

**Questions and Answers for the  
Portland Cement Manufacturing Industry  
NESHAP  
40 CFR 63, Subpart LLL**

## What is the legal status of this guide?

The Office of Air Quality Planning and Standards (OAQPS) and the Office of Enforcement and Compliance Assistance (OECA) of the U. S. Environmental Protection Agency (EPA) have reviewed this document and approved it for publication.

When using this document, remember that it isn't legally binding and doesn't replace the final rule - "National Emission Standard for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry" (published in the Federal Register, 6/14/99, 64 FR 31898 ) or any State, local or tribal rules that may apply to your facility.

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This document includes only requirements from the final rule published in the *Federal Register*.

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# 1.0 Introduction

## Why should I use this document?

This document can help plant owners and operators (you) understand the Portland Cement Manufacturing Industry NESHAP (also known as Subpart LLL) by helping you determine **five** main things:

- C If the rule applies to your plant and process
- C What your reporting requirements are
- C What to test, monitor, record and report
- C How to comply with the rule
- C Dates by which you must meet requirements

## Is there anything I should know before using this document?

When using this document, remember that it **doesn't** replace the final rule and covers only requirements published on or before **6/14/99**. You should keep up with new requirements printed after this date 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](http://www.access.gpo.gov/su_docs/aces/aces140.html).

We've included a copy of the final rule in **Appendix A** (as published in the *Federal Register*, **6/14/99, 64 FR 31898**), so you can reference the rule while you're using this document.

## How do I get copies of this document?

This document does not exist as hard copy. You can access this document at EPA's Unified Air Toxics Website ([www.epa.gov/ttn/uatw](http://www.epa.gov/ttn/uatw)). Look under Rules and Implementation, or [www.epa.gov/ttn/uatw/pcem/pcempg.html](http://www.epa.gov/ttn/uatw/pcem/pcempg.html)

## 2.0 Does This Rule Apply To Me?

### What does this rule contain?

This rule contains standards to reduce Hazardous Air Pollutant (HAP) emissions from Portland Cement Manufacturing Industry plants.

- Ⓒ Standards include emission limits, operating limits, and opacity limits.
- Ⓒ There are 188 HAPs, which are listed in section 112(c) of the Clean Air Act Amendments of 1990 and at [www.epa.gov/ttn/uatw/188polls.txt](http://www.epa.gov/ttn/uatw/188polls.txt).
- Ⓒ A portland cement plant is any facility manufacturing portland cement.

This rule also contains the requirements for demonstrating initial and continuous compliance with each standard.

### Does this rule apply to me?

This rule applies if you own or operate a portland cement plant that is a major or area source of HAP.

- Ⓒ A major source of HAP is a facility that has the potential to emit 10 or more tons per year of any single HAP or 25 or more tons per year of all HAP. The rule defines a facility as “all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or their public right-of-way”.
- Ⓒ An area source of HAP is any facility that has the potential to emit HAP but is not a major source.
- Ⓒ This rule applies to each new, existing, or reconstructed portland cement plant.

### How do I determine whether I have an area or major source?

#### Short Answer

Some of the standards of this rule only apply to major sources, and others apply to both area and major sources. The potential to emit (PTE) for all HAPs emitted from all sources at the plant site must be included in determining whether it is a major source. The rule allows you to use certain test methods to determine your potential to emit hydrogen chloride (HCl) and organic HAP. The methods to use to determine applicability are shown in Table 1. Methods 320 and 321 are new



Fourier Transform Infrared (FTIR) spectroscopy test methods that were promulgated along with the final rule. If you want to establish that your source is an area source, the HCl data you present to your permitting authority must be obtained using either Methods 320 or 321. If you accept major source status, no up-front testing is required to establish that status.

**Table 1. Test Methods for Determining Applicability<sup>1</sup>**

<b>If you are testing...</b>	<b>For the following part of your plant...</b>	<b>And you want to ...</b>	<b>Then you must use method...</b>
HCl	Kilns, in-line kiln/raw mill and associated bypass stacks	Show that you have an area source	Method 320 or 321
HCl	Kilns, in-line kiln/raw mill and associated bypass stacks	Confirm major source status	Method 26, 26A, 320 or 321
Other organic HAPs	Kiln, in-line kilns/raw mills, material dryers	Confirm major or area source status	Method 320 or 18

<sup>1</sup> No testing is necessary if you choose to declare that you are a major source.

### Long Answer

Although emission standards were established for PM as a surrogate for semi-volatile and non-volatile HAP metals; THC as a surrogate for organic HAPs; and (D/F), each facility owner/operator must make a major source determination that requires an estimate of the facility's potential to emit all HAPs from all emission sources. All HAPs (organic, HCl, metals, etc.) from all emission points must be included in determining major source status. So, it is necessary to obtain data that will allow summation of all HAP emissions to compare to the 10/25 ton per year thresholds specified in section 112 of the Clean Air Act. Hydrogen chloride and organic HAP emissions such as (but not limited to) benzene, toluene, hexane, formaldehyde, hexane, naphthalene, phenol, styrene, and xylenes are the main HAPs from the kiln that may cause facilities to be major sources, but HAPs emitted from all sources at the plant site should be accounted for in making a major source determination.

HCl and organic HAPs emissions are the main HAPs from the kiln that will cause a source to be a major source, but HAPs emitted from all sources at the plant site, including metals emissions (discussed below) should be accounted for in making a major source determination. Accurate measurements of HCl in the kiln exhaust gases are necessary for major source determination. Method 26 may have positive biases attributable to chloride salts rather than to HCl; and negative biases due to condensation and/or removal of HCl on the filter and/or in the sampling probe. Therefore, the Agency has decided that Method 26 and 26A used without concurrent validation with Method 321 or Method 322 will only be acceptable for measuring HCl from non-hazardous waste kilns to confirm that the portland cement plant is a major source. Methods 26 or 26A may not be used to measure HCl in the determination that the source is an area source. Only the FTIR methods may be used in the measurement of HCl if the source claims it is not a major source.

Depending on site-specific circumstances, EPA Method 25 may not provide sufficient information to make an accurate summation of THC emissions. For example, a source's determination that its THC emissions based on Method 25 or 25A are less than 10 tons per year does not necessarily signify that it is an area source; the source may be a major source based on the 25 ton per year criterion when all other HAP emissions are summed with the THC. If the source's THC emissions are over 10 tons per year, the source may choose to conduct emissions tests using EPA Method 320 to make a determination of actual organic HAP emissions. However, in lieu of conducting Method 320 emissions tests, the source could use Method 25A, but the source would have to assume that the mass emission rate (as propane) from all combustion sources combined at the site is attributed to one organic HAP. This amount would then have to be compared to the 10 ton per year threshold for one HAP. To summarize, in addition to accounting for organic HAPs (either through Method 320 testing or assuming all THC is one organic HAP), accurate measurements of HCl in the kiln exhaust gases would be necessary for major source determination, as well as measurements of HAP metals, to obtain data that will allow summation of all HAP emissions to compare to the 10/25 ton per year thresholds.

If the source determines that it is not major because it does not meet either the 10/25 ton per year thresholds based on the summation of HCl and organic HAP emissions from all sources at the plant, the source would need to determine its HAP metals emissions from all sources at the facility as well, to make a determination that it is not a major source. The use of a "one percent HAP metals in PM" emission factor assumption will not provide definitive evidence that the source is an area source. However, the Agency would allow sources to forego the speciated HAP metals emission tests (through the use of Method 29) if it is assumed that 1 percent of the total PM emissions from all sources at the site are metal HAPs. This assumed amount of metal HAPs emissions would be added to the amount of HCl and organic HAPs emitted (determined as described above), and this total amount would then be compared to the 25 ton per year threshold for all HAPs combined. To reiterate, each facility owner/operator must make a major source determination that requires an estimate of the facility's potential to emit all HAPs from all emission sources, accounting for HCl, organic HAPs (either through speciation of organic HAPs or assuming all THC is one organic HAP), and metals (either through speciation of metal HAPs or assuming 1 percent of PM is metal HAP), to allow summation of all HAP emissions to compare to the 10/25 ton per year thresholds.

