 8 of the rule*

**What monitoring must I perform?**

For each affected kiln, you must monitor the following:

- Uncalcined clay processing rate, and
- Control device operating parameters, depending on the type of control device used (See Table 5 below).

*Items 11 through 13 of Table 8 of the rule*

**What specific control device operating parameters must I monitor?**

Table 5 lists the control device parameters you must monitor for each type of control device.

**Table 5. Monitoring Requirements for New Clay Refractory Products Kilns**

If your kiln is controlled with a...	You must perform the following monitoring:
DLA	Continuously measure the pressure drop across the DLA
	Maintain free-flowing limestone to the DLA
	Continuously measure the limestone feeder setting
	Use same source and grade of limestone as was used during the most recent performance test
DLS/FF or DIFF	Maintain free-flowing lime to the DLS/FF or DIFF
	Continuously measure the limestone feeder setting
Wet scrubber	Continuously measure the pressure drop across the scrubber
	Continuously measure the chemical feed rate (if a chemical such as lime is used)

§§63.8(f) and  
63.9800(i)

**Do I have any options for monitoring control device parameters?**

As an alternative to the monitoring requirements listed in Table 5, you can submit a request for alternative monitoring and, if approved, perform the alternative monitoring.

Item 4 of  
Table 3 of the  
rule

**C. Work Practices**

**What work practices must I perform?**

If you own or operate an existing clay refractory products kiln, you must use natural gas or the equivalent as the kiln fuel.

**D. Reporting and Recordkeeping**

§§63.9812  
and 63.9814

**What notifications and reports must I submit?**

Table 6 lists the notifications and reports that you must submit.

**Where can I find examples of these reports?**

Examples of these reports can be found at the following website:  
<http://www.epa.gov/ttn/atw/gp/gppg.html#IMP>

**Can I submit notifications and reports electronically?**

Yes, you can submit all required notifications and reports electronically, and we encourage you to do so. Electronic reporting is easier and faster than hard copy reporting and eliminates the need to maintain paper copies. Guidance on filing reports electronically can be found at the following website:

<http://www.epa.gov/ttn/atw/certs/>

§63.9816

**What records must I keep?**

You must keep records of the following:

- Each notification and report that you are required to submit under the Refractory Products Manufacturing NESHAP;
- Records related to startups, shutdowns, and malfunctions;
- Records of performance tests;
- Records of emission data used to develop an emissions profile;
- Records that document how you comply with any applicable work practice standard;
- For each deviation of an operating limit parameter value, the date, time, and duration of the deviation, a brief explanation of the cause of the deviation and the corrective action taken, and whether the deviation occurred during a period of startup, shutdown, or malfunction;
- For each affected source, records of production rate on a process throughput basis (either feed rate to the process unit or discharge rate from the process unit);
- Records of any approved alternative monitoring methods or test procedures;



- Records of maintenance activities and inspections performed on control devices; and
- Current copies of your Startup, Shutdown, and Malfunction Plan and your Operation, Monitoring, and Maintenance Plan, including any revisions and records documenting conformance with those revisions.

**Table 6. Notifications and Reports**

	<u>You must submit a(an)...</u>	<u>By...</u>	<u>For the following conditions:</u>
<u>§§63.9(b) and 63.9812(b) and (c)</u>	<u>Initial Notification</u>	<u>August 14, 2003</u>	<u>Your affected kiln is an existing source, or</u> <u>Your affected kiln is a new source with a startup before April 16, 2003</u>
		<u>120 days after startup</u>	<u>Your affected kiln is a new source with a startup on or after April 16, 2003</u>
<u>§§63.9(e) and 63.9812(d)</u>	<u>Notification of Performance Test</u>	<u>60 days before the test</u>	<u>In all cases</u>
<u>§§63.9(h) and 63.9812(e)</u>	<u>Notification of Compliance Status</u>	<u>60 days after the initial performance test</u>	<u>In all cases</u>
<u>63.9812(f)</u>	<u>Notification of Alternative Fuel Use</u>	<u>48 hours after the declaration of natural gas curtailment or supply interruption</u>	<u>If you use an alternative fuel in your kiln</u>
<u>63.9812(g)</u>	<u>Request for Approval to Bypass a Kiln Control Device</u>	<u>The time required to receive approval prior to taking the control device offline</u>	<u>The kiln is a continuous kiln, and you must take the kiln control device offline to perform scheduled maintenance on the control device</u>
<u>63.9814(c) through (f)</u>	<u>Compliance Report</u>	<u>July 31 of each year following the compliance date</u>	<u>For each 6-month compliance period that ends on June 30 of the same year</u>
		<u>January 31 of each year following the compliance date</u>	<u>For each 6-month compliance period that ends on December 31 of the same year</u>
<u>63.10(d)(5)(i)</u>	<u>Report of Immediate Startup, Shutdown, or Malfunction</u>	<u>7 working days after the end of the event</u>	<u>You had a startup, shutdown, or malfunction that is not consistent with your Startup, Shutdown, and Malfunction Plan</u>
<u>63.9814(g)</u>	<u>Report of Alternative Fuel Use</u>	<u>10 working days after you stopped using the alternative fuel</u>	<u>If you use an alternative fuel in your kiln</u>

