SMALL ENTITY COMPLIANCE GUIDE
FOR
BRICK AND STRUCTURAL CLAY PRODUCTS MANUFACTURING

National Emission Standards for Hazardous Air Pollutants for
Brick and Structural Clay Products Manufacturing

40 CFR Part 63, Subpart JJJJJ

NOTICE

This guide was prepared pursuant to section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. 104-121 as amended by Pub. L. Number 110-28. THIS DOCUMENT IS NOT INTENDED, NOR CAN IT BE RELIED UPON, TO CREATE ANY RIGHTS ENFORCEABLE BY ANY PARTY IN LITIGATION WITH THE UNITED STATES. The statements in this document are intended solely as guidance to aid you in complying with the NESHAP for Brick and Structural Clay Products Manufacturing, 40 CFR Part 63, Subpart JJJJJ.

The full text of the rule and additional information are available online at
https://www3.epa.gov/ttn/atw/brick/brickpg.html

ABOUT THIS GUIDE

The U.S. Environmental Protection Agency (EPA) published this document as a compliance guide for small entities, as required by the Small Business Regulatory Enforcement Fairness Act (SBREFA). The guide is designed to help small businesses determine if and how they are affected by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Brick and Structural Clay Products (BSCP) Manufacturing, commonly, and throughout this document, referred to as the "BSCP NESHAP."

Who should use this guide?

If you own or operate a tunnel kiln or periodic kiln at a brick and structural clay product manufacturing facility, then you should use this guide. This guide will help you determine if and how your kilns are affected by the BSCP NESHAP.

How do I use this guide?

This guide is organized into four major sections:

- **SECTION 1: INTRODUCTION** presents the rule that was published on October 26, 2015 that affects owners and operators of tunnel or periodic kilns. The section presents an overview of the rule, identifies the types of affected sources, and presents the current status of the rule.
- **SECTION 2: SUMMARY OF THE BSCP NESHAP** summarizes the requirements of the BSCP NESHAP.
- **SECTION 3: HOW TO COMPLY** helps you determine your subcategory, which is based on your tunnel kiln's design type and size, and whether it is new or existing. The section also describes the five tasks you must complete to demonstrate compliance with the BSCP NESHAP.
- **SECTION 4: OTHER INFORMATION** presents the estimated benefits and costs of the BSCP NESHAP, provides compliance assistance resources, and tells you where to obtain additional information on the rule.

This guide is intended to summarize rule requirements and provide some examples and clarifications where the EPA anticipates that small entities will have questions about rule requirements. Throughout this guide, citations to the actual regulatory text are referenced for both the BSCP NESHAP and the applicable overarching requirements from the General Provisions. You can use the Electronic Code of Federal Regulations (e-CFR) to find the appropriate sections regulatory language cited in this guide.

- To access the e-CFR regulatory text for the BSCP NESHAP or for the General Provisions go to: www.ecfr.gov.

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1.0 INTRODUCTION

1.1 Background on Brick and Structural Clay Products Manufacturing Rule

Section 112(d) of the Clean Air Act (CAA) requires the EPA to set emissions standards for hazardous air pollutants (HAP) emitted by major stationary sources based on the performance of the maximum achievable control technology (MACT). The EPA issued the NESHAP for BSCP Manufacturing on May 16, 2003 (68 FR 26690). The NESHAP was subsequently challenged, and the U.S. Court of Appeals for the D.C. Circuit vacated and remanded the standards on March 13, 2007. To address the vacatur and remand of the original NESHAP, the EPA redeveloped the rule and published final BSCP standards in the Federal Register on October 26, 2015 (80 FR 65470). The rule reduces emissions of toxic air pollutants from:

- Large tunnel kilns at major sources of air toxics ("major sources")
- Small tunnel kilns at major sources of air toxics
- Periodic kilns at major sources of air toxics

1.2 Rule Petitions

On December 22, 2015, a petition for review of the final BSCP NESHAP was filed by the Sierra Club and Natural Resources Defense Council (NRDC) with the U.S. Court of Appeals for the D.C. Circuit. In their petition, the Sierra Club and NRDC objected to the following:

- The health-based emission limit for acid gases.
- The alternative emission limits for mercury (Hg) and non-Hg HAP metals.
- The use of upper prediction limits to account for emissions variability in setting standards.
- The establishment of work practice standards for emissions of dioxins/furans, emissions of HAP during periods of startup and shutdown, and emissions of HAP from periodic kilns.
- The EPA's failure to set standards for hydrogen cyanide.

On December 23, 2015, a petition for review of the final BSCP NESHAP was also filed with the court by the Brick Industry Association (BIA). In their petition, BIA objected to the following:

- The EPA's standard for non-Hg HAP metals.
- The EPA's method for accounting for variability in the Hg standard.
- The level of the health-based emission limit for acid gases.

On the same date, the BIA also filed a petition for reconsideration of the final BSCP NESHAP. In support of its petition, BIA claimed that:

- The EPA failed to give notice that it would change its method for calculating the existing source MACT floor for emissions of non-Hg HAP metals.
- The EPA incorrectly used tests conducted below capacity in its revised MACT floor approach.

- The EPA failed to give notice that it would include a variability calculation in its determination of the MACT floor for Hg or how it would make this variability calculation.
- It was impracticable for the petitioner to request a variability factor for non-Hg metal emission limits for the final rule.
- The EPA failed to give notice that it would include opacity as a compliance method for the non-Hg HAP metals standard.

In a letter responding to the BIA's petition for reconsideration, the EPA stated that it had carefully reviewed the claims raised in the BIA's petition and concluded for reasons outlined in the letter that the petitioner had not demonstrated that reconsideration was warranted pursuant to CAA section 307(d)(7)(B). Consequently, the EPA stated it was denying the reconsideration petition at that time. On May 18, 2016, the EPA published a formal notice of action denying the petition for reconsideration of the BSCP NESHAP. (81 FR 31234). However, the EPA did note that the agency intends to evaluate any additional opacity information provided by the petitioner and determine whether any further action is warranted.

In response to the EPA's denial of its petition for reconsideration, the BIA filed a petition for review on June 9, 2016 challenging the EPA's reconsideration decision. On July 20, 2016, the BIA filed a motion to consolidate its petition challenging reconsideration with the pending challenges to the rule. The court has granted the motion and consolidated the cases. Litigation of the Sierra Club/NRDC and BIA petitions was pending as of the date of this document.

2.0 SUMMARY OF THE BSCP NESHAP

2.1 Who Is Affected by this Rule?

The BSCP NESHAP covers tunnel and periodic kilns located at major source BSCP facilities.

2.2 Am I Subject to this Rule?

You are subject to the BSCP NESHAP if you own or operate a tunnel or periodic kiln that is located at, or is part of, a BSCP facility that is classified as a major source of hazardous air pollutants (HAP).

A "major source" HAP facility emits 10 or more tpy of any single air toxic or 25 or more tpy of any combination of air toxics. The list of air toxics is available on the EPA website at: https://www3.epa.gov/airtoxics/orig189.html. Any facilities that are not major sources of HAP are classified as area sources.

Reminder: You must estimate the emissions from all HAP-emitting processes at your facility to determine whether your source is major or area.

The following major source units are NOT subject to the BSCP NESHAP:

- Kilns that are used exclusively for setting glazes on previously fired products
- Raw material processing and handling
- Dryers

- Sources regulated under the Clay Ceramics Manufacturing NESHAP or the Refractories Manufacturing NESHAP

2.3 Summary of Requirements

The EPA is regulating kilns at major source BSCP manufacturing facilities based on three components: the type of kiln, whether the unit is new or existing, and the size of the unit. Kilns are designed differently depending on whether they are intended to operate continuously or by batch and by the size of the kiln. The final rule sets different requirements for tunnel and periodic kilns as follows:

- Large tunnel kilns are continuous kilns that have a design capacity equal to or greater than 10 tons per hour (tph) of fired product.
- Small tunnel kilns are continuous kilns that have a design capacity less than 10 tph of fired product.
- Periodic kilns are batch firing kilns.
- Existing units commenced construction on or before December 18, 2014.
- New units commenced construction after December 18, 2014.
- Reconstructed units are defined by the replacement of components of an affected source to such an extent 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.

Tables 1 and 2 below present the emission limits and work practice standards for the final BSCP NESHAP.