**How do I know if my plant is new, existing, or reconstructed?**

- C A portland cement plant is new if the construction or reconstruction commenced after March 24, 1998.
- C Any portland cement plant is existing if it is not new.
- C A portland cement plant is reconstructed if the components have been replaced such that:
  - The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and
  - It is technologically and economically feasible for the reconstructed source to meet relevant standard(s) established in this rule.

## How do I know if my kiln, in-line kiln/raw mill, or raw material dryer is a greenfield or a brownfield?

Your kiln, in-line kiln/raw mill, or raw material dryer is a greenfield if there were none in operation on or before March 24, 1998. If the source is not a greenfield, it is a brownfield.

## What parts of my plant does this rule cover?

Table 2 shows which parts of your plant this rule covers. More parts of the plant are covered if you own or operate a major source than if you own or operate an area source. Key components of the plant are described below, and you can also find the exact description of each part of the plant in the definitions section of the rule, 40 CFR 63.1341.

**Alkali bypass** - A duct between the feed end of the kiln and the preheater tower through which a portion of the kiln exit gas stream is withdrawn and quickly cooled by air or water to avoid excess buildup of alkali, chloride and/or sulfur on the raw feed. This may also be referred to as the “kiln exhaust gas bypass”.

**Bagging system** - The equipment which fills bags with portland cement.

**Clinker cooler** - The equipment into which clinker product leaving the kiln is placed to be cooled by air supplied by a forced draft or natural draft supply system.

**Conveying system** - A device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include but are not limited to the following: feeders, belt conveyors, bucket elevators, and pneumatic systems.

**Conveying system transfer point** - A point where any material, including but not limited to feed material, fuel, clinker or product, is transferred to or from a conveying system, or

between separate parts of a conveying system.

**Facility** - All contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

**Finish mill** - A roll crusher, ball and tube mill, or other size reduction equipment used to grind clinker to a fine powder. Gypsum and other materials may be added to and blended with clinker in a finish mill. The finish mill also includes the air separator associated with the finish mill.

**Greenfield kiln, in-line kiln/raw mill, or raw material dryer** - A kiln, in-line kiln/raw mill, or raw material dryer for which construction is commenced at a plant site (where no kilns and no in-line kiln/raw mills were in operation at any time prior to March 24, 1998) after March 24, 1998.

**In-line kiln/raw mill** - A system in a portland cement production process where a dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream..

**Kiln** - A device, including any associated preheater or precalciner devices that produces clinker by heating limestone and other materials for subsequent production of portland cement.

**New brownfield kiln, in-line kiln/raw mill, or raw material dryer** - A kiln, in-line kiln/raw mill or raw material dryer for which construction is commenced at a plant site (where kilns and/or in-line kiln/raw mills were in operation prior to March 24, 1998) after March 24, 1998.

**Portland cement plant** - Any facility manufacturing portland cement.

**Raw material dryer** - An impact dryer, drum dryer, paddle-equipped rapid dryer, air separator, or other equipment used to reduce the moisture content of feed materials.

**Raw mill** - A ball and tube mill, vertical roller mill or other size reduction equipment that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

This rule does **not** apply to kilns and in-line kiln/raw mills that burn hazardous waste and are

subject to and are regulated under 40 CFR Part 60, Subpart EEE, National Emission Standards for Hazardous Waste Combustors. However, hazardous waste kilns and in-line kiln/raw mills that temporarily or permanently stop burning hazardous waste may be subject to the portland cement rule. Cement kilns that combust municipal solid waste, medical waste or other materials (other than hazardous waste) are subject to the Portland Cement rule.

**Table 2. Parts of the Portland Cement Plant That the Rule Covers**

<b>If you own or operate a(n) ...</b>	<b>Then the rule covers these parts of the plant...</b>
Area or major source	<p>Kiln (except those subject to 40 CFR 63 EEE, the rule for hazardous waste combustors)</p> <p>In-line kiln/raw mill (except those subject to 40 CFR 63 EEE, the rule for hazardous waste combustors)</p> <p>Greenfield raw material dryer</p>
Major source	<p>Clinker cooler</p> <p>Raw mill</p> <p>Finish mill</p> <p>Raw material dryer</p> <p>Raw material, finished product, or storage bin</p> <p>Conveying system transfer point</p> <p>Bagging system</p> <p>Bulk loading or unloading system</p>
On-site nonmetallic mineral processing facility at a major portland cement plant	<p>All process units in the materials handling operations beginning with the raw material storage just before the raw mill.</p> <p>This includes the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill.</p> <p>It does not include the primary and secondary crushers or any other equipment of the on-site nonmetallic mineral processing plant that precede the raw material storage.</p>

## By when must I comply?

- C If you have a new or reconstructed source, you must comply according to the dates in Table 3.
- C If you have an existing source, you must comply with this subpart no later than June 14, 2002.

**Table 3. Compliance Dates for New and Reconstructed Sources**

<b>If you initiate startup...</b>	<b>Then you must comply...</b>
Before 6-14-99	No later than 6-14-99
After 6-14-99	Immediately upon startup of operations

## **3.0 What Are The Standards?**

### **What standards must I meet?**

This rule includes two types of standards--emission limits and operating limits. You must meet each standard that applies to you.

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

You must meet each emission limit in Table 4 that applies to you. The total hydrocarbon (THC) emission limits only apply to new greenfield kilns, in-line kiln/raw mills and raw material dryers.

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

You must meet each operating limit in Table 5 that applies to you. The operating limits are for kilns and in-line kiln/raw mills. The rule includes these operating limits to control dioxin and furan (D/F) emissions.

You must meet operating limits for the Particulate Matter Control Device (PMCD) inlet temperature and, if you have one, the alkali bypass inlet temperature. You must meet separate PMCD inlet temperature limits for when the raw mill is and is not operating.

If you are using carbon injection, you must also meet the carbon injection rate and either the carrier gas flow rate or pressure drop limits. There is a separate carbon injection operating limit for the alkali bypass.



**Table 4. Emission Limits**

For the following part of your plant....	You must meet the following emission limits..
All kilns and in-line kiln/raw mills at major sources (including alkali bypass)	0.15 kg particulate matter (PM) per Mg of feed (dry basis) (0.30 lb PM per ton, dry basis)  20 percent opacity
All kilns and in-line kiln/raw mills at major and area sources (including alkali bypass)	0.20 ng per dscm ( $8.7 \times 10^{-11}$ gr per dscf) dioxins and furans toxicity equivalent (TEQ), corrected to 7 percent oxygen
All kilns and in-line kiln/raw mills at major and area sources (including alkali bypass) <b>only if</b> the average of the performance test run average PMCD inlet temperatures is 204E C or less. [Corrected to 7 percent oxygen]	0.40 ng per dscm ( $1.7 \times 10^{-10}$ gr per dscf) dioxins and furans (TEQ), corrected to 7 percent oxygen
New greenfield kilns and in-line kiln/raw mills at major and area sources	50 ppmvd total hydrocarbons, as propane, corrected to 7 percent oxygen
New greenfield raw material dryers at major and area sources	
All clinker coolers at major sources	0.050 kg of PM per Mg of feed (dry basis) (0.10 lb PM per ton of feed, dry basis)  10 percent opacity
All raw mills and finish mills at major sources	10 percent opacity
All raw material dryers; raw material, clinker and finished product storage bins; conveying system transfer points; bagging systems; bulk loading and unloading systems at major sources	