### III. CHROMIUM REFRACTORY PRODUCTS KILNS

§63.9824

**How does the Refractory Products Manufacturing NESHAP define chromium refractory products?**

The Refractory Products Manufacturing NESHAP defines chromium refractory products as any refractory products that contain at least 1 percent chromium by weight.

§63.9784

**What types of chromium refractory products sources are subject to the Refractory Products Manufacturing NESHAP?**

The Refractory Products Manufacturing NESHAP applies only to chromium refractory products kilns.

§§63.9792 and 63.9812 through 63.9816

**What are my basic compliance requirements?**

To comply with the Refractory Products Manufacturing NESHAP, for existing and new chromium refractory products kilns, you must do the following:

- Meet a work practice standard.
- Prepare and submit notifications and reports, and
- Keep records.

These requirements are described in the following sections.

**A. Emission Limits**

**What emission limits must I meet for chromium refractory products kilns?**

Chromium refractory products kilns are not subject to emission limits.

**B. Monitoring**

**What monitoring must I perform?**

Chromium refractory products kilns are not subject to monitoring requirements.

**C. Work Practices**

Item 3 of Table 3 of the rule

**What work practices must I perform?**

If you own or operate a new or existing chromium refractory products kiln, you must use natural gas or the equivalent as the kiln fuel.

**D. Reporting and Recordkeeping**

§§63.9812 and 63.9814

**What notifications and reports must I submit?**

Table 7 lists the notifications and reports that you must submit.

**Table 7. Notifications and Reports**

<u>You must submit a(an)...</u>	<u>By...</u>	<u>For the following conditions:</u>
<u>§§63.9(b) and 63.9812(b) and (c)</u>	<u>Initial Notification</u>	<u>August 14, 2003</u>
		<u>120 days after startup</u>
<u>§63.9812(f)</u>	<u>Notification of Alternative Fuel Use</u>	<u>48 hours after the declaration of natural gas curtailment or supply interruption</u>
<u>§63.9814(c) through (f)</u>	<u>Compliance Report</u>	<u>July 31 of each year following the compliance date</u>
		<u>January 31 of each year following the compliance date</u>
<u>§63.10(d)(5)(i)</u>	<u>Report of Immediate Startup, Shutdown, or Malfunction</u>	<u>7 working days after the end of the event</u>
<u>§63.9814(g)</u>	<u>Report of Alternative Fuel Use</u>	<u>10 working days after you stopped using the alternative fuel</u>

**Where can I find examples of these reports?**

Examples of these reports can be found at the following website:

<http://www.epa.gov/ttn/atw/gp/gppg.html#IMP>

**Can I submit notifications and reports electronically?**

Yes, you can submit all required notifications and reports electronically, and we encourage you to do so. Electronic reporting is easier and faster than hard copy reporting and eliminates the need to maintain paper copies. Guidance on filing reports electronically can be found at the following website:

<http://www.epa.gov/ttn/atw/certs/>

§63.9816

**What records must I keep?**

You must keep records of the following for a period of at least 5 years:

- Each notification and report that you are required to submit under the Refractory Products Manufacturing NESHAP;
- Records related to startups, shutdowns, and malfunctions;
- Records that document how you comply with the work practice standard; and
- Current copies of your Startup, Shutdown, and Malfunction Plan and your Operation, Monitoring, and Maintenance Plan, including any revisions and records documenting conformance with those revisions.