Table 1: Summary of BSCP NESHAP Emission Limits and Work Practice Requirements

Subcategory		Summary of Requirement
Existing large tunnel kilns	i.e., each existing tunnel kiln with a design capacity equal to or greater than 10 tph of fired product	• Numeric emission limits for Hg, and either particulate matter (PM) or non-Hg HAP metals[a] • To minimize dioxin/furan emissions, (1) maintain and inspect the burners and associated combustion controls; and (2) tune the specific burner type to optimize combustion • To minimize HAP emissions during periods of startup, (1) establish the startup push rate for each kiln, the minimum air pollution control device (APCD) inlet temperature for each APCD, and temperature profile for each kiln without an APCD and include them in your first compliance report; (2) after initial charging of the kiln with loaded kiln cars, remain at or below the startup push rate for the kiln until the kiln exhaust reaches the minimum APCD inlet temperature for a kiln with an APCD or until the kiln temperature profile is attained for a kiln with no APCD; and (3) if your kiln has an APCD, begin venting the exhaust from the kiln through the APCD by the time the kiln exhaust temperature reaches the minimum APCD inlet temperature. • To minimize HAP emissions during periods of shutdown, (1) do not push loaded kiln cars into the kiln once the kiln exhaust temperature falls below the minimum APCD inlet temperature if the kiln is controlled by an APCD or when the kiln temperature profile is no longer maintained for an uncontrolled kiln; and (2) if your kiln has an APCD, continue to vent the exhaust from the kiln through the APCD until the kiln exhaust temperature falls below the minimum inlet temperature for the APCD. • To minimize HAP emissions during periods of routine control device maintenance, (1) develop and use a temperature profile for each kiln; (2) develop and follow maintenance procedures for each kiln that specify the frequency of inspection and maintenance of temperature monitoring devices and controls that regulate air-to-fuel ratios; and (3) develop and maintain records for each kiln.
Existing small tunnel kilns	i.e., each existing tunnel kiln with a design capacity less than 10 tph of fired product	
New large tunnel kilns	i.e., each new or reconstructed tunnel kiln with a design capacity equal to or greater than 10 tph of fired product	
New small tunnel kilns	i.e., each new or reconstructed tunnel kiln with a design capacity less than 10 tph of fired product	
All tunnel kilns	i.e., collection of all tunnel kilns at facility	• Health-based emission limit for hydrogen chloride (HCl)-equivalent[b]

Subcategory		Summary of Requirement
Periodic kilns	i.e., each batch firing kiln	• Develop and use a designed firing time and temperature cycle for each periodic kiln • Label each periodic kiln with the maximum load (in tons) of product that can be fired in the kiln during a single firing cycle • Document the total tonnage placed in the kiln for each load to ensure that it is not greater than the maximum load • Develop and implement maintenance procedures for each kiln that specify the frequency of inspection and maintenance of temperature monitoring devices, controls that regulate air-to-fuel ratios, and controls that regulate firing cycles • Develop and maintain records for each periodic kiln, including logs to document the proper operation and maintenance procedures of the periodic kilns

[a] Non-Hg HAP metals means the sum of the following metallic hazardous air pollutants: antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel and selenium.

[b] Estimated by determining facility-wide HCl, hydrogen fluoride (HF), and chlorine (Cl_2) emissions, calculating the HCl-equivalent emissions for HF and Cl_2 using reference concentration (RfC) values, and adding the HCl emissions to that total.

Table 2: Required Emission Limits for New and Existing Tunnel Kilns

Subcategory	HCl-Equivalent[a]	Hg[b]	PM OR Non-Hg HAP Metals[a,b]
Existing large tunnel kilns	--	4.1E-05 lb/ton of fired product **OR** 7.7 µg/dscm **OR** 5.5E-04 lb/hr	PM: 0.036 lb/ton of fired product **OR** PM: 0.0029 gr/dscf **OR** Metals: 0.0057 lb/hr
Existing small tunnel kilns	--	3.3E-04 lb/ton of fired product **OR** 91 µg/dscm **OR** 0.0019 lb/hr	PM: 0.37 lb/ton of fired product **OR** PM: 0.0021 gr/dscf **OR** Metals: 0.11 lb/hr
New large tunnel kilns	--	2.8E-05 lb/ton of fired product **OR** 6.2 µg/dscm **OR** 3.4E-04 lb/hr	PM: 0.018 lb/ton of fired product **OR** PM: 0.0014 gr/dscf **OR** Metals: 0.0057 lb/hr
New small tunnel kilns	--	3.3E-04 lb/ton of fired product **OR** 91 µg/dscm **OR** 0.0019 lb/hr	PM: 0.030 lb/ton of fired product **OR** PM: 0.0021 gr/dscf **OR** Metals: 0.11 lb/hr
All tunnel kilns	57 lb/hr	--	--

[a] lb/hr = pounds per hour

[b] Concentrations at 17 percent oxygen. lb/ton = pounds per ton; µg/dscm = micrograms per dry standard cubic meter; gr/dscf = grains per dry standard cubic foot.

The tasks to be completed to demonstrate compliance with these requirements are outlined in Section 3 of this compliance guide.

2.4 When Do I Need to Comply?

Appendix A provides a timeline illustrating when the tasks to demonstrate compliance must be completed. Appendix B provides sample notification forms. Notification forms are not required to be submitted electronically.

Initial Notification of Applicability: (§63.9(b)(2))

- If startup was before December 28, 2015, then no later than June 22, 2016, (§63.8480(b))
- If startup is on or after December 28, 2015, then within 120 days after becoming subject to the subpart (§63.8480(b))

Compliance Dates (§63.8395)

- New sources constructed after December 18, 2014 but before December 28, 2015 must comply by December 28, 2015.
- New sources constructed after December 28, 2015 must comply upon startup.
- Existing sources must comply by December 26, 2018.
- Existing and new area sources that become major sources must comply upon startup as a major source.

Initial Notification of Compliance Status: (§63.8480(b) and (c))

You may be required to submit any of the below notification forms. See Section 3.3 for more details.

- If your source must conduct a performance test, a Notification of Intent must be submitted at least 60 days before the performance test is scheduled to begin. (§63.8480(b)).

- If your source is required to conduct initial compliance demonstrations that includes a performance test, you must submit a Notification of Compliance Status form including all performance test results, before the close of business on the 60th day following the completion of all performance tests. (§63.8480(b)).

- If your source is required to conduct initial compliance demonstrations that does not include a performance test (i.e., compliance demonstrations for the work practice standards), you must submit a Notification of Compliance Status form before the close of business on the 30th day following the completion of the initial compliance demonstrations. (§63.8480(b)).

- If you request to use the routine control device maintenance alternative standard (according to §63.8420(d)), you must submit your request at least 120 days before the applicable compliance date.

Table 3 below summarizes the dates for conducting initial compliance demonstrations and submitting initial notifications and compliance reports.

Table 3: Summary of Dates for Demonstrating Compliance

Subcategory	Submit Initial Notification of Applicability by…	Submit Initial Notification of Compliance Status by…	Demonstrate Compliance with Standards by…	Prepare Compliance Report by…
Existing sources	6/22/2016	Within 60 days following completion of all performance tests and 30 days following completion of all other compliance demonstrations	6/24/2019	1st report submitted by 1/31/2020. Semiannual reports submitted January 31 or July 31 (first date after semiannual reporting period[a]).
New sources constructed after December 28, 2015	Within 120 days after becoming subject to subpart	Within 60 days following completion of all performance tests and 30 days following completion of all other compliance demonstrations	Within 180 days after startup	1st report submitted by January 31 or July 31 that is at least 1 year after the compliance date. Semiannual reports submitted January 31 or July 31 (first date after semiannual reporting period[a]).
New sources constructed after December 18, 2014 but before December 28, 2015	6/22/2016	Within 60 days following completion of all performance tests and 30 days following completion of all other compliance demonstrations	6/25/2016	1st report submitted by 1/31/2017. Semiannual reports submitted January 31 or July 31 (first date after semiannual reporting period[a]).

[a] The semiannual reporting periods are from January 1 through June 30 and from July 1 through December 31.

3.0 HOW TO COMPLY

Your requirements depend on the subcategory of your kiln. To determine your requirements, take the following steps:

1. Determine your subcategory using the three questions in Section 3.1.

2. Based on your subcategory, determine which tasks you must complete in Sections 3.3 through 3.7.

3.1 How Do I Determine my Subcategory?

To determine your subcategory, you must answer three questions:

- What design type is my kiln—tunnel or periodic?
- Is my kiln a new source or an existing source?
- What size is my tunnel kiln—large or small?

3.1.1 Design Type Subcategory

The BSCP NESHAP establishes separate standards for tunnel kilns and periodic kilns. During normal operating conditions, tunnel kilns are subject to emission limits, while periodic kilns are subject to work practice standards. Tunnel kilns include any continuous kiln that is used to fire BSCP, while periodic kilns include any batch-firing kiln.