**Table 5. Operating Limits for D/F Standards**

<b>For the following part of your portland cement plant...</b>	<b>You must establish separate operating limits for...</b>	<b>You must meet the following operating limits...</b>
All kilns and in-line kiln/raw mills at major and area sources (including alkali bypass)	PMCD inlet temperature for periods when the raw mill is operating	Maintain the rolling 3-hour average PMCD inlet temperature when the raw mill is operating less than or equal to the temperature established at the performance test when the raw mill was operating.
	PMCD inlet temperature for periods when the raw mill is <b>not</b> operating	Maintain the rolling 3-hour average PMCD inlet temperature when the raw mill is not operating less than or equal to the temperature established at the performance test when the raw mill was <b>not</b> operating.
	Alkali bypass (if there is one) inlet temperature	Maintain the rolling 3-hour average alkali bypass inlet temperature less than or equal to the temperature established at the performance test when the raw mill was operating.
All kilns and in-line kiln/raw mills at major sources (including alkali bypass) when using activated carbon	Kiln or in-line kiln/raw mill activated carbon injection rate	Maintain the rolling 3-hour average activated carbon injection rate for the kiln or in-line kiln/raw mill no less than the rate established at the performance test. Inject carbon of equivalent specifications to that used at performance test.
	Alkali bypass (if there is one) activated carbon injection rate	Maintain the rolling 3-hour average activated carbon injection rate for the alkali bypass no less than the rate established at the performance test. Inject carbon of equivalent specifications to that used at performance test.
	Carrier gas flow rate or carrier gas pressure drop	Maintain either the carrier gas flow rate or carrier gas pressure drop above the value established at performance test.

**If I comply with this rule, must I meet the NSPS Standards?**

If you are subject to this rule, you are exempt from any applicable New Source Performance Standard in 40 CFR 60, subpart F, except if...

<b>You have...</b>	<b>Then you will be subject to the NSPS...</b>	<b>For the following new or reconstructed parts of your plant...</b>
An area source	PM and opacity limits	Kilns, in-line kiln/raw mill
	Opacity limits	Greenfield raw material dryers

## **4.0 What Does The Rule Require?**

### **What are my requirements?**

The rule has requirements to ensure that you meet the standards. These requirements include:

- C Performance testing and performance specifications
- C Installation, calibration, operating, and maintenance requirements for process equipment and control devices
- C Monitoring
- C Recordkeeping
- C Reporting

### **What performance tests and performance specifications must I use?**

You must conduct the performance tests and performance specifications in Table 6.

**Table 6. Performance Tests and Performance Specifications**

For each...	You must test for the following pollutant(s)...	Using the following EPA method or Performance Specification
New and existing kiln, in-line kiln/raw mill, alkali bypass, if there is one, and clinker cooler (that is subject to a PM standard)	PM	<p>EPA Method 5</p> <p>You must conduct three runs of at least one hour and the minimum sample volume must be 0.85 dscm (30 dscf).</p> <p>You do not have to determine the PM in the impingers (back half) of the particulate sample train for the initial compliance test.</p> <p>In addition to the initial performance test, you must also conduct a Method 5 test every 5 years.</p>
New and existing kiln, in-line kiln/raw mill, alkali bypass, if there is one, and clinker cooler (that is subject to an opacity limit)	Opacity	<p>Performance Specification 1 of 40 CFR part 60, Appendix B for a continuous opacity monitoring system (COMS)</p> <p>You must test at the same time that you conduct the Method 5 test.</p>
New and existing kiln, in-line kiln/raw mill, and clinker cooler that has a fabric filter or ESP with multiple stacks <b>OR IF</b> the control device exhausts through a monovalent <b>OR IF</b> it is infeasible to use a COMS according to Performance Specification (PS) 1	Opacity	<p>EPA Method 9 visual opacity readings.</p> <p>You must conduct the Method 9 test at the same time that you conduct the Method 5 test.</p> <p>In addition to the initial performance test, you must also conduct a Method 9 test every 5 years.</p>
New and existing kiln, in-line kiln/raw mill, and alkali bypass, if there is one	D/F	<p>EPA Method 23</p> <p>Each run must last at least three hours and have a sample volume of at least 2.5 dscm (90dscf).</p> <p>In addition to the initial performance test, you must also conduct a Method 23 test every 30 months.</p>

**Table 6. Performance Tests and Performance Specifications**

For each...	You must test for the following pollutant(s)...	Using the following EPA method or Performance Specification
New greenfield kiln, in-line kiln/raw mill, and raw material dryer	THC	Performance Specification 8A of 40 CFR part 60, Appendix B for total hydrocarbons Continuous Emission Monitoring (CEM)  You must test for 3 hours.
New and existing raw and finish mill, raw material dryer, and materials handling processes (raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging, and bulk loading and unloading systems)	Opacity	EPA Method 9  You must conduct the Method 9 test at the same time that you conduct the Method 5 test.  The Method 9 test must last 3 hours (30, 6-minute averages). However, you may stop the Method 9 test after 1 hour if there are no individual readings greater than 10 percent opacity and there are no more than 3 readings of 10 percent.

**Are there any other requirements for conducting performance tests and performance specifications?**

You must meet the following requirements for performance tests or performance specifications.

- C You must conduct each run of each performance test under the conditions that exist when the portland cement plant is operating at the highest load or capacity level reasonably expected to occur.
- C Each time that a performance test is required for an in-line kiln/raw mill, you must conduct two tests: one while the raw mill is operating under normal conditions and one while the raw mill is not operating.
- C If there is an alkali bypass associated with a kiln or in-line kiln/raw mill, you must simultaneously test the main exhaust and alkali bypass. However, you do not have to test the alkali bypass exhaust when the raw mill is not operating.
- C You must repeat performance tests for opacity, PM, and D/F emissions from kilns and in-line kilns/raw mills within 90 days of a significant change in the raw material components or fuels fed to the kilns.

## **What is a significant change in the raw materials or fuels?**

Your State, local, or tribal permitting agency will decide whether a change in raw material components or fuels is significant enough to require a new performance test. These provisions are included in the rule to ensure that the emission limits will still be met if you change the material fed to the kiln or in-line kiln raw mill. Examples of a significant change would be a switch from burning coal to burning tires or the use of a new feed material.

Your permitting agency will include provisions in your permit for when you must notify them regarding a change in raw materials or fuels.

## **What are the requirements for installing, operating, and maintaining process equipment and control devices?**

Any performance tests that are conducted must be conducted under conditions that are representative of normal operations, as required in the General Provisions at §63.7(g)(1).

Table 7 shows the requirements that you must meet.

## **What monitoring must I do?**

You must conduct the monitoring in Table 8.

In some cases the rule gives you options for monitoring. For example, if you are using a fabric filter or an electrostatic precipitator with multiple stacks you may choose to monitor opacity using Method 9 or a COMS.

If you are using carbon injection for your kiln or in-line kiln/raw mill, you must meet the requirements for carbon injection in addition to the requirements for PM control device inlet temperature measurement.

The requirements for using PM Continuous Emission Monitoring Systems (CEMS) have been deferred. You currently are not required to install or use PM CEMS. The PM CEMS installation deadline will be established in a future rulemaking. Until the PM CEMS requirements are promulgated, the PM performance test is the only PM compliance provision. Although opacity is a separately enforceable limit, it fills the need for PM monitoring.

If you are a major source, you must conduct an annual inspection of the combustion system components of kilns and in-line kiln/raw mills, and record the results.

## **What are the requirements for an operation, maintenance and monitoring plan?**

You must prepare, submit, and implement a written operations and maintenance plan for the entire cement plant. You must include requirements for each part of the plant for which there is an emission limit or operating limit. Failure to comply with any provision of the operation and maintenance plan is a violation of the standard. The plan must include the following information:

- C Procedures for proper operation and maintenance of affected equipment and air pollution control devices needed to meet emission and operating limits.
- C Corrective actions you will take if you see visible emissions from the raw mill and finish mill sweep and air separator PMCDs during the required daily visual opacity observations.
- C Procedures for the yearly inspection of the combustion system components of each kiln and in-line kiln/raw mill at the facility.
- C Procedures for monthly 1-minute visible emissions monitoring of materials handling sources using Method 22, including the conduction of Method 9 tests if visible emissions are observed.

**Table 7. Installation, Operation, and Maintenance Requirements for Monitoring and Control Devices**

<b>For the following...</b>	<b>You must...</b>
COMS	Install, maintain, calibrate, and operate according to subpart A, General Provisions, of 40 CFR Part 60 and according to PS 1 of 40 CFR Part 60, Appendix B.  COMS must be installed at the outlet of the PM control device.
THC CEM	Install, maintain, calibrate, and operate according to subpart A, General Provisions, of 40 CFR Part 60 and according to PS 8A of 40 CFR Part 60, Appendix B.
Thermocouple or other monitoring device for measuring and recording exhaust gas temperature	Install at the inlet to or upstream of the PM control device.
Activated carbon injection	Install, operate, calibrate and maintain continuous activated carbon injection rate monitor and verify the calibration at least once every three months.  The rate measurement device must be accurate to within 1 percent of the rate being measured.  Install, operate, calibrate and maintain either a carrier gas flow rate monitor or a carrier gas pressure drop monitor.  Document carbon specifications.



**Table 8. Monitoring Requirements**

<b>For the following part of your plant...</b>	<b>For each...</b>	<b>You must monitor ...</b>
Kilns and in-line kiln/raw mills (including alkali bypass) at major and area sources	Combustion system	Combustion components by conducting an annual inspection and recording the results.
All kilns and in-line kiln raw mills at major sources (including alkali bypass)	COMS	Opacity using COMS at the outlet of the PM control device.
Clinker coolers at major sources		The COMS must sample and analyze opacity each 10-second period and record opacity for each 6-minute block period.
	Method 9 daily visual opacity observations	Opacity daily using Method 9 for at least 30-minutes while the kiln is at highest load or capacity level. You must record the average opacity for each six-minute period during the 30-minute test.
Kilns and in-line kiln raw mills at major and area sources (including alkali bypass)	Thermocouple or other temperature sensor	The temperature of the exhaust gases at the inlet to or upstream of the PM control device each minute. If there is an in-line kiln/raw mill, you must start a new monitoring period each time that you stop or start the raw mill.
Kilns and in-line kiln raw mills at major and area sources (including alkali bypass)	Activated carbon injection	The rate of activated carbon injection each minute. You must also monitor either the carrier gas flow rate or pressure drop each minute. If there is an in-line kiln/raw mill, you must start a new monitoring period each time that you stop or start the raw mill. The requirements for activated carbon are in addition to the requirements for temperature monitoring.
New greenfield kilns, in-line kiln raw mills, and new greenfield raw material dryers at major and area sources	Total hydrocarbon CEMS	Total hydrocarbons using CEMS. The CEMS must sample and analyze THC emissions each 15-minute period and record THC emissions for each 15-minute period. You must calculate the 30-day block average

**Table 8. Monitoring Requirements**

<b>For the following part of your plant...</b>	<b>For each...</b>	<b>You must monitor ...</b>
Kilns and in-line kiln raw mills at major sources (including alkali bypass)	CEMS for PM	These requirements are deferred unless and until the Administrator announces otherwise in the <i>Federal Register</i> .
Raw mills and finish mills at major sources	Method 22 visible emissions test	The opacity of the mill sweep and air separator PM control device daily for six minutes while the unit is operating at the highest load or capacity level reasonably expected to occur.  If you observe visible emissions during the Method 22 test, then you must initiate corrective action within one hour and conduct a Method 9 test for thirty minutes within 24 hours.
Raw material dryers; raw material, clinker, finished product storage bins; conveying system transfer points; bagging systems; and bulk loading and unloading systems at major sources	Method 22 visible emissions test	Visible emissions monthly using Method 22. If visible emissions are observed during any Method 22 test, you must conduct a 6-minute Method 9 test within one hour.  You may test semi-annually if you observe no visual emissions in 6 consecutive monthly tests for that source. You may test annually if you observe no visual emissions in the semi-annual test for that source.  If visible emissions are observed in semi-annual or annual tests, you must resume monthly testing until you meet the requirements again for semi-annual and annual testing.
Greenfield raw material dryers at area sources	Method 22 visible emissions test	Visible emissions monthly using Method 22. If visible emissions are observed during any Method 22 test, you must conduct a 6-minute Method 9 test within one hour.  You may test semi-annually if you observe no visual emissions in 6 consecutive monthly tests. You may test annually if you observe no visual emissions in the semi-annual test.  If visible emissions are observed in semi-annual or annual tests, you must resume monthly testing until you meet the requirements again for semi-annual and annual testing.

## **Can I change my required monitoring procedures?**

You can apply for alternate requirements to the monitoring procedure, except the requirement for using CEMS to monitor THC emissions. However, you may not alter monitoring until your requests are approved.

## **How do I apply for alternate monitoring requirements?**

An application must be submitted with or before the notification of performance test. The application must include the following three main items:

- Ⓒ Data or information justifying the request.
- Ⓒ Descriptions of the proposed alternative including:
  - Ⓐ Monitoring parameter you are requesting to alter
  - Ⓐ Description of the alternate monitoring technique
  - Ⓐ New averaging period for the limit
  - Ⓐ An explanation of limit calculations
- Ⓒ Data showing that the results of a new monitoring scheme will give at least equal assurance of compliance.

## **How will I know if the application is approved or denied?**

You will be notified of approval or denial within 90 days of receipt of the request, or within 60 days of the receipt of supplementary material, whichever is later.

You will be notified of a pending disapproval and the reasons for it. You will also have the opportunity to submit additional information before the final action, within a given time limit.

## **What records must I keep?**

You are required to keep the following specific records for all affected sources:

- Ⓒ Documentation supporting initial notifications and notifications of compliance status under §63.1355
- Ⓒ All records of applicability determinations with the supporting analyses
- Ⓒ If you have been given a waiver of record keeping or reporting requirements, you must keep information showing whether you are meeting the requirements for the waiver
- Ⓒ For each COMS, CEMS, thermocouple, and activated carbon injection system, you must keep the continuous monitoring system (CMS) records as listed in Table 9.

The CMS recordkeeping provisions are in the General Provisions at 40 CFR 63.10(c). These requirements apply to you if the Portland Cement rule applies to you. You must keep all records according to 40 CFR §63.10© and listed in Table 9.

### **How long must I keep records?**

You must keep all information, including reports and notifications, readily available for five years. Material from the most recent two years must be kept on-site. You may keep these records on paper, microfilm, computer, disk, magnetic tape, or microfiche.