3.1.2 New vs. Existing Sources

You have an existing source if you commenced construction or reconstruction of the kiln on or before December 18, 2014. You have commenced construction or reconstruction if you have a contractual obligation to undertake and complete construction or have begun the act of construction on the kiln.

You have a new source if you commenced construction or reconstruction of the kiln after December 18, 2014 and you met the applicability criteria at the time you commenced construction.

3.1.3 Unit Size

Tunnel kiln size is expressed in terms of design capacity and is measured in tons per hour of fired product, or tph.

Tunnel kiln design capacity is defined as the maximum amount of brick that a kiln is designed to produce in one year divided by the number of hours in a year, taking into account the void space in the brick, the push rate for the kiln, and the stacking pattern, if applicable. If a kiln is modified to increase the capacity, the design capacity is considered to be the capacity following modifications. The permitted design capacity would dictate whether the kiln is small or large. The operator should work with the permitting authority to ascertain the proper design capacity, as the design capacity of a kiln may fluctuate depending on the product or other operational considerations.

3.2 Which Tasks Must I Complete?

Based on your subcategory (i.e., design type, new/existing, size considerations), determine which tasks you must complete. The task requirements are summarized below.

Task 1: Submit initial notifications

Task 2: Comply with work practice standards

Task 3: Meet emission limits

Task 4: Keep records

Task 5: Submit other notifications and reports

3.3 Task 1: Submit Initial Notifications

Owners and operators of a BSCP tunnel or periodic kiln must submit an initial Notification of Applicability and an initial Notification of Compliance Status.

See sample notification forms in Appendix B.

Notification of Applicability. Submit a Notification of Applicability according to the following schedule:

Existing Sources:	No later than June 22, 2016
New Sources Constructed After December 28, 2015:	Within 120 days after becoming subject to subpart
New Sources Constructed After December 18, 2014 But Before December 28, 2015:	No later than June 22, 2016

The Notification of Applicability must contain the following information:

- The name and address of the owner or operator.
- The address (i.e., physical location) of the affected source.
- An identification of the relevant standard, or other requirement, that is the basis of the notification (i.e., 40 CFR part 63 subpart JJJJJ) and the source's compliance date.
- Anticipated compliance date with the standard.
- A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted.
- A statement of whether the affected source is a major source or an area source.

Notification of Compliance Status. Submit the Notification of Compliance Status according to the following schedule:

Existing Sources: Within 60 days of completing the performance test and within 30 days of completing all other initial compliance demonstrations.

New Sources: Within 60 days of completing the performance test and within 30 days of completing all other initial compliance demonstrations.

The Notification of Compliance Status is your certification that your facility is in compliance with all the requirements of the rule.

You must keep a copy of each notification and report that you submit to comply with this rule, and all documentation supporting any initial Notification of Applicability or Notification of Compliance Status that you submitted.

Table 4 outlines the certifications and other requirements included in the Notification of Compliance Status, as applicable, which must be signed by a responsible official to certify its accuracy.

Table 4: Notification of Compliance Status: Certifications and Other Requirements

If…	…then you must include the following in the Notification of Compliance Status…
You are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to subpart JJJJJ	The methods that were used to determine compliance.
	The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted.
	The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods.
	The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard.
	A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method)
	A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standards or other requirements.
	The operating limit parameter values established for each affected source with supporting documentation and a description of the procedure used to establish the values.
	For each APCD that includes a fabric filter, if a bag leak detection system is used, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems specified in §63.8450(e).

3.4 Task 2: Comply with Work Practice Standards

3.4.1 Startup/Shutdown Procedures

Startup of a tunnel kiln involves starting up the burners based on a set procedure to raise the temperature of the kiln to the proper operational temperature for manufacturing bricks or structural clay products.

During startup, existing, new, or reconstructed tunnel kilns must:

- Establish the startup push rate for each kiln, the minimum air pollution control device (APCD) inlet temperature for each APCD, and temperature profile for each kiln without an APCD and include them in the first compliance report.
- After initial charging of the kiln with loaded kiln cars, remain at or below the startup push rate for the kiln until the kiln exhaust reaches the minimum APCD inlet temperature

for a kiln with an APCD or until the kiln temperature profile is attained for a kiln with no APCD.

- If controlled with an APCD, begin venting the exhaust from the kiln through the APCD by the time the kiln exhaust temperature reaches the minimum APCD inlet temperature.

Shutdown of a tunnel kiln is the process of cooling the kiln from the proper operational temperature by stopping the burners based on a set procedure.

During shutdown, existing, new, or reconstructed tunnel kilns must:

- Not push loaded kiln cars into the kiln once the kiln exhaust temperature falls below the minimum APCD inlet temperature if the kiln is controlled by an APCD or when the kiln temperature profile is no longer maintained for an uncontrolled kiln.
- If the kiln is controlled with an APCD, continue to vent the exhaust from the kiln through the APCD until the kiln exhaust temperature falls below the minimum inlet temperature for the APCD.

3.4.2 Conduct Burner Inspection and Tune-ups

Existing, new, or reconstructed tunnel kilns are required to minimize dioxin/furan emissions by maintaining and inspecting the burners and associated combustion controls (as applicable) and tuning the specific burner type to optimize combustion.

You must complete the initial tune-up by the following dates:

Existing Sources:	No later than June 24, 2019
New Sources Constructed After December 28, 2015:	Within 180 days after startup
New Sources Constructed After December 18, 2014 But Before December 28, 2015:	No later than June 25, 2016

Each tune-up must be done no later than 36 months after the previous tune-up. Table 5 below summarizes the burner inspection and tune-up requirements in the final BSCP NESHAP.

Table 5: Burner Inspection and Tune-up Requirements

Requirement	Description
Inspect the burners and associated combustion controls, as applicable	Clean or replace any burner components as necessary
Tune the specific burner type to optimize combustion	Should be consistent with the manufacturer's specifications, if available
Maintain records of burner tune-ups used to demonstrate compliance with the dioxin/furan work practice standard	
Submit a report of the most recent tune-up with the compliance report.	

3.4.3 Periodic Kilns

Existing, new, or reconstructed periodic kilns must minimize HAP emissions according to the following requirements:

- Develop and use a designed firing time and temperature cycle for each periodic kiln; either program the time and temperature cycle into the kiln or track each step on a log sheet.
- Label each periodic kiln with the maximum load (in tons) of product that can be fired in the kiln during a single firing cycle.
- For each firing load, document the total tonnage of product placed in the kiln to ensure that it is not greater than the maximum load.
- Develop and follow maintenance procedures for each kiln that, at a minimum, specify the frequency of inspection and maintenance of temperature monitoring devices, controls that regulate air-to-fuel ratios, and controls that regulate firing cycles.
- Develop and maintain records for each periodic kiln, including logs to document the proper operation and maintenance procedures of the periodic kilns.

3.4.4 Routine Control Device Maintenance Alternative

If a facility owns or operates an affected tunnel kiln that is subject to the emission limits in subpart JJJJJ and must perform routine maintenance on the control device for that kiln, the facility may bypass the kiln control device and continue operating the kiln subject to an alternative standard upon approval by the Administrator. However, the facility must satisfy the following conditions:

- Request to use the routine control device maintenance alternative standard from the Administrator no later than 120 days before the compliance date. The request must justify the need for the routine maintenance on the control device and the time required to accomplish the maintenance activities, describe the maintenance activities and the frequency of the maintenance activities, explain why the maintenance cannot be accomplished during kiln shutdowns, provide information stating whether the continued

operation of the affected source will result in fewer emissions than shutting the source down while the maintenance is performed, describe how the facility plans to comply with the general duty to minimize emissions during the maintenance, and provide any other documentation required by the Administrator.

- The routine control device maintenance must not exceed 4 percent of the annual operating uptime for each kiln.
- The request for the routine control device maintenance alternative standard, if approved by the Administrator, must be incorporated by reference in, and attached to, the affected source's title V permit.
- The facility must minimize HAP emissions during the period when the kiln is operating and the control device is offline by complying with the following work practice standards:
    - Develop and use a temperature profile for each kiln.
    - Develop and follow maintenance procedures for each kiln that, at a minimum, specify the frequency of inspection and maintenance of temperature monitoring devices and controls that regulate air-to-fuel ratios.
    - Develop and maintain records for each kiln.
- The facility must minimize the time period during which the kiln is operating and the control device is offline.

3.5 Task 3: Meet Emission Limits

3.5.1 What, When, and How Must I Monitor or Test?

Your specific emission limits depend on the subcategory that applies to your tunnel kiln (see Table 2 of this guide). Section 3.1 discusses how to determine what subcategory applies to your tunnel kiln.

For each affected source that is subject to the emission limits, you must demonstrate compliance by conducting an initial or ongoing performance test according to the following schedule.

Initial compliance:

- ***Existing units***: By December 26, 2018 + 180 days = June 24, 2019 (§63.8435)
- ***New units constructed after December 28, 2015***: 180 days after startup (§63.8435)
- ***New units constructed after December 18, 2014 but before December 28, 2015***: By December 28, 2015 + 180 days = June 25, 2016 (§63.8435)

Continuous compliance:

- Before renewing your 40 CFR part 70 operating permit or at least every 5 years following the initial performance test.

For each affected source that is subject to the emission limits, you must:

- At all times, operate and maintain the affected source in a manner consistent with good air pollution control practice for minimizing emissions.
- Develop and follow a site-specific test plan.
- Develop and follow a site-specific operation, maintenance, and monitoring (OM&M) plan.
- Conduct initial and ongoing performance tests for:
    - Hg, using EPA Method 29[1]
    - Hydrogen fluoride (HF), hydrogen chloride (HCl), and chlorine (Cl_2), using EPA Method 26A[2] or EPA Method 320[3]
    - Either particulate matter (PM) or non-Hg HAP metals, using EPA Method 5 (PM only) or EPA Method 29 (PM or non-Hg HAP metals)
- Establish operating limits during the performance test.
- Monitor and collect data to demonstrate compliance with the operating limits.
- Conduct performance evaluations of your continuous monitoring system(s).

To determine compliance with the production-based PM and Hg emission limits (see Table 2 above), you must calculate your mass emissions per unit of production for each test run using Equation 1 below:

[1] ASTM D6784–02 (Reapproved 2008) may be used as an alternative to Method 29 (portion for Hg only).
[2] EPA Method 26 may be as an alternative to EPA Method 26A when no acid PM (e.g., HF or HCl dissolved in water droplets emitted by sources controlled by a wet scrubber) is present. ASTM D6735–01 (Reapproved 2009) may be used as an alternative to EPA Methods 26 and 26A.
[3] ASTM D6348–03 (Reapproved 2010) may be used as an alternative to Method 320 if the test plan preparation and implementation in Annexes A1–A8 are mandatory and the %R in Annex A5 is determined for each target analyte.

$$MP = \frac{ER}{P} \qquad \text{Eq. 1}$$

Where:

MP = mass per unit of production, pounds of pollutant per ton of fired product (lb/ton fired product)

ER = mass emission rate of pollutant (PM or Hg) during each performance test run, pounds per hour (lb/hr)

P = production rate during each performance test run, tons of fired product per hour (tph of fired product).

To determine compliance with the health-based emission limit for acid gas HAP for BSCP manufacturing facilities (see Table 2 above), you must calculate the HCl-equivalent emissions for HF, HCl, and Cl_2 for each tunnel kiln at your facility using Equation 2 below:

$$E_i = E_{HCl} + \left[E_{HF} \left(\frac{RfC_{HCl}}{RfC_{HF}} \right) \right] + \left[E_{Cl_2} \left(\frac{RfC_{HCl}}{RfC_{Cl_2}} \right) \right] \qquad \text{Eq. 2}$$

Where:

E_i = HCl-equivalent emissions for kiln i, lb/hr

E_{HCl} = emissions of HCl, lb/hr

E_{HF} = emissions of HF, lb/hr

E_{Cl2} = emissions of Cl_2, lb/hr

RfC_{HCl} = reference concentration for HCl, 20 micrograms per cubic meter ($\mu g/m^3$)

RfC_{HF} = reference concentration for HF, 14 $\mu g/m^3$

RfC_{Cl2} = reference concentration for Cl_2, 0.15 $\mu g/m^3$

If you have multiple tunnel kilns at your facility, sum the HCl-equivalent values for all tunnel kilns at the facility. Once you have an HCl-equivalent value for the entire facility, compare this value to the health-based emission limit (57 lb/hr) to determine compliance with the limit.

The concern has been raised that, where Cl_2 results are non-detect, using the full detection limit for Cl_2 in the calculation of HCl-equivalent values may cause issues for some BSCP facilities in meeting the limit. There are certain practices which will help in preventing this from becoming an issue. When using EPA Method 26 or 26A, you should request from your sampler that the analytical laboratory meet or exceed the analytical instrumental detection limit of 0.1 microgram per milliliter (µg/ml) as specified in EPA Method 26A. Over the period of a 1-hour test run, at a source with a moisture content of approximately 15 percent, a detection limit of 0.1 µg/ml would yield a total non-detect mass of chloride of approximately 50 µg, assuming that no dilution is performed on the sample by the laboratory.

You should also request that the laboratory limit diluting the samples as much as practicable, as dilution raises the effective detection limit. It is advisable for the laboratory initially to run the sample at full strength to evaluate the matrix and determine if dilution is necessary, and then apply the minimum dilution necessary. In cases where chloride is not detected in a sample fraction, the method detection limit should be used as the non-detect value. All detected results above the method detection limit should be reported and used in the calculation. These procedures will limit the effect of non-detect results for Cl_2 in the calculation of HCl-equivalent values.

Finally, note that some types of BSCP process units do not have emission limits, including:

- Periodic kilns, which are subject to work practice standards
- Kilns that are used exclusively for setting glazes on previously fired products, which are not subject to the subpart
- Raw material processing and handling, which are not subject to the subpart
- Dryers, which are not subject to the subpart

Section 3.5.1 does not apply for these types of process units.

3.5.2 Develop and Follow a Site-specific Test Plan (§63.7(c))

You must develop a site-specific test plan before conducting a required performance test. You do not have to submit the site-specific test plan to the EPA Administrator or delegated authority unless it is requested. You must keep a copy of the site-specific test plan as a record.

The site-specific test plan must include:

- Test program summary
- Test schedule
- Data quality objectives (pretest expectations of precisions, accuracy, and completeness)
- Internal and external quality assurance program.

3.5.3 Develop and Follow a Site-specific Operation, Maintenance, and Monitoring Plan (§63.8425)

If your kiln is subject to the emission limits in subpart JJJJJ, then you must prepare, implement, and revise as necessary a site-specific OM&M plan. The OM&M plan must be available for inspection by the delegated authority upon request. Your OM&M plan must include, as a minimum, the following information:

- Each process and APCD to be monitored, the type of monitoring device that will be used, and the operating parameters that will be monitored.

- A monitoring schedule that specifies the frequency that the parameter values will be determined and recorded.

- The limits for each parameter that represent continuous compliance with the emission limitations. The limits must be based on values of the monitored parameters recorded during performance tests.
- Procedures for the proper operation and routine and long-term maintenance of each APCD, including a maintenance and inspection schedule that is consistent with the manufacturer's recommendations.
- Procedures for installing the continuous monitoring system (CMS) sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last APCD).
- Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction system.
- Continuous monitoring system performance evaluation procedures and acceptance criteria (e.g., calibrations).
- Procedures for the proper operation and maintenance of monitoring equipment.
- Continuous monitoring system data quality assurance procedures, including the performance evaluation plan and program of corrective action.
- Continuous monitoring system recordkeeping and reporting procedures.
- Procedures for responding to operating parameter deviations.
- Procedures for keeping records to document compliance.
- If you operate an affected kiln and you plan to take the kiln control device out of service for routine maintenance:
    - Procedures for minimize HAP emissions
    - Procedures for minimizing the duration of any period of routing maintenance

You must install, operate, and maintain each CMS and conduct a performance evaluation of each CMS according to your OM&M plan.

Changes to the operating limits in your OM&M plan require a new performance test, but not changes to the inspection and maintenance procedures.

3.5.4 Conduct Initial and Ongoing Performance Tests

You must conduct an initial performance test to demonstrate initial compliance and to establish operating parameters that you will follow until the next performance test. Conduct subsequent performance tests before renewing your 40 CFR part 70 operating permit or at least every 5 years.

Conduct all performance tests according to the requirements and methods in Table 4 of subpart JJJJJ, which specifies test methods for selecting sampling ports, determining stack gas velocity and flow rate, determining oxygen content, measuring moisture content, and measuring emissions. You must demonstrate initial compliance and establish your operating limits based on the performance stack tests.

Conduct performance stack tests at representative operating conditions and record the process information that is necessary to document operating conditions during the test.

Conduct a minimum of three separate test runs for each performance stack test.