**Table 9. Required Records for Continuous Monitoring Systems  
(as required under §63.10(c))**

<b>The records you must keep for continuous monitoring systems are...</b>	<b>The records must include...</b>	<b>You do not have to keep these records if...</b>
CMS measurements	All required CMS measurements, including monitoring data recorded during breakdowns and out-of-control periods	
CMS inoperative periods	Date and time for each period CMS was inoperative	The inoperative period was a zero (low-level) or high level check
CMS out of control periods	Date and time for each period CMS was out of control	
Identification of periods of excess emissions and parameter monitoring exceedances	Date and time of commencement and completion of each period of excess emissions and parameter monitoring exceedances for all periods, including startups, shutdowns, and malfunctions	
Malfunction reason(s)	The nature and cause of any malfunction (if known)	You use startup, shutdown and malfunction plan instead if the malfunction reason(s) is included
Corrective action(s)	The corrective action taken or preventive measures adopted after malfunction	You use startup, shutdown and malfunction plan instead if the corrective action(s) is included
Repair reason(s)	The nature of repairs or adjustments to the CMS that was inoperative or out of control	You use startup, shutdown and malfunction plan instead if the repair reason(s) is included
Total operating time	The total process operating time for the reporting period	
Quality control program procedures	The procedures that are part of a quality control program for a CMS under §63.8(d)	

## **What must I record for the quality control program procedures?**

The General Provisions at 40 CFR 63.8(d) require that you keep a written protocol for the following quality control operations for each CMS:

- Ⓒ Initial and subsequent calibration of the CMS
- Ⓒ Determination and adjustment of CMS calibration drift
- Ⓒ Preventive maintenance of CMS, including spare parts inventory
- Ⓒ Data recording, calculations, and reporting
- Ⓒ Accuracy audit procedures, including sampling and analysis methods
- Ⓒ Program for correcting a malfunctioning CMS

## **How long must I keep the quality control program procedures?**

The procedures must be kept for the life of the source, or until the source is no longer subject to these rule provisions. Superseded versions of the procedures must be kept readily available for review for 5 years. Where applicable, these procedures can be kept in the startup, shutdown, and malfunction plan to avoid duplicity.

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

You must submit notifications as indicated in Table 10. The citations in the table refer to the General Provisions at 40 CFR 63 Subpart A. The General Provisions contain additional requirements that apply to you. In lieu of the initial notification, you may submit a copy of your Title V permit application if it meets the following requirements:

- Ⓒ It contains the same information as required by §63.9 (b)
- Ⓒ The State has an approved operating permit program under part 70
- Ⓒ The State has delegation authority from the EPA

You must submit the permit application by the same date as that for initial notification.

**Table 10. Applicability and Timing of Notifications.**

<b>You must submit a(n) . . .</b>	<b>If you . . .</b>	<b>You must submit the notification. . .</b>
Initial notification [§63.9(b)(1-2)]	Are subject to this regulation and have an initial startup before 6-14-99	Not later than 10-12-99 (120 calendar days after 6-14-99)
	Are subject to this subpart and have an initial startup on or after 6-14-99	120 days after you become subject to this subpart
Notification of intent to construct or reconstruct [§63.9(b)(3-5)]	Plan to construct or reconstruct a new affected source that is a major or area source of HAPs	As soon as practicable before construction begins [§63.5(d)]
Notification of startup [§63.9(b)(3-5)]	Have to submit a notification of intent to construct or reconstruct	Delivered or postmarked within 15 calendar days after startup
Notification of intent to conduct performance test [§63.7(b)(1)]	Are required to conduct a performance test	At least 60 calendar days before the performance test is scheduled to begin so that the Administrator can review the site-specific test plan if requested and have an observer on site. [§63.7(b)]
Site-specific test plan [§63.7(c)(2)(I)]	Are asked by the Administrator to review the site-specific test plan before the performance test	At least 60 calendar days before the performance test is scheduled to begin with the notification of intent to conduct a performance test OR on a mutually agreed upon date. [§63.7(c)(2)(iv)]
Notification of rescheduling of performance test [§63.7(b)(2)]	You are unable to conduct the performance test on the date specified due to unforeseeable circumstances beyond your control	As soon as practicable and without delay prior to the schedule performance test date and specify the date when the performance test is rescheduled. [§63.7(b)(2)]
Notification of opacity and visible emissions observations [§63.9(f)]	Are required to conduct opacity or visible emissions observations and you are required to conduct a performance test	With your notification of performance test at least 60 calendar days before the opacity or visible emissions observation is scheduled to begin
	Are not required to conduct a performance test or if visibility or other conditions prevent you from conducting the opacity or visible emission observations concurrently with the performance test	Deliver or postmark the notification that you intend to conduct the opacity or visible emission observations at least 30 calendar days before they are scheduled to begin. [§63.9(f)]

**Table 10. Applicability and Timing of Notifications.**

<b>You must submit a(n) . . .</b>	<b>If you . . .</b>	<b>You must submit the notification. . .</b>
Notification for sources with CMS [§63.8(e)(3)(I)]	Intend to conduct a CMS performance evaluation and the date that you intend to conduct it	At least 60 calendar days before the evaluation is scheduled to begin. You must submit it with the performance test notification if you are conducting a performance test. [§63.8(e)(3)(iii)]
2 (or 3 if the Administrator requests 3) copies of the written results of the COMS performance evaluation	Are required to install a COMS or are using a COMS to determine opacity compliance during a performance test	At least 15 calendar days before you conduct the performance test. [§63.8(e)(5); §63.8(e)(2)(ii); §63.10(e)(2)(ii)]
Notification of compliance status including the performance test results report [§63.9(h)]	Have conducted a performance test under this subpart	Before the close of business on the 60 <sup>th</sup> calendar day following the completion of the performance test. [§63.10(d)(2)]
Notification of compliance status including performance evaluation results report [§63.9(h)]	Have conducted a CMS performance evaluation	With the performance test report or before the close of business on the 60 <sup>th</sup> calendar day following the completion of the performance evaluation if there is no performance test. [§63.7(e)(2)]
Notification of compliance status including opacity and visible emission observation report [§63.9(h)]	Have conducted an opacity or visible emissions observation and you conducted it at the same time that the performance test was conducted	With the performance test results before the close of business on the 60 <sup>th</sup> calendar day following the completion of the performance test. [§63.10(d)(3)]
	Were not required to conduct a performance test and conducted an opacity or visible emissions observation or if visibility or other conditions prevented you from conducting the opacity or visible emission observations at the same time that the performance test was conducted	Before the close of business on the 30 <sup>th</sup> calendar day following the completion of the opacity or visible emission observation. [§63.10(d)(3)]
Notification of actual emissions data or other corrected information [§63.9(h)]	Submitted estimates or preliminary information in the application for approval of construction or reconstruction in place of the actual emissions data or control efficiencies	With the first notification of compliance status that you submit [§63.9(h)(6)]



**Table 10. Applicability and Timing of Notifications.**

<b>You must submit a(n) . . .</b>	<b>If you . . .</b>	<b>You must submit the notification. . .</b>
Notification that emissions have exceeded 70% of the standard [§63.8(f)(6)(iii)]	Use an alternative to relative accuracy testing under §63.8(f)(6), but CEMS data show that emissions have exceeded 70% of the standard for any averaging period	No later than 10 calendar days after the exceedance occurred

You must also submit the reports described in Table 11. If a State, local, or tribal agency requires a report with the same information as any of these reports, a copy of the report for the agency may be sent instead.

**Table 11. Required Reports**

<b>You must submit...</b>	<b>If you..</b>	<b>You must submit the report...</b>
Results of performance tests	Conduct a performance test	With the Notification of Compliance Status
Results of opacity tests	Conduct an opacity observation EXCEPT for: C daily observations of raw mill or finish mill sweep and air separator PMCDs  C opacity for material handling systems	With the Notification of Compliance Status
Progress reports	Receive an extension of compliance	According to the schedule in the compliance extension
Startup, shutdown, or malfunction report	Have a startup, shutdown or malfunction and the event was handled according to the startup, shutdown or malfunction plan,	Submit with summary report  You must state the event and that you followed the plan in the semi-annual report.
	Have a startup, shutdown or malfunction and the event was not handled according to the plan	Submit by phone or fax within 2 working days  Submit a letter certified by a responsible official explaining the event, including Why plan wasn't followed
Written report of CMS performance evaluation	Conduct a continuous monitoring system performance evaluation	With performance test results
Written report of COMSs performance evaluation	Conduct a COMS performance evaluation	With performance test results
Summary report	Are subject to this rule	Semi-annually, which is delivered or postmarked 30 days following the end of each calendar half.
Excess emissions and monitoring system performance report	If downtime for any continuous monitoring system is 10 percent or more of the total operating time for the reporting period	Quarterly so that it is postmarked or delivered 30 days following the end of each calendar quarter, until you are in compliance with the standards for at least 4 consecutive quarterly reporting periods and the Administrator has approved your request to return to semiannual reporting.