3.5.5 Establish Operating Limits during the Performance Test

During the performance test, you must establish operating limits for your air pollution control device. Table 4 of subpart JJJJJ specifies how to establish operating parameters.

Dry Limestone Adsorber (DLA) Pressure Drop and Limestone Feeder Setting:

- Establish the minimum (3-hour block average) pressure drop as your operating limit during the three-run performance stack test.
- Establish the limestone feeder setting (on a per ton of fired product basis) one week prior to the performance stack test and maintain the feeder setting for the one-week period that precedes the performance stack test and during the performance stack test.
- Document the source and grade of limestone used during the performance stack test.

Wet Scrubber pH and Liquid Flow Rate:

- Establish the minimum (3-hour block average) scrubber liquid pH and flow rate as your operating limits during the three-run performance stack test. If you conduct multiple performance stack tests (e.g., both HF/HCl/Cl_2 and PM/non-Hg HAP metals tests), you must set the minimum liquid pH and flow rate operating limits at the highest of the average values established during the performance stack tests.

Dry Lime Injection Fabric Filter (DIFF) and Dry Lime Scrubber/Fabric Filter (DLS/FF) Lime Injection Rate:

- Establish the minimum lime injection rate, which is the average lime injection rate measured during the most recent performance test demonstrating compliance with the applicable emission limits.

Activated Carbon Injection Rate:

- Establish the minimum activated carbon injection rate, which is the 3-hour block average of the recorded activated carbon injection rates measured during the most recent performance test demonstrating compliance with the applicable emission limit.

Fabric Filter Bag Leak Detection:

- Install, maintain, calibrate and operate the bag leak detection system.
- Operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.

Kiln Process Rate:

- Establish a maximum process rate for every kiln as your operating limit(s) during the performance stack test. Used if maximum potential HCl-equivalent emissions are greater than the HCl-equivalent limit, and you need to know the maximum process rate that would ensure the maximum potential HCl-equivalent emissions remain at or below the HCl-equivalent limit.

3.5.6 Collect Data to Demonstrate Continuous Compliance with the Emission Limits

You must demonstrate continuous compliance with the emission limits and operating limits by continuously monitoring your operating parameters according to the methods in Table 6 of subpart JJJJJ.

Visible Emissions/Opacity (for Uncontrolled and DLA-Controlled Kilns):

- Perform daily visible emissions (VE) observations of each kiln stack, using EPA Method 22, with each test at least 15 minutes. Maintain no VE from stack.
- If VE are observed, collect opacity data, using EPA Method 9. Calculate 6-minute averages.
- If opacity greater than 10 percent is observed, initiate and complete corrective actions according to your OM&M plan and report these deviations in the semiannual compliance report.
- Decrease the frequency of VE testing from daily to weekly if no VE are observed in 30 consecutive daily VE tests for any kiln stack or if no opacity greater than 10 percent is observed during any opacity tests for any kiln stack.
- If VE are observed during any weekly test and opacity greater than 10 percent is observed in the subsequent opacity test, initiate and complete corrective actions according to your OM&M plan, and resume VE testing of that kiln stack on a daily basis.
- In lieu of VE testing, you may conduct a PM test at least once every year following the initial performance test or you may request and, if approved, use an alternative monitoring procedure under §63.8(f).

Note: Using an approved alternative monitoring procedure is not considered a change to the MACT floor. The applicable PM/HAP metals emission limit is the MACT floor. Procedures such as VE observations, opacity testing, PM testing, or an approved alternative monitoring

procedure are used to demonstrate compliance with the applicable emission limit. The Administrator is not changing the PM/HAP metals emission limits when an alternative monitoring procedure is approved.

DLA Pressure Drop and Limestone Feeder Setting:

- Collect DLA pressure drop CMS data. Calculate 3-hour block average. Maintain 3-hour block average at or above the operating limits from the performance test.
- Verify that limestone hopper and storage bin (located at the top of the DLA) contain adequate limestone.
- Record limestone feeder setting daily to verify that feeder setting is maintained at or above the operating limit from the performance test.
- Use same grade of limestone from the same source as was used during performance test; maintain records of the source and type of limestone.

Wet Scrubber pH and Liquid Flow Rate:

- Collect pH and liquid flow rate CMS data. Calculate 3-hour block averages. Maintain 3-hour block average at or above the operating limits from the performance test.

DIFF and DLS/FF Lime Injection Rate:

- Verify that lime is free-flowing. If lime is found not to be free flowing, initiate and complete corrective actions in accordance with OM&M plan. Record feeder setting once during each shift of operation to verify that feeder setting is being maintained at or above the operating limit from the performance test.

Activated Carbon Injection Rate:

- Collect carbon injection rate CMS data. Calculate 3-hour block average. Maintain 3-hour block average at or above the operating limit from the performance test.

Fabric Filter Bag Leak Detection:

- Install, maintain, calibrate and operate the bag leak detection system.
- Operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.
- Initiate corrective action within 1 hour of alarm sounding. Keep records of corrective action.

Kiln Process Rate:

- Collect the kiln process rate data. Calculate 3-hour block averages. Maintain 3-hour block average at or below the operating limit from the performance test. Used if last calculated maximum potential HCl-equivalent emissions was not below HCl-equivalent limit.

You must operate the monitoring system(s) and collect data at all times while the kiln is operating. Use all the data collected in assessing the operation of the control device and associated control system. However, you may not use data to demonstrate compliance recorded during:

- Monitoring system malfunctions or out-of-control periods (see definitions in box)
- Repairs associated with monitoring system malfunctions or out-of-control periods
- Maintenance periods
- Required monitoring system quality assurance or quality control activities, including calibration checks and required zero and span adjustments

You must make monitoring system repairs due to monitoring system malfunctions or out-of-control periods and return the monitoring system to operation as quickly as possible. Failure to collect required data is a deviation of the monitoring requirements. (See definition of deviation at §63.8515.)

Out of Control Periods

A CMS is out of control if:

A. The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the CD specification in the applicable performance specification or relevant standard; or

B. The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

C. The continuous opacity monitoring system (COMS) CD exceeds two times the limit in the applicable performance specification in the relevant standard.

Malfunction

A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused by poor maintenance or careless operation are not malfunctions.

3.5.7 Conduct Performance Evaluations of Your Continuous Monitoring System(s)

Fabric filter:

- If you use a control device with a fabric filter to comply with an emission limit, then you must install, calibrate, maintain, and continuously operate the bag leak detection system, unless you choose to comply with the daily VE checks. See §63.8450(e).

All other CMS:

- If you have an operating limit that requires a CMS, you must install, operate, and maintain the CMS. See §63.8450(a).

3.5.8 Minimize Emissions During Startup and Shutdown

- You must minimize emissions during startup and shutdown periods per the work practice procedures listed in Section 3.4.1 above.

3.6 Task 4: Keep Records – What Records Must I Keep and for How Long?

See Task 1 for information on the initial Notification of Applicability and an initial Notification of Compliance Status. This section addresses the remaining recordkeeping requirements.

3.6.1 General Requirements for Records

You must keep a copy of each notification and report submitted under this rule. You must also keep all documentation supporting any initial Notifications of Applicability or Notifications of Compliance Status. Please read sections 3.6.2 and 3.6.3 for details on the records required for your kiln, based on whether work practices or emissions limits apply.

Your records must be in a form suitable and readily available for review. You must keep each record for 5 years after the date of each recorded action. You must keep each record on site for at least 2 years after the date of each recorded action. For the remaining 3 of the 5 years, the records may be kept off site.

In general, you must keep copies of:

- Every notification or report, and all supporting documentation
- Records of performance tests
- Records of all monitoring data and calculated averages for applicable operating limits, such as DLA pressure drop, scrubber liquid pH and flow rate, lime feeder setting, activated carbon flow rate, and kiln process rate, to show continuous compliance with each emission limit and operating limit
- Records of production rates for each affected source
- Records for any approved alternative monitoring or test procedures
- Records of maintenance and inspections performed on the APCD
- Records of the date, time, and duration of each deviation, a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions
- Records of actions taken during each deviation to minimize emissions, including corrective actions taken to return the affected unit to its normal or usual manner of operation

3.6.2 Work Practice Standards Recordkeeping

Startup and Shutdown:

- Maintain records of the date, time, and duration of each startup and shutdown, recording the periods when the affected source was subject to the standard applicable to startup and shutdown.
- Maintain records of all site-specific parameters, temperature profiles, and procedures required to be established or developed according to the applicable work practice standards.
- For periods of startup, maintain records of the kiln push rate and kiln exhaust temperature prior to the time the kiln exhaust reaches the minimum APCD inlet temperature (for a kiln with an APCD) or the kiln temperature profile is attained (for a kiln with no APCD).
- For periods of shutdown, maintain records of the kiln push rate and kiln exhaust temperature after the time the kiln exhaust falls below the minimum APCD inlet temperature (for a kiln with an APCD) or the kiln temperature profile is no longer maintained (for a kiln with no APCD).