## What must I include in my summary report?

The summary report must be titled, “Summary Report-Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance,” and contain the information in Table 12.

**Table 12. Summary Report**

<b>You must include the following administrative information</b>	<b>You must include the following monitoring information, in addition to that required in §63.10(e)(3)(vi)</b>
Company name and address of affected source	All failures to maintain activated carbon injection rate and carrier gas flow rate or pressure drop (if applicable).
Identification of each HAP at the source	All failures to calibrate thermocouples and other temperature sensors.
The date of the latest CMS certification or audit	All exceedances of maximum control device inlet gas temperature limits
The total operating time of the affected source in the reporting period	All failures to comply with the operation and maintenance plan
The monitoring equipment manufacturer(s) and model number(s)	Results of combustion system component inspections in the reporting period
Emission and operating parameter limits	
Brief description of the process units	
Beginning and ending dates of the reporting period	

## 5.0 How Do I Comply With The Rule?

### What must I do to comply with this rule?

You must demonstrate initial and continuous compliance with each emission limit, operating limit, and opacity limit that applies to you.

Initial compliance includes all the requirements to show compliance when you first become subject to the rule. The rule includes performance testing, performance evaluations, and other methods for demonstrating initial compliance. You must also meet notification, recordkeeping, and reporting requirements to complete your initial compliance requirements.

Continuous compliance includes monitoring, recordkeeping, reporting, and other requirements to show that you are complying with the rule as long as it applies to you.

### How do I show initial compliance?

- C You must submit a written operations and maintenance plan for all affected sources.
- C You must demonstrate initial compliance with each emission limit that applies to you according to Table 13.
- C You must also perform the same compliance demonstrations every 2.5 years after the initial compliance demonstration for D/F limits and every 5 years after the initial demonstration for PM and opacity limits. You must perform the initial compliance demonstrations again for all limits when a significant change in feed or fuel occurs within 90 days of the change. Each time that you perform the compliance demonstration, you must meet the requirements in Table 13.

**Table 13. Initial Compliance with Emission Limits**

For each	For the following emission limit..	You must demonstrate initial compliance by...
Kiln and in-line kiln/raw mill at a major source (including alkali bypass)	0.15 kg of PM per Mg of feed (dry basis)	<p>Maintaining less than or equal to 0.15 kg of PM per Mg of feed (dry basis), determined by conducting Method 5 testing, determining dry feed rate by a suitable method, and calculating emissions according to Equation 1 of the rule.</p> <p>If there is an alkali bypass associated with the kiln or in-line kiln/raw mill, you must calculate emissions according to Equation 2 of the rule.</p> <p>You must conduct three runs of at least one hour and the minimum sample volume must be 0.85 dscm (30 dscf). You must use the average of the three runs to determine initial compliance.</p>
	20 percent opacity	<p>Ensuring that the maximum 6-minute average opacity during each of the three Method 5 test runs, measured using a COMS, is no greater than 20 percent.</p> <p>The maximum 6-minute average opacity for each of the three test runs must be no greater than 20 percent.</p>
	20 percent opacity <b>IF</b> you are using a fabric filter or an electrostatic precipitator with multiple stacks; <b>OR</b> the control device exhausts through a monovent; <b>OR</b> you cannot install a COMS according to PS-1 of 40 CFR Part 60, Appendix B.	<p>Maintaining the maximum 6-minute average opacity during each of the three Method 5 test runs, measured using Method 9, at no greater than 20 percent.</p> <p>The maximum 6-minute average opacity for each of the three test runs must be no greater than 20 percent.</p>

**Table 13. Initial Compliance with Emission Limits**

For each	For the following emission limit...	You must demonstrate initial compliance by...
Kilns and in-line kiln/raw mill at a major or area source (including alkali bypass)	0.20 ng dioxins and furans (TEQ) per dscm; <b>OR</b> 0.40 ng dioxins and furans TEQ per dscm when the average of the performance test run average PM control device inlet temperature is 204 <sup>0</sup> C or less (corrected to 7 percent oxygen)	Maintaining the arithmetic average of the D/F concentrations measured for three runs using Method 23, no greater than 0.20 ng D/F per dscm.  Each run must last at least three hours and have a sample volume of at least 2.5 dscm (90dscf). You must conduct a performance test every 30 months.
New greenfield kiln, in-line kiln/raw mill, and raw material dryer at a major or area source	50 ppmvd THC, as propane, corrected to 7 percent oxygen	Maintaining the average THC concentration (calculated from one-minute averages from CEMS) during the three hour performance test at less than or equal to 50 ppmvd, as propane, corrected to 7 percent oxygen
Clinker cooler at a major source	0.050 kg of PM per Mg of feed (dry basis)	Maintaining less than or equal to 0.050 kg of PM per Mg of feed (dry basis), determined by conducting Method 5 testing, determining dry feed rate by a suitable method, and calculating emissions according to Equation 1 of the rule.  You must conduct three runs of at least one hour and the minimum sample volume must be 0.85 dscm (30 dscf). You must use the average of the three runs to determine initial compliance.
Clinker cooler at a major source	10 percent opacity	Ensuring that the maximum 6-minute average opacity during each of the three Method 5 test runs, measured using a COMS, is no greater than 10 percent.  The maximum 6-minute average opacity for each of the three test runs must be no greater than 10 percent.

**Table 13. Initial Compliance with Emission Limits**

For each	For the following emission limit...	You must demonstrate initial compliance by...
Raw mill; finish mill; raw material dryer; raw material, clinker and finished product storage bins; conveying system transfer point; bagging system; and bulk loading and unloading system	10 percent opacity	<p>Maintaining the maximum six-minute average opacity, measured using Method 9, at no greater than 10 percent</p> <p>The maximum 6-minute average opacity for each of the three test runs must be no greater than 10 percent.</p> <p>The Method 9 performance test must last 3 hours (30, 6-minute averages). However, you may stop the Method 9 test after 1 hour if there are no individual readings greater than 10 percent opacity and there are no more than 3 readings equal to 10 percent.</p>

## **At what time must I begin to comply?**

You must begin monitoring and recording no later than 12:00 a.m. on the initial compliance date (June 14, 1999 or immediately upon startup for new sources and June 14, 2002 for existing sources) and determine compliance according to the averaging periods in the rule. The rule requires that your source be in compliance with the standards beginning at 12:01 a.m. on the compliance date. However, you must have enough accurate data to determine whether you are in compliance. Therefore, the standards become effective as a practical matter at the first time that you have enough monitoring data to determine compliance. For example, compliance with the three-hour rolling average temperature operating limits does not become effective as a practical matter until 3:01 am on the compliance date. Use this same approach for all continuous monitoring systems that the rule requires, including CEMS.

## **How do I calculate rolling averages during intermittent operations?**

You may not use data from any time when operating parameters are not recorded for any reason (e.g., source shutdown) to calculate rolling averages. For example, suppose your portland cement plant was shut down for yearly maintenance for three weeks. To calculate a three-hour rolling average temperature, you would add the first one-hour average value recorded for the parameter for the first hour of renewed operations to the last two one-hour averages before the shutdown. This approach inhibits intentional interruption of the monitoring system to avoid unwanted parameter values.

You must use this approach to calculate averages for all CMS, including CEMS. There is an exception for instances when the in-line kiln/raw mill operating status is changed from off to on or on to off. The calculation of the three-hour rolling average temperature must begin anew in these instances.

## **How do I show continuous compliance with the rule?**

- You must comply with the provisions of the written operations and maintenance plan for all affected sources.
- You must demonstrate continuous compliance with each emission limit that applies to you according to Table 14.
- C You must demonstrate continuous compliance with each operating limit that applies to you according to Table 15. If you are not in compliance with the operating limit, you are in violation of the D/F emission limit.



**Table 14. Continuous Compliance with Emission Limits**

For each...	For the following emission limit...	You must demonstrate continuous compliance by...
Kiln and in-line kiln/raw mill and alkali bypass, if there is one, at a major source	0.15 kg of PM per MG of feed (dry basis)	Continuously monitoring PM using CEMS and maintaining 0.15 kg of PM per Mg of feed (dry basis). The continuous compliance requirements do not apply until the EPA has promulgated the PM CEMS standard.
Kiln, in-line kiln/raw mill and alkali bypass, if there is one, at a major source	20 percent opacity	Continuously monitoring using COMS.
Kiln, in-line kiln/raw mill and alkali bypass, if applicable, at a major source	20 percent opacity <b>IF</b> you are using a fabric filter or an electrostatic precipitator with multiple stacks; <b>OR</b> the control device exhausts through a monovent; <b>OR</b> you cannot install a COMS according to PS-1 of 40 CFR Part 60, Appendix B	Performing daily visual opacity observations of each stack using Method 9 for at least 30 minutes each day at the plant's highest capacity level of the day.  Maintaining the average opacity for each six minute block less than or equal to 20 percent.
Kiln, in-line kiln/raw mill and alkali bypass, if there is one, for an area or major source	0.20 ng dioxins and furans Toxicity Equivalent (TEQ) per dscm; <b>OR</b> 0.40 ng dioxins and furans TEQ per dscm when the average of the performance test run average PMCD inlet temperature is 204 <sup>o</sup> C or less (corrected to 7 percent oxygen)	Continuously monitoring and recording PMCD inlet gas temperatures.  Maintaining 3-hour rolling average PMCD inlet temperatures less than or equal to the temperature limits established at performance test.  You must not exceed the PMCD maximum inlet temperature when the raw mill is operating and when it is not operating. If there is an alkali bypass you must also not exceed a separate PMCD inlet temperature.  If carbon injection is used, continuously monitoring and recording rate of activated carbon injection. You must also continuously monitor either carrier gas flow rate or carrier gas pressure drop. Maintaining 3-hour rolling average injection rates no less than that of the performance test. Maintaining 3-hour rolling averages of either flow rate or pressure drop no lower than the minimum value established at performance test.
Green field raw material dryer, kiln, or in-line kiln/raw mill at area and major sources	50 ppmvd THC, as propane, corrected to 7 percent oxygen	Monitoring THC using a CEMS and maintaining the 30-day average THC concentration in exhaust gases less than or equal to 50 ppmvd (reported as propane corrected to 7 percent oxygen).

**Table 14. Continuous Compliance with Emission Limits**

For each...	For the following emission limit...	You must demonstrate continuous compliance by...
Clinker cooler at a major source	10 percent opacity	Continuously monitoring opacity using COMS at the outlet of the clinker cooler PM control device and maintaining 6-minute block averages of opacity at less than or equal to 10 percent.
Clinker cooler at a major source	10 percent opacity <b>IF</b> you are using a fabric filter or an electrostatic precipitator with multiple stacks; <b>OR</b> the control device exhausts through a monovent; <b>OR</b> you cannot install a COMS according to PS-1 of 40 CFR Part 60, Appendix B	Performing daily visual opacity observations of each stack using Method 9 for at least 30 minutes each day at the plant’s highest capacity level of the day. Six minute block averages of opacity must be less than or equal to 10 percent.
Raw mill and finish mill at major sources	10 percent opacity	Maintaining no daily visible emissions, measured for six minutes using Method 22, from the mill sweep and air separator PMCD. You must conduct the Method 22 test when the unit is operating at the highest load or capacity reasonably expected to occur during the day.  If a visible emission is observed during the Method 22 test, you must initiate and complete the corrective action in your operation and maintenance plan. You must also conduct Method 9 testing within 24 hours.
Raw material dryer; raw material, clinker and finished product storage bin; conveying system transfer point; bagging system; and bulk loading and unloading system at major sources	10 percent opacity	Conducting test Method 22 according to the operations and maintenance plan.

**Table 15. Continuous Compliance with Operating Limits**

For each...	For the following operating limit...	You must demonstrate continuous compliance by...
Kiln, in-line kiln/raw mill, and alkali bypass, if there is one, at area and major sources	Maintaining the three-hour rolling average PMCD inlet temperatures at no greater than the temperature established at performance test.	<p>Continuously monitoring and recording PMCD inlet gas temperatures.</p> <p>Maintaining the 3-hour rolling average temperatures of gas at inlet to the kiln PMCD and alkali bypass PMCD less than or equal to that established at performance test.</p> <p>Using and maintaining documentation that the activated carbon is of equal or greater quality than that used at performance test.</p>
Kiln, in-line kiln/raw mill, and alkali bypass, if there is one, at area and major sources	Maintain the activated carbon injection rate at no less than the rate established at performance test.	<p>Continuously monitoring and recording activated carbon injection rate.</p> <p>Maintaining the 3-hour rolling average carbon injection rate greater than or equal to the rate limit established at performance test.</p> <p>Using and maintaining documentation that the activated carbon is of equal or greater quality than that used at performance test.</p>
Kiln, in-line kiln/raw mill, and alkali bypass, if there is one, at area and major sources	Maintain either the carrier gas flow rate or the carrier gas pressure drop no lower than the value established at performance test.	<p>Continuously monitoring and recording either carrier gas flow rate or carrier gas pressure drop.</p> <p>Maintaining the 3-hour rolling average carrier gas flow rate or pressure drop greater than or equal to the limit established at performance test.</p> <p>Using and maintaining documentation that the activated carbon is of equal or greater quality than that used at performance test.</p>

## 6.0 Other Requirements and Information

### Who administers this regulation?

Your State or local agency for air pollution control, **or** your EPA Regional Office, will administer the regulation. If your plant is in Indian Country, then your Tribe **or** your EPA Regional Office will administer the regulation. You may be under the jurisdiction of one or more agencies depending on whether they've been granted delegation of this rule.

Not all States have been granted delegation, or, if they have been granted delegation, they may not have been delegated all portions of the rule. Our EPA Regional Offices may also have retained certain rights even after delegation (for example, you may continue to have dual reporting requirements). You should check with your EPA Regional Office or State for the latest information.

### Do I need a title V permit?

You'll need a title V permit if you're subject to the Portland Cement Manufacturing NESHAP.

### How do I change my permit to include this rule?

If you've already been issued a final title V permit and you have three or more years left on your permit, your permitting authority will reopen your permit within 18 months of the publication date of the final rule or final amendments. If you have less than three years left on your permit, update your permit during your renewal period. If your permit hasn't been issued in final form, update your application or draft permit.

To summarize, your options are as follows:

<b>As of 6-14-99, if you have . . .</b>	<b>Then . . .</b>
Not been issued a final title V permit	Update your permit application or draft permit
Less than three years left on your permit	Update your title V permit during renewal
Three or more years left on your permit	Your permitting authority will reopen your permit within 18 months after the publication date of the final rule or final amendments

A similar schedule would be followed for incorporating into your title V permit any promulgated

changes to the Portland Cement Manufacturing NESHAP, including final amendments concerning PM CEMS.