Burner Tune-up:

- Keep records of the dates and procedures of each tune-up. The record must be kept on-site and submitted to the delegated authority if requested.

Periodic Kilns:

- Maintain logs of the information required to document proper operation of your periodic kiln, including:
  - Records of the firing time and temperature cycle for each product produced in each periodic kiln
  - A log that details the type of product fired in each batch, the corresponding time and temperature protocol reference number, and an indication of whether the appropriate time and temperature cycle was fired
  - A log of the actual tonnage of product fired in the periodic kiln and an indication of whether the tonnage was below the maximum tonnage for that specific kiln
- Maintain logs of the maintenance procedures used to demonstrate compliance with the maintenance requirements of the periodic kiln work practice standard.

Routine Control Device Maintenance Alternative:

- Maintain records related to control device maintenance and documentation of your approved routine control device maintenance request, if you request to use the alternative standard.

3.6.3 Emission Limits Recordkeeping

You will need to keep records related to emission limits, test plans, monitoring plans/data, operating limits and fuel type/amount.

Site-specific Test Plan:

- Prepare the site-specific test plan before conducting a required performance test (see specific plan requirements in Section 3.5.7).
- Keep a copy of the site-specific test plan as a record.
- Submit the site-specific test plan if requested by the EPA or a delegated authority.

Site-specific OM&M Plan:

- Prepare the site-specific OM&M plan before your initial performance evaluation of your CMS (see specific plan requirements in Section 3.5.4).
- Keep current copy of the site-specific OM&M plan, including any revisions, with records documenting conformance.
- Upon request, make the site-specific OM&M plan available for inspection by the delegated authority.

Fabric Filter:

For tunnel kilns that demonstrate compliance with a fabric filter and bag leak detection system, include:

- Records of the bag leak detection system output
- Records of bag leak detection system adjustments
- The date and time of all bag leak detection system alarms, date and time you initiated and completed corrective action, brief description of corrective action taken
- The percent of the operating time during each 6-month period that the alarm sounds

3.7 Task 5: Submit Other Notifications and Reports

See Task 1 for information on the initial Notification of Applicability and an initial Notification of Compliance Status. This section addresses the remaining reporting and notification requirements.

3.7.1 Compliance Report

For each affected source subject to the emission limits and work practice standards in BSCP NESHAP, you must submit, by July 31 and January 31 of each year, a semiannual Compliance Report for the previous semiannual reporting period (January 1 through June 30 or July 1 through December 31).

The first Compliance Report must cover the period beginning on the compliance date that is specified for your affected source and ending on either June 30 or December 31. The first reporting period must be at least 6 months, but less than 12 months.

For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, if the permitting authority has established dates for submitting semiannual reports, you may submit the first and subsequent Compliance Reports according to the dates the permitting authority has established instead of the dates in the BSCP NESHAP.

The report must contain:

1. The company name and address.

2. A statement by a responsible official certifying the truth, accuracy, completeness of the certification. The statement also needs to supply the official's name, title, and signature.

3. The date of the report and the beginning and ending dates of the reporting period.

4. A description of control device maintenance performed while the control device was offline and the kiln controlled by the control device was operating.

5. A report of the most recent burner tune-up conducted to comply with the dioxin/furan work practice standard.

6. If there are no deviations from any emission limits or operating limits that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

7. If there were no periods during which the CMS were out of control, a statement that there were no periods during which the CMS were out of control during the reporting period.

8. The startup push rate for each kiln, the minimum APCD inlet temperature for each APCD, and the temperature profile for each kiln without an APCD.

9. For each deviation that occurs at an affected source during the reporting period, include the date, time, and duration of the deviation; a list of the affected sources or equipment for which the deviation occurred; an estimate of the quantity of each regulated pollutant emitted over any emission limit; and a description of the method used to estimate the emissions.

10. For each deviation from an emission limit or operating limit occurring at an affected source where you are using a CMS to comply, include the following:

    - The total operating time of each affected source during the reporting period.
    - The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.
    - The date, time, and duration that each CMS was out-of-control, including the pertinent information in your OM&M plan.
    - Whether each deviation occurred during routine control device maintenance covered in your approved routine control device maintenance alternative standard or during another period, and the cause of each deviation (including unknown cause, if applicable).
    - A description of any corrective action taken to return the affected unit to its normal or usual manner of operation.
    - A breakdown of the total duration of the deviations during the reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
    - A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.
    - A brief description of the process units.
    - A brief description of the CMS.
    - The date of the latest CMS certification or audit.
    - A description of any changes in CMS, processes, or control equipment since the last reporting period.

If you have obtained a title V operating permit according to 40 CFR part 70 or 71, you must report all deviations as defined in subpart JJJJJ in the semiannual monitoring report required by 40 CFR part 70 or 71. If you submit a compliance report according to subpart JJJJJ along with, or as part of, the semiannual monitoring report required by 40 CFR part 70 or 71, and the compliance report includes all required information concerning deviations from any emission limit or operating limit, then submitting the compliance report will satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submitting a

compliance report will not otherwise affect any obligation you may have to report deviations from permit requirements to the permitting authority.

Estimated Compliance Costs

Based on data collected to support the regulatory impact analysis, The EPA estimates the following costs (in 2011 dollars):

- Emission controls: $62.3 million capital cost and $23.7 million annual cost.
- Emissions testing: $2.26 million capital cost and $0.552 million annual cost.
- Monitoring: $0.352 million annual cost.
- Total: $64.6 million capital cost and $24.6 million annual cost

3.7.2 Stack Test Performance Data Reporting

If your tunnel kiln is subject to stack testing, you must:

- Submit the results of the performance tests within 60 days of completing each performance test electronically by using the Compliance and Emissions Data Reporting Interface (CEDRI) which can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).
- Submit performance test data in the format generated through the use of the EPA's Electronic Reporting Tool (ERT) (see https://www3.epa.gov/ttn/chief/ert/index.html) or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. Only data collected using test methods supposed by the EPA's ERT as listed on the EPA's ERT Web site must be submitted electronically via CEDRI.
- If you wish to claim that some of the information being submitted for performance tests is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX.
- For any performance test conducted using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site, you must submit the results on paper to the Administrator at the appropriate address listed in §63.13 (Addresses of State air pollution control agencies and EPA Regional Offices).
- If your kiln experiences any deviations, you must submit a semiannual Compliance Report. See Section 3.6 for details of the semiannual Compliance Report.

4.0 OTHER INFORMATION

4.1 Benefits and Costs

The EPA estimates that there are 168 tunnel kilns and 120 periodic kilns at 90 major source facilities subject to the BSCP NESHAP and projects that no new kilns will be installed over the

next 3 years. The EPA has determined that 40 of the 90 major source facilities are small entities or are located at small entities.

The EPA estimates that the value of the net benefits from reduced exposure to fine particles for the tunnel kilns subject to emission limits is $48 million to $150 million, using a 7 percent discount rate. The EPA did not estimate monetary benefits from reducing exposure to air toxics or other air pollutants, ecosystem effects, or visibility impairment.

The final rule will reduce emissions of a number of toxic air pollutants, predominantly acid gases such as HF, HCl, and Cl_2, and lesser amounts of other compounds, including Hg, non-Hg metals,[4] and dioxins/furans, by an estimated 375 tpy. Exposure to these toxic air pollutants, also known as HAPs or air toxics, depending on exposure duration and levels of exposures, can be associated with a variety of adverse health effects. These adverse health effects could include chronic health disorders (e.g., irritation of the lung, skin and mucus membranes, effects on the central nervous system and damage to the kidneys) and acute health disorders (e.g., lung irritation and congestion, alimentary effects such as nausea and vomiting, and effects on the kidney and central nervous system). Two of the HAPs have been classified as human carcinogens (arsenic and chromium VI) and four as probable human carcinogens (cadmium, lead, dioxins/furans, and nickel).

4.2 Compliance Assistance Resources

The EPA believes that through awareness, education and reasonable options, both public and private members of the regulated community will be proactive in voluntary efforts to comply with pollution control regulations. Compliance assistance providers help regulated communities and businesses understand and comply with environmental laws through one-to-one counseling, online resource centers, fact sheets, guides, and training. Assistance providers include EPA regional office staff; state, local and tribal governments; federal and state small business and pollution prevention technical assistance extension agents, consultants, and trade associations.

Find out what laws apply to you, what you need to do to comply, and tools and resources that can help you and your constituents comply with environmental regulations by visiting the following websites:

EPA Compliance Assistance: https://www.epa.gov/compliance/compliance-assistance-centers/

National Compliance Assistance Centers: http://www.assistancecenters.net/

State-by-State Resource Locator: http://www.envcap.org/statetools/

National Small Business Environmental Assistance Programs: https://nationalsbeap.org/

EPA Small Business Gateway: https://www.epa.gov/resources-small-businesses/

[4] Non-Hg HAP metals means the sum of the following metallic HAPs: antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel and selenium. Chromium includes both chromium III and chromium VI.

EPA Environmental Regulations and Laws: https://www.epa.gov/laws-regulations/regulations/

EPA Pollutants and Sources: https://www3.epa.gov/airtoxics/pollsour.html

EPA Air Toxics Website: https://www3.epa.gov/ttn/atw/

EPA Asbestos and Small Business Ombudsman: https://www.epa.gov/resources-small-businesses/asbestos-small-business-ombudsman/

EPA Small Business Compliance and Enforcement: https://www.epa.gov/compliance/small-business-compliance/ and https://www.epa.gov/enforcement/small-businesses-and-enforcement/

EPA Compliance Incentives and Auditing: https://www.epa.gov/compliance/epas-audit-policy/

4.3 What Other Resources are Available?

State and local contacts can be found at the National Association of Clean Air Agencies web site (http://www.4cleanair.org/) or at the EPA Regional offices (https://www.epa.gov/aboutepa/, https://www.epa.gov/resources-small-businesses/regional-small-business-coordinators, and https://www.epa.gov/resources-small-businesses/regional-small-business-liaisons).

4.4 For More Information

The full text of the Federal Register containing the rule and additional information are available online at: https://www3.epa.gov/ttn/atw/brick/brickpg.html.

A link to the current BSCP NESHAP and General Provisions in the e-CFR is available online.

Other background information is also available in the rulemaking docket (Docket ID: EPA-HQ-OAR-2013-0291) either electronically at http://www.regulations.gov, the EPA's electronic public docket and comment system, or in hardcopy at the EPA Docket Center's Public Reading Room.

Appendix A
Compliance Timelines for 40 CFR Part 63, Subpart JJJJJ

Figure A-1. Compliance Timeline for Existing Sources.

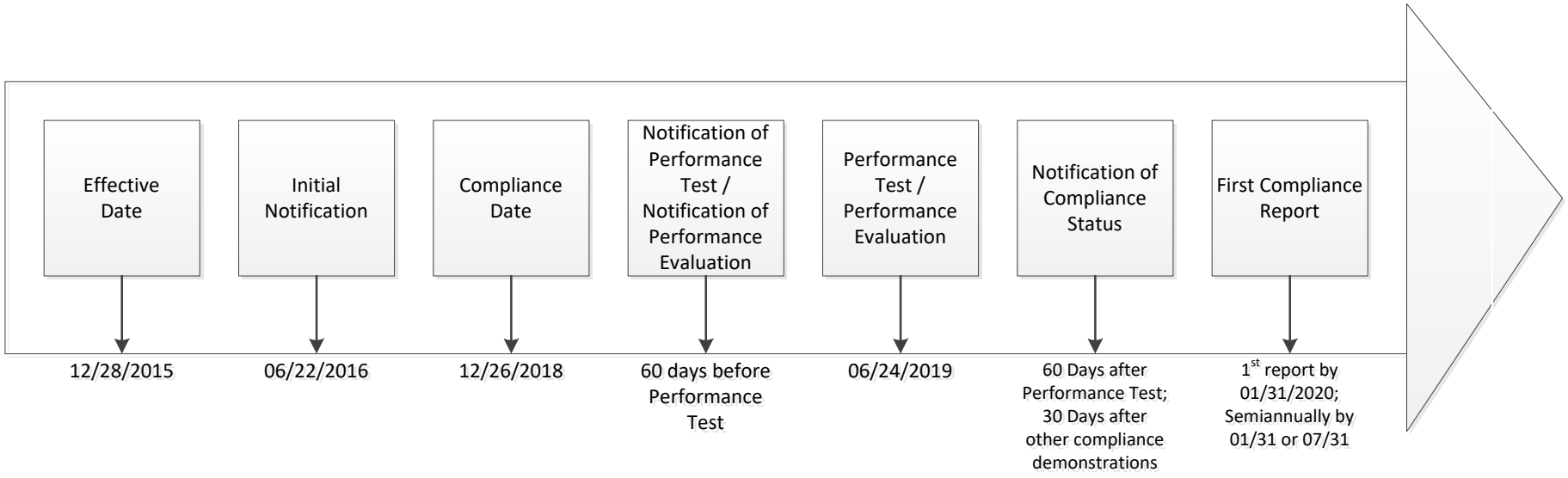
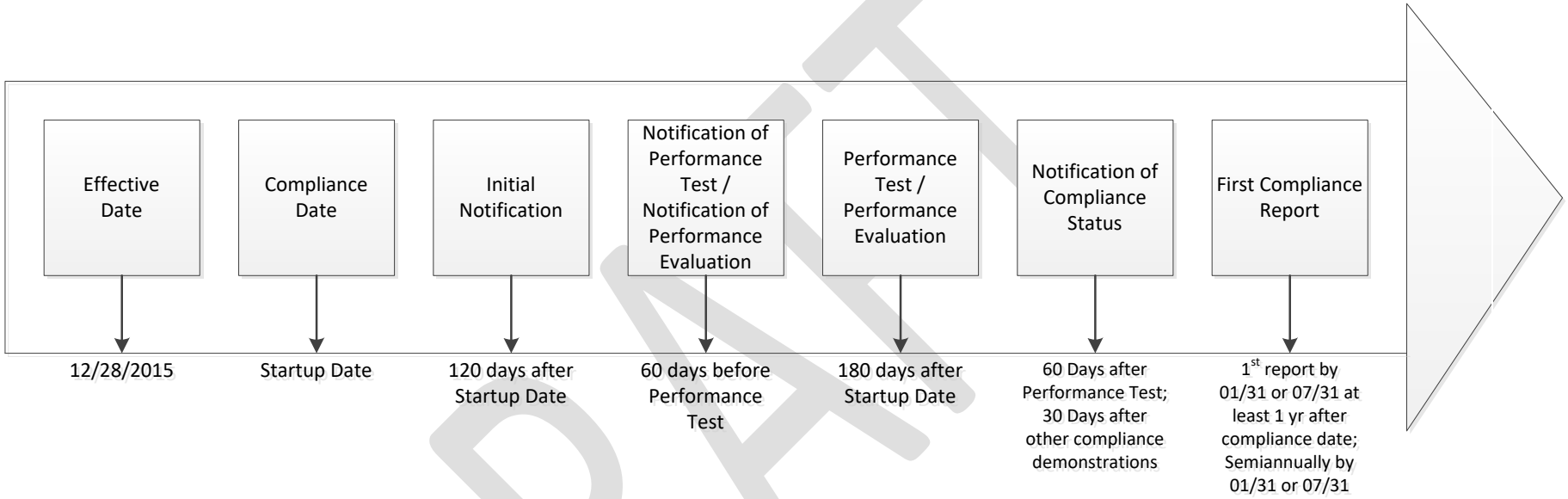


Figure A-2. Compliance Timeline for New or Reconstructed Sources with Startup after Promulgation Date.



Appendix B
Sample Notifications for 40 CFR Part 63, Subpart JJJJJ

Initial Notification of Applicability

This is a sample form for the initial Notification of Applicability that can be used by facilities at their discretion to meet the requirements in the Brick and Structural Clay Products Manufacturing NESHAP.

Applicable Rule: 40 CFR Part 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing

1. Print or type the following general information for each Brick and Structural Clay Products Manufacturing facility:

   Owner/Operator/Title:_____
   Street Address:_____
   City:_____ State:_____ Zip Code:_____
   Plant Name:_____
   Plant Contact/Title:_____
   Plant Contact Phone Number (optional): _____
   Plant Address (if different than owner/operator's)
   Street Address: _____
   City:_____ State:_____ Zip Code:_____

2. Provide the following information as appropriate:

- The affected source's compliance date:_____
- A brief description of the nature, size, design, and method of operation of the affected source:
  _____
  _____
  _____
- An identification of the types of emission points within the affected source:
  _____
  _____
  _____
- A statement of whether the affected source is a major source or an area source:
  _____
  _____
  _____

Application for Approval of Construction or Reconstruction

This is a sample form for the Application for Approval of Construction or Reconstruction that can be used by facilities at their discretion to meet the requirements in the Brick and Structural Clay Products Manufacturing NESHAP.