Title V permitting rules may change after the publication of this document. Keep abreast of any changes by checking the *Federal Register* or visit our title V websites at [www.epa.gov/ttn/oarpg/t5main.html](http://www.epa.gov/ttn/oarpg/t5main.html) and [www.epa.gov/oar/oaqps/permits/](http://www.epa.gov/oar/oaqps/permits/).

## **What parts of the General Provisions apply?**

The General Provisions were published in the *Federal Register* on March 16, 1994 (Volume 59, page 12408) and apply to all NESHAPs, including this Portland Cement Manufacturing NESHAP.

This means that when you became subject to this rule, you also became subject to the General Provisions. Some sections in this rule over-ride the General Provisions. You'll find that Table 1 of the final rule shows you which sections of the General Provisions apply to this rule and which don't. General Provision requirements, except for notification, recordkeeping, and reporting, are not addressed in this document.

## 7.0 Getting Additional Help

### Where do I go for help?

You can go to a lot of places for help, including all of the following:

- Ⓒ Your State, local or tribal agency for air pollution control
- Ⓒ Your State's Small Business Assistance Program (SBAP)
- Ⓒ Local, regional, or national trade associations
- Ⓒ Your EPA Regional Office

State and local contacts can change frequently. To get the most current contact information, go to the STAPPA/ALAPCO website ([www.4cleanair.org](http://www.4cleanair.org)) and then the membership directory. The directory will give you the latest contacts for major air programs (that is, emission standards for toxic air pollutants, ozone, etc.) at the State and local level.

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*If you have questions about this rule, you should contact your State, local or Tribal agency before calling the EPA. Their rules may be more stringent than Federal requirements.*

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**Trade Associations** representing the portland cement industry are listed below. Trade associations sometimes have rule information for their members.

Trade Association	Telephone #	Address
American Portland Cement Alliance	(202) 408-9494	Andy O'Hare 1225 I Street, NW, Suite 300 Washington, DC 20005
Portland Cement Association	(847) 966-6200	Ann Dougherty 5420 Old Orchard Rd. Skokie, IL 60077-1083

Many States have a *Small Business Assistance Program*. If you're a small business and don't know who your SBAP is, you can call EPA's Control Technology Center Hotline [at (919) 541-0800 or visit EPA's SBAP at [www.epa.gov/oar/oaqps/sbap](http://www.epa.gov/oar/oaqps/sbap) for help].

Contact numbers for *EPA's Regional Air Division Offices* may also change frequently. To obtain the most up-to-date information, you may want to visit your Regional Office's website. **Table 16** lists each of our Regional Offices, the Air Toxics Division Phone and Address, and the Regions internet home page. Make all written inquiries to the attention of "Portland Cement NESHAP Contact."

## Can I get more information on the Web?

You can get a wealth of information on the World Wide Web (WWW). Some of the more popular ways to get information on this rule include:

- C EPA's **Unified Air Toxics Website** ([www.epa.gov/ttn/uatw](http://www.epa.gov/ttn/uatw))  
You can download copies of preambles, regulations, background information documents, policy memos, and other guidance materials here. All rule pages can be found under the Rules and Implementation page. Portland cement can be found under [www.epa.gov/ttn/uatw/pcem/pcem.html](http://www.epa.gov/ttn/uatw/pcem/pcem.html).
- C EPA's **OAR Policy and Guidance Information** ([www.epa.gov/ttn/oarpg/t3main.html](http://www.epa.gov/ttn/oarpg/t3main.html))  
This is another link to regulatory information.
- C EPA's **Applicability Determination Index (ADI)** (<http://es.epa.gov/oeca/eptdd/adi.html>)  
EPA's Office of Enforcement and Compliance Assurance (OECA) posts memos dealing with applicability and compliance at this site.
- C **OECA Compliance Assistance Centers** (<http://www.epa.gov/epahome/business.htm>)  
You can find information on compliance with federal regulations at this site. There are centers for printing, automotive services and repair, agriculture, and metal finishing, chemical production, printed wiring board manufacture, transportation, and local governments.
- C **STAPPA/ALAPCO home page** (<http://www.4cleanair.org>)  
STAPPA/ALAPCO is the State and Territorial Air Pollution Program Administrators (STAPPA) and The Association of Local Air Pollution Control Officials (ALAPCO) organization. STAPPA/ALAPCO has members representing each State and local agency for air pollution control.

You can get air pollution information at this site, including a document entitled “*Communicating Air Quality: A Compendium of Resources.*” It lists educational materials on air pollution that State and local agencies have created.



**Table 16. Air Division Contact For Each EPA Regional Office**

<b>EPA Region</b>	<b>States Covered</b>	<b>Division Phone and Address</b>	<b>Phone Home Page</b>
Region I	CT, ME, MA, NH, RI & VT	Janet Bowen Office of Ecosystem Protection CAP JFK Federal Building Boston, MA 02203	(617) 565-3595 <a href="http://www.epa.gov/region1">www.epa.gov/region1</a>
Region II	NJ, NY, Puerto Rico & Virgin Islands	Kenneth Eng Air Compliance Branch Chief 290 Broadway, 21st Floor New York, NY 10007-1866	(212) 637-4000 <a href="http://www.epa.gov/region2">www.epa.gov/region2</a>
Region III	DE, MD, PA, VA, WV & DC	Bernard Turlinski Air Enforcement Branch Chief 841 Chestnut Building 3AT10 Philadelphia, PA 19107	(215) 566-2110 <a href="http://www.epa.gov/region3">www.epa.gov/region3</a>
Region IV	AL, FL, GA, KY, MS, NC, SC & TN	Lee Page Air Enforcement Branch Atlanta Federal Center 61 Forsyth Street Atlanta, GA 30303-3104	(404) 562-9131 <a href="http://www.epa.gov/region4">www.epa.gov/region4</a>
Region V	IL, IN, MI, WI, MN & OH	George T. Czerniak, Jr. Air Enforcement Branch Chief 5AE-26 77 West Jackson St. Chicago, IL 60604	(312) 353-2088 <a href="http://www.epa.gov/region5">www.epa.gov/region5</a>
Region VI	AR, LA, NM, OK & TX	John R. Hepola Air Enforcement Branch Chief 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733	(214) 665-7200 <a href="http://www.epa.gov/region6">www.epa.gov/region6</a>
Region VII	IA, KS, MO & NE	Don Toensing, Chief Air Permitting Compliance Branch 726 Minnesota Avenue Kansas City, KS 66101	(913) 551-7446 <a href="http://www.epa.gov/region7">www.epa.gov/region7</a>
Region VIII	CO, MT, ND, SD, UT & WY	Douglas M. Skie Air and Technical Operations Branch 999 18th Street, 1 Denver Place, Suite 500 Denver, CO 80202-2466	(303) 312-6432 <a href="http://www.epa.gov/region8">www.epa.gov/region8</a>
Region IX	AZ, CA, HI, NV, American Samoa, & Guam	Barbara Gross Air Compliance Branch Chief 75 Hawthorne Street San Francisco, CA 94105	(415) 744-1138 <a href="http://www.epa.gov/region9">www.epa.gov/region9</a>

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<b>EPA Region</b>	<b>States Covered</b>	<b>Division Phone and Address</b>	<b>Phone Home Page</b>
Region X	AK, ID, WA & OR	Anita Frankel Air and Radiation Branch Chief AT-092 1200 Sixth Avenue Seattle, WA 98101-1128	(206) 553-1757 <a href="http://www.epa.gov/region10">www.epa.gov/region10</a>