Applicable Rule: 40 CFR Part 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing

1. Print or type the following general information for each Brick and Structural Clay Products Manufacturing facility:

   Owner/Operator/Title:_____
   Street Address:_____
   City:_____ State:_____ Zip Code:_____
   Plant Name:_____
   Plant Contact/Title:_____
   Plant Contact Phone Number (optional): _____
   Plant Address (if different than owner/operator's)
   Street Address: _____
   City:_____ State:_____ Zip Code:_____

2. In addition to the information requested above, please include the following information in each application for approval of construction or reconstruction:

- Notification that you intend to construct a new major affected source or make any physical change or operational change to a major affected source that may meet or has been determined to meet the criteria for a "reconstruction," as defined in §63.2 of the NESHAP General Provisions (40 CFR part 63, subpart A):
  _____
  _____
  _____
- The expected date of the beginning of actual construction or reconstruction:_____
- The expected completion date of the construction or reconstruction:_____
- The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified in subpart JJJJJ, or, if actual emissions data are not yet available, an estimate of the type and quantity of hazardous air pollutants expected to be emitted by the source in units and averaging times specified in subpart JJJJJ. Include operating parameters, such as flow rate, to the extent that they demonstrate performance and compliance:
  _____
  _____
  _____
  _____
  _____

3. In addition to the information requested above, please include the following information in each application for approval of construction:

- Technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source:

_____
_____
_____

- An identification of each type of emission point for each hazardous air pollutant that is emitted (or could reasonably be anticipated to be emitted):

_____
_____
_____

- A description of the planned air pollution control system (equipment or method) for each emission point, including each control device for each hazardous air pollutant and the estimated control efficiency (percent) for each control device:

_____
_____
_____

- A description of the method to be used for the control of emissions, including an estimated control efficiency (percent) for that method:

_____
_____
_____

- Calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations:

_____
_____
_____

4. In addition to the information requested above, please include the following information in each application for approval of reconstruction:

- A brief description of the affected source and the components that are to be replaced:

_____
_____
_____

- A description of present and proposed emission control systems (i.e., equipment or methods), including each control device for each hazardous air pollutant, the estimated control efficiency (percent) for each control device, and calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations:

_____
_____
_____

5. If, in the application for approval of reconstruction, you designate the affected source as a reconstructed source and declare that there are economic or technical limitations to prevent the source from complying with the standards or other requirements, you must submit the following information:

- An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source:_____
- The estimated life of the affected source after the replacements:_____
- A discussion of any economic or technical limitations that the source may have in complying with the standards or other requirements after the proposed replacements, including sufficient detail to demonstrate to the Administrator's satisfaction that the technical or economic limitations affect source's ability to comply with the standard and how they do so:

  _____
  _____
  _____

Initial Notification of Compliance Status

This is a sample form for the initial Notification of Compliance Status that can be used by facilities at their discretion to meet the requirements in the Brick and Structural Clay Products Manufacturing NESHAP.

Applicable Rule: 40 CFR Part 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing

1. Print or type the following general information for each Brick and Structural Clay Products Manufacturing facility:

   Owner/Operator/Title:_____
   Street Address:_____
   City:_____ State:_____ Zip Code:_____
   Plant Name:_____
   Plant Contact/Title:_____
   Plant Contact Phone Number (optional): _____
   Plant Address (if different than owner/operator's)
   Street Address: _____
   City:_____ State:_____ Zip Code:_____

2. Provide the following information, as appropriate:

- The methods that were used to determine compliance:
  _____
  _____
  _____
- The results of any performance tests, opacity or visible emission observations, continuous monitoring system performance evaluations, and/or other monitoring procedures or methods that were conducted (please attach the results to this notification).
- The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods:
  _____
  _____
  _____
- The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants specified in subpart JJJJJ), reported in units and averaging times and in accordance with the test methods specified in subpart JJJJJ:
  _____
  _____
  _____
- An analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification):
  _____
  _____

- A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method):

- The operating limit parameter values established for each affected source with supporting documentation and a description of the procedure used to establish the values:

- For each control device that includes a fabric filter, if a bag leak detection system is used, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in §63.8450(e) of subpart JJJJJ (please attach the analysis and supporting documentation to this notification).
- A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the standard or other requirements:

- A signature from the responsible official certifying the accuracy of this notification:

Compliance Report

This is a sample form for the Compliance Report that can be used by facilities at their discretion to meet the requirements in the Brick and Structural Clay Products Manufacturing NESHAP. Applicable Rule: 40 CFR Part 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing

1. Print or type the following general information for each Brick and Structural Clay Products Manufacturing facility:

   Owner/Operator/Title:_____
   Street Address:_____
   City:_____ State:_____ Zip Code:_____
   Plant Name:_____
   Plant Contact/Title:_____
   Plant Contact Phone Number (optional): _____
   Plant Address (if different than owner/operator's)
   Street Address: _____
   City:_____ State:_____ Zip Code:_____

2. Include a statement by a responsible official with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete:

   _____
   _____
   _____

3. Provide the following information, as appropriate:

- Date of report and beginning and ending dates of the reporting period:

  _____

- A description of control device maintenance performed while the control device was offline and the kiln controlled by the control device was operating:

  _____
  _____
  _____

- The date and time when the control device was shut down and restarted:

  _____
  _____

- Identification of the kiln that was operating and the number of hours that the kiln operated while the control device was offline:

  _____
  _____

- A statement of whether or not the control device maintenance was included in your approved routine control device maintenance request:

_____
_____
_____

4. If the control device maintenance was included in your approved routine control device maintenance request, provide the following information:

- The total amount of time that the kiln controlled by the control device operated during the current semiannual compliance period and during the previous semiannual compliance period:

_____
_____

- The amount of time that each kiln controlled by the control device operated while the control device was offline for maintenance covered under the routine control device maintenance alternative standard during the current semiannual compliance period and during the previous semiannual compliance period:

_____
_____

5. Based on the information provided in item 4 above, compute the annual percent of kiln operating uptime during which the control device was offline for routine maintenance, using Equation 7 provided in §63.8485(c)(4)(i)(C) of subpart JJJJJ, and provide the results below:

_____
_____

6. In addition to the information requested above, please include the following information in the compliance report:

- A report of the most recent burner tune-up conducted to comply with the dioxin/furan work practice standard in Table 3 of subpart JJJJJ (please attach the tune-up report to this report).
- If there are no deviations from any emission limits or operating limits in subpart JJJJJ, a statement that there were no deviations from the emission limits or operating limits during the reporting period:

_____
_____
_____

- If there were no periods during which the continuous monitoring system was out-of-control as specified in your OM&M plan, a statement that there were no periods during which the continuous monitoring system was out-of-control during the reporting period:

_____
_____
_____

- The startup push rate for each kiln, the minimum control device inlet temperature for each control device, and the temperature profile for each kiln without a control device (please provide the information below and/or attach it to this report):

_____
_____
_____

7. For each deviation that occurs at an affected source, include the following information:

- The date, time, and duration of the deviation:

_____

- A list of the affected sources or equipment for which the deviation occurred:

_____
_____
_____

- An estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions:

_____
_____
_____

8. For each deviation from an emission limit or operating limit occurring at an affected source where you are using a continuous monitoring system to comply with the emission limit or operating limit in subpart JJJJJ, include the information in items 1 through 5 and 7 above along with the information listed below:

- The total operating time of each affected source during the reporting period:

_____
_____
_____

- The date and time that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks:

_____
_____
_____

- The date, time, and duration that each continuous monitoring system was out-of-control, including the pertinent information in your OM&M plan:

_____
_____
_____

- Whether each deviation occurred during routine control device maintenance covered in your approved routine control device maintenance alternative standard or during another period, and the cause of each deviation (including unknown cause, if applicable):

  _____
  _____
  _____

- A description of any corrective action taken to return the affected unit to its normal or usual manner of operation:

  _____
  _____
  _____

- A breakdown of the total duration of the deviations during the reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes:

  _____
  _____
  _____

- A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during that reporting period:

  _____
  _____
  _____

- A brief description of the process units:

  _____
  _____
  _____

- A brief description of the continuous monitoring system:

  _____
  _____
  _____

- The date of the latest continuous monitoring system certification or audit:

  _____

- A description of any changes in continuous monitoring systems, processes, or control equipment since the last reporting period:

  _____
  _____
  _____